
Friday, April 29 and Saturday, April 30, 2011

# Program & Abstracts

**Editor**

Jill K. Singer, Ph.D.
Director, Office of Undergraduate Research

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The Research Foundation of SUNY College at Buffalo

Cover Design and Layout: Carol Alex

## The following individuals and offices are acknowledged for their many contributions:


Sean Fox, Technical Director, SERC, Carleton College
Maryruth Glogowski, Director, Butler Library, and the library staff
Carole Schaus, Office of Undergraduate Research
Kaylene Waite, Computer Graphics Specialist
Bruce Fox, Photographer
Ted Turkle, Vice President and Operations Manager, The Research Foundation of SUNY/Buffalo State, and staff
Carol Beckley, Theater Department
Jim Shea, Technology Department
Tim Ngo, Copy Center
Tom Coates, Events Management, and staff, especially Mary Beth Wojtaszek
Department and Program Coordinators (identified below)
Beth Graff-Baker, Center for Development of Human Services
and very special thanks to Carol Alex, Center for Development of Human Services


## Department and Program Coordinators for the Thirteenth Annual Student Research and Creativity Celebration

Lisa Anselmi, Anthropology
Kyeonghi Baek, Political Science
Saziye Bayram, Mathematics
Carol Beckley, Theater
Betty Cappella, Educational Foundations
Joaquin Carbonara, Mathematics
Louis Colca, Social Work
Carol DeNysschen, Dietetics and Nutrition
Michael DeMarco, Physics
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Kelly Frothingham, Geography and Planning
Victoria Furby, Music
Jill Gradwell, History and Social Studies Education
Andrea Guiati, All College Honors Program
David Henry, Elementary Education and Reading
Deborah Insalaco, Speech Language Pathology
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Jamie Kim, Chemistry
Joelle Leclaire, Economics
Bill Lin, Computer Information Systems
James Mayrose, Technology
Michaelene Meger, Exceptional Education
Michael Niman, Communication
Jill Norvilitis, Psychology
Kathleen O'Brien, Hospitality and Tourism
Barbara Olivieri, Health and Wellness
Terry Postero, Interior Design
Dan Potts, Biology
William Raffel, Communication
Lisa Rafferty, Exceptional Education
Peter Ramos, English
Scott Roberts, Health and Wellness
Cory Rogge, Art Conservation
Stephen Saracino, Design
Lynne Scalia, Business
Jim Shea, Technology
Gary Solar, Earth Sciences and Science Education
Elizabeth Szockyj, Criminal Justice
Amitra Wall, Sociology
Sandra Washington, McNair Scholars Program
William White, Modern and Classical Languages
William Wieczorek, Center for Health and Social Research
Kevin Williams, Earth Sciences and Science Education
Robert Wood, Design
Mary Wyrick, Art Education
Jeffrey Zacko-Smith, Center for Studies in Creativity

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This year's Student Research and Creativity Celebration program is dedicated to the memory of Dr. Horace (Hank) Mann. His generosity in support of the Undergraduate Summer Research Fellowship Program will support students and faculty mentors for years to come. He is deeply missed but his legacy lives on in events such as the Student Research and Creativity Celebration.

# Welcome!

It is my great pleasure to welcome you to the 2011 Student Research and Creativity Celebration at Buffalo State!

Though this will be the 13th annual SRCC, it will be my first – and I could not be more excited to see the incredible fruits of our students' labors on glorious display. From intensive laboratory studies to service-learning courses in nearby neighborhoods to original compositions and choreography–and much, much more – Buffalo State's students benefit from access to hands-on learning experiences and a broad range of research and creative opportunities.

This means our students graduate confident in their ability to work independently, to think critically and creatively, and to engage meaningfully with the world around them. They leave this campus with pride in their talents and accomplishments – and Buffalo State is enormously proud of them as well.

To all the students displaying their work at this year's Student Research and Creativity Celebration, as well as to the faculty who have mentored them and all the individuals and offices who have made this event possible – congratulations!

Aaron Podolefsky, Ph.D.
*President*

Since its inception thirteen years ago, the Student Research and Creativity Celebration has become a hallmark event for Buffalo State. It is a showcase for the wonderfully varied intellectual, artistic, and creative pursuits of our undergraduate and graduate students and is always a stunning demonstration of the curiosity and brainpower of Buffalo State's students. All participants – students, mentors, campus community – celebrate the event as evidence of the university's commitment to "the rigors, joys, and fulfillment of intellectually discover", one of our core values.

The integration of research and creative experiences into its undergraduate and graduate programs affords all Buffalo State students with opportunities for meaningful inquiry, expression, exploration, and discovery. These hands-on experiences strengthen student understanding of their disciplines and allow students to work in close collaboration with Buffalo State's exceptional faculty and staff. Buffalo State students embrace inquiry-based learning and excel in multiple ways to articulate research findings and creative imagination to the wider university community.

Student participants in this 13th Student Research and Creativity Celebration deserve many accolades for their terrific work. We applaud the faculty who have mentored our students and appreciate the contributions of all who made the event possible. A very special thanks is extended to Dr. Jill Singer, director of the Office of Undergraduate Research for the leadership to this event and to many other efforts that affirm Buffalo State as a national leader in student research.

Dennis Ponton, Ph.D.
*Provost*

Welcome to the 13th annual Student Research and Creativity Celebration! This annual activity brings together all academic disciplines from across the Buffalo State community and the wide range of research, scholarly, and creative endeavors undertaken by our students are reflected in the more than 275 posters, papers, visual and performing arts presentations, displays, and demonstrations. This event provides an opportunity to learn about our students' experiences and findings made during their inquiry, investigation, or experimentation using a novel approach. In their own way, each student has helped contribute new knowledge and gained a deeper understanding of the research and discovery process. Some of the activities presented this weekend are ongoing and results are preliminary. Other presenters already have shared their work at national and international professional meetings and conferences. But whether the work is in its earliest stages or nearing completion, our students are learning about the value and importance of communicating and sharing the knowledge gained or exhibiting a new work of art. And while this event calls attention to the intellectual abilities and creativity of our students, it also is an opportunity to recognize the excellent support and guidance each student received from their mentor (or mentors).

This year's program represents the culmination of many months of planning and could not happen without the support and assistance from individuals and offices across campus. There are 46 SRCC coordinators that help promote this event at the department and program level and a number of faculty that play an important role by serving as moderators for oral sessions and monitors in the poster sessions. Buffalo State students also play an important role in running this event, from showcasing their scholarly and artistic works during the opening reception to helping presenters register and find their way to the correct location for their presentation. I gratefully acknowledge all these individual efforts and enthusiasm shared by the campus for this annual celebration.

Undergraduate research continues to gain momentum at the national level and campuses across the country, including the SUNY system, have identified undergraduate research as a transformative and high impact educational practice. To even more effectively promote undergraduate research for students, faculty, and institutions, the Council on Undergraduate Research and the National Conference on Undergraduate Research (CUR and NCUR, respectively) joined together to form a single organization. Buffalo State has positioned itself to be a leader in undergraduate research and even during challenging fiscal times, the College remains steadfast in its commitment to support research, scholarly and creative activities for students in all academic disciplines.

I hope you enjoy listening to and meeting the student presenters. Thank you for attending the 13th Student Research and Creativity Celebration and supporting our student presenters and their faculty mentors.

Jill Singer

Jill K. Singer, Ph.D.
*Professor of Earth Sciences*
*Director, Office of Undergraduate Research*

*Research and creativity foster all we do here at Buffalo State, and the Graduate School is proud to support these efforts. I warmly congratulate all the students participating in this great weekend of intellectual and artistic expression – especially all the graduate students – and sincerely thank all the faculty mentors for their commitment to student excellence. A special thanks is extended to Dr. Jill Singer for her leadership in nurturing the Research and Creativity Celebration, now in its 13th year.*

Kevin Railey, Ph.D. Associate Provost and Dean, The Graduate School

*Undergraduate research is a hallmark of undergraduate and graduate education at Buffalo State, and the Annual Student Research and Creativity Celebration is our traditional venue for sharing research projects and honoring the researchers and their mentors. We are proud that our faculty, national and international leaders in a myriad of disciplines, encourage and inspire students to explore the diversity of scholarly pursuits. On behalf of the School of Arts and Humanities, I am delighted to congratulate all participants in this 13th annual celebration.*

Benjamin C. Christy, A.Mus.D., Dean, School of Arts and Humanities

*Congratulations to the students presenting at the 13th Annual Student Research and Creativity Celebration. Buffalo State takes great pride in your contributions to our community of scholars and learners. Students taking the difficult step from consumers to creators of knowledge represent one of the greatest successes of our institution. We are proud to support you as you continue to explore, engage, and excel.*

Scott L. Johnson, Ph.D., Dean, University College and Associate Vice President for Undergraduate Education

*Welcome to all of our students and guests and congratulations to the presenters participating in the 13th annual Student Research and Creativity Celebration. Thank you for your commitment and willingness to contribute to this very important campus event. Thanks also to the faculty mentors that encouraged and supported student efforts. These projects represent the vitality and diversity of our many outstanding academic programs here at Buffalo State.*

Kevin F. Mulcahy, Ed.D., Interim Dean, School of the Professions

*Congratulations and welcome to the students and their faculty mentors taking part in the 13th annual Student Research and Creativity Celebration! Student participation in research is one of our highest priorities in the School of Natural and Social Sciences. It is a very valuable and rewarding experience for both students and faculty, and I know you will find it to be one of the highlights of your academic career. This impressive showcase of the outstanding research and creative work of Buffalo State undergraduate and graduate students is one of my favorite events of the year, and it demonstrates once again Buffalo State's commitment to student participation in these experiences.*

Mark W. Severson, Ph.D., Dean, School of Natural and Social Sciences

*This celebration is among the most meaningful for your professors here at Buffalo State. To be connected to high-level intellectual curiosity and to witness new scholarly insights generated by student effort is a deeply rewarding piece of the professorial life. Speaking on behalf of the working professionals in the School of Education, sincere thanks for your contributions to this event.*

Paul G. Theobald, Ph.D., Interim Dean, School of Education

*Creativity and innovation have never been more vital or more valued than they are right now. We are at a watershed moment in time during which the intellectual resources of our nation, of which you are a part, are shaping our future. The Research Foundation proudly supports the goals of the Student Research and Creativity Celebration, and appreciates the opportunity to participate in supporting the undergraduate and graduate students who have invested so much time, energy, and intellect in the pursuit of new horizons and unexplored ideas. So as we recognize the outstanding achievements of our students, it is imperative that we acknowledge and thank too, the faculty mentors who made all this possible by so diligently providing their guidance, inspiration, and support throughout the year.*

Edgar (Ted) Turkle III, M.A., Vice President and Operations Manager, The Research Foundation of SUNY/Buffalo State

# Thursday, April 28, 2011

## Czurles-Nelson Gallery, Upton Hall

9:00 a.m. – 4:30 p.m.

**Art Education Student Juried Exhibition**

Note: Gallery Hours Same for Friday, April 29th

## Margaret Bacon Gallery, Upton Hall

10:00 a.m. – 5:00 p.m.

**FAR 240, Introductory Sculpture**

Works in cast iron and plaster by: Noel Brown, Norm Cramer, Dave Huurman, Melissa Jakubowski, Adrienne Klein, Liz Morley, Jeremy Popielarz, Alison Spongr, Rachelyn Spry, Kelsey Stay, Kate Weidner, and Audry Yash

Faculty Mentor: Professor Elena Lourenco, Fine Arts

Note: Reception: 7:00 p.m. – 9:00 p.m.

## Warren Enters Theatre, Upton Hall

8:00 p.m.

**Spring Dance Concert: "Fantastic Voyage"**

Ballet inspired by the music of Earth, Wind, and Fire

**Dancers**: Nicole Aversa, Lindsey Bessman, Jane Calvert, Thomas Cambria, Charlotte Cardwell, Eriketa Cirulli, Helen Fabre, Emily Frack, James Huggins, Amanda Kugler, London Lee, Angela Lopez, Gabriela Moreno, Jarron Morimer, Vincent Pontillo, Danica Riddick, Syidah Sabir, Lewis Sepulveda, Derick Sherrier, Omar Vargas, Missy Vargo, Lauren Wagner, and Lancia Woods

Student Designer: Fred Pasolini, lighting designer

Faculty Mentors: Professors Ann Emo, Joy Guarino, Carlos Jones, Janet Reed, Leanne Rinelli, Shannon Schweitzer, and Ken Shaw, Theater

# Friday, April 29, 2011

## Margaret Bacon Gallery, Upton Hall

10:00 a.m. – 7:00 p.m.

Works in cast iron and plaster

## Dance Studio, Rockwell Hall B22

1:00 p.m. – 3:00 p.m.

1:00 p.m. – 2:00 p.m.

**Kinetic: Partnering Objects**

Vincent Pontillo, Design (Metal/Jewelry)

Faculty Mentor: Professor Janet Reed, Theater

2:00 p.m. – 3:00 p.m.

**Intersection of Dance and Technology**

Angela Lopez, Arts and Letters

Faculty Mentor: Professor Janet Reed, Theater

## E.H. Butler Library

5:00 p.m. – 6:30 p.m.

**President's and Provost's Opening Reception**

A culminating activity by students in HTR 400: Catering Management

Dan Cycon and Laurel Presher, Student Coordinators with, Katie Helbig, Corinne Brogan, Christina Recchio, Austin Diana, Ana Valerio, Tricia Battistell, Abbe Hogle, and Lauren Pasternak

Faculty Mentors: Professors Stephen Burgeson and Donald Schmitter, Hospitality and Tourism

**Preview of Posters and Artwork**

## Performing Arts Center at Rockwell Hall

7:30 p.m.

**Jazz Ensemble Concert**

**Buffalo State College Jazz Ensemble:**

Patrick Allison, Ryan Awayda, Nick Barnhard, Vince Brown, Vicky Carden, Russell D. Carere, Joseph Cheslak, Josh Ekiert, Peter Evans, Matt Harris, Anthony Henry, Jacob Jay, Patrick Krebs, Matt Lester, Teresa Leone, Phil Lockhart, Stephen Mclean, Joshua Moore, Josh Pacino, Matt Rutschumann, Matthew Seeman, Frazer T. Smith, Colin Sperrazza, Peter Vogel, Robert Webster, and Richard Yeager

Faculty Mentor: Professor Rick Fleming, Music

## Warren Enters Theatre, Upton Hall

8:00 p.m.

**Spring Dance Concert**

# Saturday, April 30, 2011

## E.H. Butler Library

**Oral Papers**, Rooms 208, 210, and 210B

Humanities I and II – Room 210B

8:30 a.m. – 4:30 p.m.

Technology – Room 208

8:30 a.m. – 10:15 a.m.

Sciences and Mathematics – Room 210

9:00 a.m. – 12:00 p.m.

Education – Room 208

10:30 a.m. – 12:00 p.m.

Social Sciences – Room 210

1:00 p.m. – 3:30 p.m.

**Posters and Displays** – Atrium and Mezzanine

9:00 a.m. – 4:00 p.m.

Sessions I to VII, each session one hour in length

## Galleries and Theatres

**Margaret Bacon Gallery, Upton Hall**

10:00 a.m. – 5:00 p.m.

Works in cast iron and plaster

**Flexible Theatre, Donald Savage Building**

10:00 a.m.– 11:00 a.m.

"Love Allegory"

**Warren Enters Theatre, Upton Hall**

2:00 p.m. and 8:00 p.m.

Spring Dance Concert

## Student Union Quad

11:00 a.m. – 2:00 p.m.

**Demonstrations and Displays**

**Ceramics Throwing**

Angela McCormack, Emily Chamberlain, R.J. Sturgess, Ryan Gray, Stephanie Dukat, Jessamyn Sprenger, Seth Rowitsch, Rachael Fleming, and Michelle Sallander

Faculty Mentor: Professor Robert Wood, Design

**Mini Baja Vehicle: 2011's Model**

Michael Garofolo, Alex Hubert, and Cody Siezega

Faculty Mentor: Professor David Kukulka, Mechanical Engineering Technology

# Friday, April 29, 2011
# Exhibits and Performances
## Czurles-Nelson Gallery, Upton Hall
9:00 a.m. – 4:30 p.m.
Art Education Student Juried Exhibition showcases studio work

## Margaret Bacon Gallery, Upton Hall
10:00 a.m. – 7:00 p.m.
Works in cast iron and plaster

## Dance Studio, Rockwell Hall B22
1:00 p.m. – 3:00 p.m.

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**Kinetic: Partnering Objects**
Vincent Pontillo, Design (Metal/Jewelry)

2:00 p.m. – 3:00 p.m.
**Intersection of Dance and Technology**
Angela Lopez, Arts and Letters

## Performing Arts Center, Rockwell Hall
7:30 p.m.
**Jazz Ensemble Concert**
Buffalo State College Jazz Ensemble: **Patrick Allison**, **Ryan Awayda**, **Nick Barnhard**, **Vince Brown**, **Vicky Carden**, **Russell D. Carere**, **Joseph Cheslak**, **Josh Ekiert**, **Peter Evans**, **Matt Harris**, **Anthony Henry**, **Jacob Jay**, **Patrick Krebs**, **Matt Lester**, **Teresa Leone**, **Phil Lockhart**, **Stephen Mclean**, **Joshua Moore**, **Josh Pacino**, **Matt Rutschumann**, **Matthew Seeman**, **Frazer T. Smith**, **Colin Sperrazza**, **Peter Vogel**, **Robert Webster**, and **Richard Yeager**

## Warren Enters Theatre, Upton Hall
8:00 p.m.
**Dance Concert: "Fantastic Voyage"**
Ballet inspired by the music of Earth, Wind, and Fire
Dancers: **Nicole Aversa**, **Lindsey Bessman**, **Jane Calvert**, **Thomas Cambria**, **Charlotte Cardwell**, **Eriketa Cirulli**, **Helen Fabre**, **Emily Frack**, **James Huggins**, **Amanda Kugler**, **London Lee**, **Angela Lopez**, **Gabriela Moreno**, **Jarron Morimer**, **Vincent Pontillo**, **Danica Riddick**, **Syidah Sabir**, **Lewis Sepulveda**, **Derick Sherrier**, **Omar Vargas**, **Missy Vargo**, **Lauren Wagner**, and **Lancia Woods**

# Saturday, April 30, 2011
# E.H. Butler Library
# Oral Papers
## Rooms 208, 210 and 210B

# Humanities I
## Room 210B
8:30 a.m. – 12:15 p.m.
*Presenting:*

8:30 a.m. – 9:30 a.m. (*each paper 15 minutes*)
Salvation Through Storytelling
**Devon Cozad**, HON 400: All College Honors Colloquium

"Earnesty" vs. Honesty: Analysis and Implications of Title In Oscar Wilde's, "The Importance of Being Earnest"
**Alison Stroczkowski**, HON400: All College Honors Colloquium

The Objectification of Women In Mass Media: Effects On Self and Society
**Stephanie Berberick**, COM 450: Communication and Society

Advertising Embraces Violence As Much As We Do
**Ken Obstarczyk**, COM 450: Communication and Society

9:30 a.m. – 10:30 a.m. (each paper 15 minutes)
Smiles: Life After Darwin Is Not So Bad After All
**Matthew Guminiak**, Philosophy and Physics

Exploring Nature and the Arts Through Poetry
**Ryan Meyer**, English

Beyond Silence: Women and Truth In William Faulkner's "Go Down, Moses"
**Amy Widman**, English Education

South Africa's Apartheid Crisis In J. M. Coetzee's "Age of Iron" and the Absence of Action
**Kelsey Till**, ENG 346: Non-Western Literature After 1945

10:30 a.m. – 10:45 a.m. – Break

10:45 a.m. – 12:15 p.m. (*each paper 15 minutes*)
Advertising and the Formation of Women's Self-Identities
**Meaghan O'Connor**, COM 450: Communication and Society

Does Body Image In Advertising Change What We Look Like?
**Amy Klosowski**, COM 450: Communication and Society

Drunk On Advertising: Under the Influence of Social Marketing
**Nicholas Sessanna**, COM 450: Communication and Society

Can Buy Me Love: How Advertising Influences Online Dating Profiles
**Patricia Krehbiel**, COM 450: Communication and Society

You've Got a Friend in Group Communication: Communication Concepts in Toy Story 3
**Molly Jo Lundquist**, SPC 307: Group Communication and HON 400: All College Honors Colloquium

# Technology
## Room 208

8:30 a.m. – 10:15 a.m.
*Presenting:*

8:30 a.m. – 9:30 a.m. (*each talk 15 minutes*)
Developing a Systematic Approach to the Selection and Validation of a Secondary Source of Supply
**Jason Zika**, INT 689: Research Design and Methods

Reducing Lead Times At API Heat Transfer
**Robert Kuty**, INT 689: Research Design and Methods

Isostatic Pressing Effects On Silicon Carbide
**Lawrence Banach**, INT 689: Research Design and Methods

Making the Transition To LED Technology
**Dwight Vogel Jr**., INT 689: Research Design and Methods

9:30 a.m. – 10:15 a.m. (*each talk 15 minutes*)
Preserving Vintage Analog Electric Guitar Effects
**Dan Butch**, INT 689: Research Design and Methods

How Does eBay Change Our Consumer Behavior?
**Aaron Fisher**, COM 450: Communication and Society

Branding Sports Uniforms: Will This Be the Final Chapter In Commercializing American Sports?
**Sean Vara**, COM 450: Communication and Society

# Physical Geography, Sciences and Mathematics
## Room 210

9:00 a.m. – 12:00 p.m.
*Presenting:*

9:00 a.m. – 10:00 a.m. (*each talk 15 minutes*)
The Effects of Caffeine Consumption On Sleep and Academic Performance
**Timothy Webb**, AMT 495: Special Project in Applied Mathematics

Good Clean Fun: Maximizing Recycling Potential At an Amusement Park
**Michelle Rua**, AMT 495: Special Project in Applied Mathematics

The Atmospheric Components of a Wetland's Water Budget: Woodlawn Beach State Park, New York
**Joseph Petre**, Multidisciplinary Studies

Foraging In the Landscape of Fear: Coyotes and Deer In New York State
**Anthony Hartman**, BIO 495: Problems in Biology

10:00 a.m. – 11:00 a.m. (*each talk 15 minutes*)
Genetic Population Structure of North American Common Loons
**Arielle Austin**, Biology

Bilateral Bone Development and Fluctuating Asymmetry In Common Loons (*Gavia immer*)
**Sarah Anderson**, Biology

Approaches To the Automatic Discovery of Patterns In Biosequences
**Chris Rajczak**, AMT 495: Special Project in Applied Mathematics

Cellular Automata, Fractals, Properties of Pascal's Triangle Mod m and Generalizations
**Michael Jansma Jr.**, Mathematics Education (7-12), **Michelle Rua**, Applied Mathematics, and **Katherine Sember**, Mathematics Education (7-12)

11:00 a.m. – 12:00 p.m. (*each talk 15 minutes*)
Comparative Analysis of Cx32 Transmembrane Domains Using Tryptophan Scanning Techniques
**Matthew Brennan**, Biology

Approaches To the Synthesis of Indian Yellow
**Andrew Schick**, Chemistry

Mathematical Modeling of Syphilis
**Mike Kourt** and **Stephen Bell**, AMT 495: Special Project in Applied Mathematics

United States Demographics and Health Care Expenditures: The 2003 Medical Expenditure Panel Survey
**Kathryn Boughton**, AMT 495: Special Project in Applied Mathematics

# Education
## Room 208

10:30 a.m. – 12:00 p.m.
*Presenting:*

10:30 a.m. – 11:30 a.m. (*each talk 15 minutes*)
Determining the Current Identity of Technology Education
**Carlene Heimiller**, **Courtney Lewis**, and **Robert Tompkins**, INT 689: Research Design and Methods

Assessing the Appropriateness of Jamestown Community College's Engineering and Technical Curricula As These Relate To Industry Need
**Michael Weaver**, INT 689: Research Design and Methods

A Cultural Journey
**Valjeta Ahmeti**, **Marisa Gaiser**, and **David Weaver**, INE 390: International Education Discovering China

Metacognition In the Classroom: An End To the Intellectually Unfulfilled
**Jessica Lardo**, HON 400: All College Honors Colloquium

11:30 a.m. – 12:00 p.m. (*each talk 15 minutes*)
Modeling Stream Dynamics: Does Inquiry Translate To Regents Performance?
**John Elliott**, SCI 690: Master's Project

Efficacy of Creativity and Creative Problem Solving Training On Undergraduate Student Retention and Graduation Rates
**Juliana Sanchez Trujillo**, CRS 590: Independent Study

# Humanities II

## Room 210B

1:00 p.m. – 4:30 p.m.

*Presenting:*

1:00 p.m. – 2:00 p.m. (*each talk 15 minutes*)

21st Century Marriage: The Union of a Couple In Love Or Who Designed the Dress?
**Stephanie Hacker**, COM 450: Communication and Society

Advertising, Tourism, and the American Dream
**Philip Leone**, COM 450: Communication and Society

Social Networking Saturation: The Electronic Soapbox
**Jon DAvolio**, COM 450: Communication and Society

Freedom of Information: How Twitter Is Changing Media and Our World
**Darryl Granger**, COM 450: Communication and Society

2:00 p.m. – 3:00 p.m. (*each talk 15 minutes*)

Magazines: Fashion Bibles Or Couture Commandments?
**Naomi Defensor**, COM 450: Communication and Society

The History of Cool: What Is It and How Is It Determined
**Joshua Brown**, COM 450: Communication and Society

Preying On Cool: Coolhunters and the Commodification of Hip
**Nick Sodaro**, COM 450: Communication and Society

Reality Television and Its Social Media Effect
**Jenn Jankowski**, COM 450: Communication and Society

3:00 p.m. – 4:00 p.m. (*each talk 15 minutes*)

Reality TV....Why?
**Christopher Kos**, COM 450: Communication and Society

'Hate' Drunk On Alcohol Advertising
**Jarrad Mendel**, COM 450: Communication and Society

Stepping Over the Line: Stereotypes
**Kelsey Dieter**, COM 450: Communication and Society

Stop! You've Been Emotionally Seduced
**Felicia Williams** and **Porsha Coaxu**, COM 450: Communication and Society

4:00 p.m. – 4:30 p.m. (*each talk 15 minutes*)

Can Advertising Transform Us Into Physicians?
**Lindsay Hawkins**, COM 450: Communication and Society

Drawing a Thin Line: An Analysis of the Media's Impact On the Diet Industry
**Rianna Greenfield**, COM 450: Communication and Society

# Social Sciences

## Room 210

1:00 p.m. – 3:30 p.m.

*Presenting:*

1:00 p.m. – 2:00 p.m. (*each talk 15 minutes*)

African American Churches: Why Not At the Frontlines of the Same-Sex Marriage Battle?
**Henry Zomerfeld**, Political Science

The New People: Effects of Immigration On the U.S. Economy
**Joanna Guzma**, HON 400: All College Honors Colloquium

Democracy In the Middle East
**George Washington**, PSC 389: International Conflict and Resolution

The Behavior of Captive Western Lowland Gorillas In Comparison To Behavior In the Wild
**Anthony Hartman**, ANT 495: Primate Research

2:00 p.m. – 3:00 p.m. (*each talk 15 minutes*)

Using the First Rib To Determine Age-at-Death In Humans
**Bryan Fleck**, Anthropology

Dating and Mating: Sex and Relationships Among College Women
**Divine Sebuharara**, Health and Wellness

Historic Representations of Mental Illness In U.S. Society
**Devon Slobodzian**, HON 400: All College Honors Colloquium

Habituation and Accumulation of Bodily Capital: An Autoethnographic Inquiry Into the Culture of Boxing and the Formation of Muscle Memory
**Watoii Rabii**, Sociology

3:00 p.m. – 3:30 p.m. (*each talk 15 minutes*)

Renaissance Faires: Gender and Power Relations At the Medieval Festival
**Chantale Onesi-Gonzalez**, Sociology

The Role of Gestures In Visual-Spatial Working Memory
**Jessie Segal**, PSY 498: Honors Thesis

# Performances and Exhibits

## Margaret Bacon Gallery, Upton Hall

10:00 a.m. – 5:00 p.m.

Works in cast iron and plaster by: **Noel Brown**, **Norm Cramer**, **Dave Huurman**, **Melissa Jakubowski**, **Adrienne Klein**, **Liz Morley**, **Jeremy Popielarz**, **Alison Spongr**, **Rachelyn Spry**, **Kelsey Stay**, **Kate Weidner**, and **Audry Yash**

## Flexible Theatre, Donald Savage Bldg.

10:00 a.m. – 11:00 a.m.

"Love Allegory"
Actors: **Derick Sherrier**, **Cassondra Conrad**, **London Lee**, **Paul Gabreillini**, **Ceceilia Baron**, **Lee Becker**, **Raquel Da Souza**, and **Nadra Dennis**

## Warren Enters Theatre, Upton Hall

2:00 p.m. and 8:00 p.m.

Dance Concert: "Fantastic Voyage"
Ballet inspired by the music of Earth, Wind, and Fire
Dancers: **Nicole Aversa**, **Lindsey Bessman**, **Jane Calvert**, **Thomas Cambria**, **Charlotte Cardwell**, **Eriketa Cirulli**, **Helen Fabre**, **Emily Frack**, **James Huggins**, **Amanda Kugler**, **London Lee**, **Angela Lopez**, **Gabriela Moreno**,

**Jarron Morimer**, **Vincent Pontillo**, **Danica Riddick**, **Syidah Sabir**, **Lewis Sepulveda**, **Derick Sherrier**, **Omar Vargas**, **Missy Vargo**, **Lauren Wagner**, and **Lancia Woods**

# Poster Sessions and Displays

## Butler Library Lobby

9:00 a.m. – 4:00 p.m.

### Session I: 9:00 a.m. – 10:00 a.m.

*Presenting:*

BengalGram: An Interactive E-Card System
**Daniel Schmidt** and **Andrew Siradas**, CIS 495: Special Project in Internet Development

Beyond Teenage Pregnancy and Drug Addiction: Rethinking Social Problems
**Kenneth Njorog**, Sociology

Catching Up On the News: Bringing the Buffalo Courier-Express Photographs To Flickr
**Kaylene Waite**, EDC 690: Master's Project

China Leapfrogs Over Western Dominance: An In-depth Observation Into China's Development
**Alicia Frank**, Political Science and **Jessica Keough**, Individualized Studies

The City On MP3
**Keri Gould**, HON 400: All College Honors Colloquium

Developing A Game of Hangman With Scratch
**Bhypone Xomvilaysack** and **Steven Pardee**, CIS 389: Advanced Topics: Object Oriented Programming

The Differences In Tailgating Between Men and Women
**Carla Kuhl**, Psychology and **Rebekah Guetti**, Psychology

Dying To Know: Cosmetics and Animal Testing
**Briandi Little** and **Janelle Zerkowski**, FTT 450: Issues in the Apparel and Textile Industry

Embracing the Challenge of Teaching In Culturally Diverse Environments
**Meryl Hewitt**, Childhood Education

Evaluation of Px2010 Initiative: Underage Drinking: It's Everybody's Problem
**Joelle Delmonte**, Psychology, **Patrick Roberts**, Student Personnel Administration, **Kayla Carter**, Sociology, **Linnay Harmer**, Sociology, **Christine Vasquez**, Psychology, **Brittany Hastings**, Psychology, **Tatianna Pessoa**, Sociology, and **Sametra Toe**, Sociology

Exploring a Possible College Drinking Motive: Rebellion
**James Harter**, Psychology and **Jennifer Barszcz**, Psychology

Fashion Diversity Mash: Eastern Harmony
**Gwendolyn Smith**, HON 400: All College Honors Colloquium

Foxy Lady: Era-Inspired Fashion Design
**Janine Diaz**, HON 400: All College Honors Colloquium

Keep Spreading the Word…You Want To Be a Part of It…PDS!
**Fred Szafranski**, Exceptional Education and Elementary Education

Kinde'RRR'garten: An Elementary Effort For a Greener Globe
**Alexandra Baule** and **Sara Stanley**, HON 400: All College Honors Colloquium and EDU 312: The Teaching of Science and Mathematics

The New Traditional Student: How School, Work and Family Contribute To Academic Success
**Jeff Rich**, Psychology

Nobody Wants HO
**Donald Beckman**, HEW 411W: Critical Issues in Health and Wellness

Predicting College Students' Life Satisfaction
**Carly Gruarin**, **Rebekah Guetti**, **James Harter**, **Pamela Morclick**, **Katherine Mosier**, **Hetal Patel**, **Kristina Pelletier**, and **Lonisa Sledg**, PSY 450: Research Methods

Programming With Alice: The Twisted Journey of Little Red Riding Hood
**Sean Reardon** and **Tenisha Jones**, CIS 389: Advanced Topics: Object Oriented Programming

Puppy Kisses Are the Best
**Caitlin Cooley**, HEW 411W: Critical Issues in Health and Wellness

Sexism Still Alive In Sportscast
**Alexa Myers**, HON 400: All College Honors Colloquium

The Triple Threat
**Marissa McMullan**, HEW 411W: Critical Issues in Health and Wellness

Vending Wisely At Buffalo State College?
**Zachary Trunzo** and **Angela Hastings**, HON 400: All College Honors Colloquium

The Whopping Whooping Cough
**Nija Solomon**, HEW 411W: Critical Issues in Health and Wellness

Who's That In the Mirror?
**Ashlie Kohlhagen**, HEW 411W: Critical Issues in Health and Wellness

The World Wild Web: A Sinful Pleasure
**Mehrnoush Vahid Tareshi**, HEW 411W: Critical Issues in Health and Wellness

### Session II: 10:00 a.m. – 11:00 a.m.

*Presenting:*

An Apple a Day Keeps the Doctor Away
**Daniel Rogers**, HEW 411W: Critical Issues in Health and Wellness

Attitudes Towards Statistics
**Melissa Young**, Psychology and **Morgan Morningstar**, Psychology

Crystalline Glazes
**Seth Rowitsch**, Design (Ceramics)

Decal Exploration On Clay
**Emily Chamberlain**, Design (Ceramics) and Art Education

Drawing People To the Haunted House With Alice
**Timothy O'Toole** and **Jonathan Orcutt**, CIS 389: Advanced Topics: Object Oriented Programming

Driver Attributions: The Primacy Recency Effect In the Driving Environment
**Grant Tepper**, Philosophy and Psychology

Effect of Caffeine Consumption On College Academic Performance and Individual Study Habits
**Laura Thomas**, PSY 499: Independent Study

The Effects of Caffeine Consumption On Observed Jitteriness
**Michelle Switzer**, PSY 499: Independent Study

The Environment Can Predict Your Future
**Stefanie Schwagler**, HEW 411W: Critical Issues in Health and Wellness

From Mushrooms To Flowers
**Jonathan Keenan**, History

From Quarry To Projectile Point: Sourcing Lithic Materials From the Orry B. Heath Collection
**Joshua Mauro**, Anthropology Honors Research

Gender Differences In Coping Styles, Drinking To Cope, and Alcohol-Related Problems
**Jennifer Barszcz**, Psychology and **James Harter**, Psychology

Gender, Letters of Recommendation and Hiring Judgments: What's the Deal?
**Leticia Tellez**, Psychology

History and Actualization of Historic Substrates
**Eric Frisino**, Communication Design

How To Successfully Manage Your Business
**Chelsea Tarasek**, HON 400: All College Honors Colloquium

An Image For Every Woman: Promotional Materials For Everywoman Opportunity Center
**Hannah Burn**, FTT 451: Senior Project

Image Transfer On Clay
**Stephanie Dukat**, Design (Ceramics)
*Exhibit in the Mezzanine Level*

Is It Worth the Weight?
**Latrice Romeo**, HEW 411W: Critical Issues in Health and Wellness

Modeling Cold Air Drainage In Watertown, NY Using ArcGIS
**Alyssa Russell**, Geography and Planning

Nature Did Not Get It Wrong
**Desiree Perrault**, HEW 411W: Critical Issues in Health and Wellness

Parapsychological Beliefs Among Buffalo State College Students
**Sumit Shukla**, Psychology

The Power and Simplicity of Python: A Comparison With C++
**Ernesto Miranda**, CIS 389: Advanced Topics: Object Oriented Programming

The Princess and the Psyche: Effects of Identifying With Princesses and Princes
**Holly Nowak**, Psychology and **Amanda Ciminelli**, Psychology

The Relationship of Diffuse-Avoidant Identity Style and Stress To Binge Eating Among College Students
**Amy Crowley**, Psychology

Scratch: A Fun and Easy Way To Learn Programming
**Walter Promowicz II** and **Cassandra Stevic**, CIS 389: Advanced Topics: Object Oriented Programming

Screen Printing On Clay
**Stephanie Dukat**, Design (Ceramics)
*Exhibit in the Mezzanine Level*

Stretch Out the Stresses of Cancer
**Jessica Campas**, HEW 411W: Critical Issues in Health and Wellness

Working During College, Stress Levels and Academic Achievement
**Theresa Kruczynski**, Psychology

## Session III: 11:00 a.m. – 12:00 p.m.

*Presenting:*

ADHD, Sex and Fear of Intimacy
**Lyndsey Marsh**, Psychology

Catering To Changing Tastes – Enhancing Fine Dining With Nutrition Information At Campus House
**Ashley Ray** and **Jane Calvert**, HTR 495: Special Project Internship

Ceramic Surface Decoration
**Ryan Gray**, Design (Ceramics)

Cluster B Personality Disorders and Their Dimensional Fit With the Five-Factor Model
**Morgan Morningstar**, PSY 499: Independent Study

The Effects of Caffeine Consumption On Reaction Time
**Sopheeah DeTine**, PSY 499: Independent Study

An Examination of the Effects of Caffeine Consumption On Stress Levels
**Caitlin Glinski**, PSY 499: Independent Study

Faunal Analysis and Foodways At Old Fort Niagara
**Chelsie Whitman**, Anthropology

Gender-Priming Effects On Gender Stereotype Bias
**Louis Dangelo Jr.**, **Adam Wolpink**, **Erin McGrath**, **Christina Jasek**, **Amanda Bahr**, **Sara Brothwell**, **Sumit Shukla**, **Jessie Segal**, and **Michael Bertozzi**, PSY 430: Psycholinguistics

Handcrafted CAD
**Vincent Pontillo**, Design (Metal/Jewelry)

In the Open Air: A landscape Painting Project In New York State
**Rachel Wright**, Fine Arts (Painting and Sculpture) and Philosophy
*Exhibit in the Mezzanine Level*

Intragroup Dominance Among Male Black Howler Monkeys, *Alouatta caraya*
**Aimee Willett**, ANT 495: Special Project

Jump Starting a Local School's Fitness and Nutrition Curriculum
**Leah Knott**, HEW 499: Independent Study and HON 400: All College Honors Colloquium

Luster On Porcelain
**Stephanie Dukat**, Design (Ceramics)
*Exhibit in the Mezzanine Level*

Non-Traditional Crystalline Glazes
**Seth Rowitsch**, Design (Ceramics)

Nothing But the Bare Bones: Sexual Dimorphism In the Human Skeleton
**Katelyn Steiner**, Anthropology and **Eryn Macleod**, Anthropology

Parental Monitoring As a Protective Factor Against Risky Behaviors In College Students
**Samantha Belanger**, Psychology

Personality and Its Relationship To Success In Statistics Courses
**Amanda Ciminelli**, Psychology and **Meghan O'Connor**, Psychology

Portraiture: The Inner Made Outer
**Julia Bottoms**, Art Education

Pronoun Resolution Engages Direct Access To Antecedent Representations
**Jessie Segal**, Psychology and **Kevin Meindl**, Philosophy

Sexual Education and Risky Sexual Behavior In College Students
**Kathryn Larson**, Psychology

Social Movements Against Austerity In Europe
**Clifford Cawthon**, PSC 470: Senior Seminar

Stimulant Use Among College Students: Its Relationship To Academic- and Work-Related Variables
**Theresa Kruczynski**, Psychology

Strange Brew: Coffee, Oil, Diamonds and Women's Rights In Africa
**Raymond Ranaletta**, PSC 470: Senior Seminar

Student Perceptions of Safety On Campus
**Kristina Atwell**, **Carla Kuhl**, **John Meyers**, **Kristen Young**, **Sarah Ackerman**, **Lindsay Cosenza**, **Louis Dangelo**, **Lisa Fears**, **Amanda Grenier**, **Vendi Hodge**, **Perry Kent**, **Hannah Klie**, **Lauren Lamb**, **Kevin Meindl**, **Colleen Montreuil**, **Morgan Morningstar**, **Katie Mosier**, **Amanda Reed**, **Angelicia Rouse**, **Leticia Téllez**, **Salome Tsige**, **Shayla Washington**, and **Caley Wekenmann**, Psychology Club

Talk To the Hand: Do Gestures Help Comprehension?
**Sumit Shukla**, Psychology, **Megan Delo**, Psychology, **Jon Summers**, Psychology, and **Katelyn Klipfel**, Psychology

The Thunderous Silence: Gay Marriage, Proposition 8, and African American Churches
**Henry Zomerfeld**, PSC 470W: Senior Seminar

Traditional Japanese Urushi Lacquer Techniques
**Adam Kessler**, Design (Furniture and Fiber)

Weight Loss Strategy Preferences: How Does Experience Influence Them?
**You Lin**, Dietetics and Nutrition

## Session IV: 12:00 p.m. – 1:00 p.m.

*Presenting:*

Advertising: It Is Just the Crazy World We Live In
**Jeff Buchman** and **Catherine Setlif**, COM 450: Communication and Society

Braking System Design For Buffalo State's Mini Baja
**Michael Garofolo**, ENT422W: Machine Design II
*Mini Baja Vehicle located outside library*

Dresser Without Handles
**Adam Kessler**, Design (Wood/ Furniture and Fibers)

The Evolution of Mythology
**Matthew Kanaley**, English Education

Exposure To Predator Scent Increases Defensive Responding In Rats In the Shock-prod Burying Test
**Melissa Young**, Psychology

Felting As a Sustainable Media
**Tegan Ford**, Design (Fiber)

Harm Reduction Drug Policies In the United States, Europe, and Canada
**Thomas Vrabel**, Political Science and Philosophy

I Get a Kick Out of E.U.: Soccer Hooliganism and European Politics
**Kyle Mang**, Political Science

The Initial Exploration of the Eruptive History of the Mighty Santa Ana
**Elisabeth Gallant**, Geology and Earth Sciences

The Influence of Sexual Education On Later Sexual Behaviors
**Caitlyn Gorham**, PSY 499: Independent Study and HON 400: All College Honors Colloquium

Is Anger Related To a Sense of Control?
**Phyllis Ernst**, **Deleon Hughes**, **Carla Kuhl**, and **Moje Omoruan**, PSY 450: Research Methods

Is Waterfront Redevelopment Right For Buffalo?
**Kevin Ward**, PLN 430W: Senior Thesis

Making Ghosts
**Andrew Hutner**, Fine Arts (Sculpture)

Mapping Ballistic Spatial Distributions On Santa Ana Volcano
**Krista Ventura**, **Mark Tate**, and **Annabelle Wardzala**, GES 497: Volcanology and Geology of El Salvador

Mini Baja: 2011's Design For Buffalo State's Vehicle
**Michael Garofolo**, **Alex Hubert**, and **Cody Siezega**, ENT 422W: Machine Design II
*Mini Baja Vehicle located outside library*

Mini Baja Drivetrain Design: Powering Past the Competition
**Cody Siezega**, ENT 422W: Machine Design II
*Mini Baja Vehicle located outside library*

Mini Baja Suspension Design
**Alex Hubert**, ENT 422W: Machine Design II
*Mini Baja Vehicle located outside library*

New Philadelphia Archaeological Field School
**Keishaia Griffith**, Anthropology

New START, For Better Or For Worse?
**Jesse Montes**, PSC 389: International Conflict Resolution

Performance Art: Contemporary Art On Campus
**Zachary Pritchard**, Fine Arts (Sculpture)

Putting the Pedal To the Metal: A Bicycle Survey of Buffalo's West Side
**Bernice Radle**, Urban Planning Senior Thesis

Reinforcement Sensitivity In Schizophrenia: Two Mediating Factors
**Brian Kline**, Psychology

Role Call: National Acting Auditions
**Michael Zito**, Theater

Roles of Gender In Contemporary Media
**Kevin Kilmurray**, COM 450: Communication and Society

Sculptural Welding: Expressive Applications For Technical Skills
**Grace Higginbottom**, Design (Fibers)

Set, Costume, and Lighting Design For "The House of Blue Leaves"
**Daniel Beason**, Theater

Student Attitudes On Prescription and Non-prescription Stimulant Use
**Kelly Custode**, Psychology

When Speech Goes Wrong
**Zuri Appleby**, **Shere'e Bates**, **Nicole Bonsell**, **Ariel Briguglio**, **Darren Lisicki**, **Kevin Meindl**, **Laken Pogorzelski**, **Tiffany Ransom**, and **Brian Woods**, PSY 430: Psycholinguistics

Wood: A Continuous Role Reversal
**Tina Rott**, Fine Arts (Sculpture)

## Session V: 1:00 p.m. – 2:00 p.m.

*Presenting:*

A Biotelemetric Study of Homing Behavior In Response To Displacement and Homeward Orientation of the Diamondback Terrapin (*Malaclemys terrapin*) In Barnegat Bay, NJ
**Nicole Wood**, Biology and **Julianne Winters**, Biology (Drexel University)

Bloom's Questions: Applying Bloom's Taxonomy In the Classroom
**Sara Unger**, Exceptional Education

Cosmic Rays and the Decay of Muons
**Carrie O'Donel**, HON 400: All College Honors Colloquium

Documentation of Garnet Occurrences In Western Connecticut
**Michael Ludwick**, Earth Sciences

Exploring Relationships Among Materials
**Jacquelyn O'Brien**, Fine Arts (Sculpture)

Evolution of "Green Practice" In the United States
**Vandyke Kotoroka-Yiadom**, Economics, Finance and Business Management

Fiberglass Form Casting
**Zachary Pritchard**, Fine Arts (Sculpture)

Fixture Design For ITT Heat Exchanger Support Column Production
**Tyler Oehman**, **Justin Pratt**, and **John Roeseler**, ENT 422W: Machine Design II

From Concept To Costume: Costume Design For "Julius Caesar"
**Benjamin Streeter**, Theater

GIS Spatial Analysis of Recycling In the Town of Cheektowaga
**Nicole Kmiotek**, Planning

Hazard Mapping: Applying GIS and RS To Predict Impacts of Hurricane Landfall In Chetumal, Mexico
**Eric Snyder**, GEG 595: Independent Study

Hazard Mapping: How Structure of Southeastern Mexican Homes Stand Up To Hurricanes?
**Aaron Boci**, GEG 495: Independent Study

Hydrogen Generator
**Alex Hubert**, Mechanical Engineering Technology

The Impact of the Buffalo Urban Outdoor Education Foundation On Great Lakes Education
**Sean Collins**, **Christopher Radamacher**, **Hillary Benesch**, **Kelly Bohlen**, **Nicole Huber**, **Ronald Johnson**, **Jennifer Kimpton**, **Karen Riker**, **Margaret Smith**, and **Dawn Weihrich**, SCI 685: Evaluation in Science Education

Improvement of Radial and Thrust Bearings For Turbo Air-2020 Centrifugal Compressor
**Eric Zagmester**, **Anthony Rauth**, and **Jason Brueggeman**, ENT 422W: Machine Design II

Improving Motor Mounting Efficiency For TA-3000 and TA-6000 Centrifugal Compressors
**Brian Sullivan**, **Darren Jackson**, and **Adam Penasack**, ENT 422W: Machine Design II

Life-Size Figurative Sculpture: The Lost-Wax Method
**Janet Black**, Fine Arts (Sculpture)

Mastering Materials
**Leigh Johnson**, Art History and Fine Arts (Sculpture)

Material and Content: An Investigation of Processes
**Rachel Wright**, Fine Arts (Painting and Sculpture) and Philosophy

Monitoring of Thermal and Hydrothermal Activity of Santa Ana Volcano Post-2005 Eruption
**Elisabeth Gallant**, **Morgan Swieczkowski**, **Jamie Mischner**, and **Michael Grzeskowiak**, GES 497: Volcanology and Geology of El Salvador

Pattern and Fusion
**Pei-chen Wu**, Design (Metals/Jewelry)

Resource Allocation and Canopy Architecture May Influence the Invasion of the Nonnative Wetland Plant, *Phragmites australis*
**John Hirtreiter**, Biology

Rocks Tell Stories About Building Ancient Mountains: The Sebago Pluton, Migmatites and Associated Granites, Maine
**Daniel Naschke**, Earth Sciences Education and Geology

Sculptural Fibers
**Leigh Johnson**, Art History and Fine Arts (Sculpture)

The Secrets Behind Teacher Motivation
**Diane Addes**, SCI 690: Master's Project

Supplemental Mapping and Field Checking of Granites From the Eastern Sebago Pluton, Maine
**Krista Ventura**, Geology

Travel Around the World To Exotic Countries While Taking Classes With Semester At Sea
**Natalie Jordan**, Student Personnel Administration

Two-Wheeled Balancing Wheelchair
**Shawn Kibler**, **Andrew Gier**, **Raul Del Hierro**, and **Gary Johnson**, ENT 465W: Senior Design

## Session VI: 2:00 p.m. – 3:00 p.m.

*Presenting:*

Adult Learners and For-Profit Colleges
**Shannon Gordon**, ADE 690: Master's Project

Assembly Methods To Increase the Production Rate of ITT Heat Exchangers
**Tyler Oehman**, **John Roeseler**, and **Justin Walker**, ENT 422W: Machine Design II

Cause and Effect of QAR and Silent Reading
**Stacey Blatt**, **Cheryl Mohabir**, **Courtney Hammond**, **Daniel Myers**, and **Andrew Pacific**, EDU 511: Methods of Teaching English Language Arts

Creating Online Geologic Field Experiences Using 3D Virtual Rocks In Google Earth
**Amanda Klawinski**, Earth Sciences and Geology and **Peter Zaffram**, Geology

Deletion of the Chaperone GRP170a Causes Accumulation of Unfolded Proteins In the Roundworm *Caenorhabditis elegans*
**Mark Lojacono**, Biology Secondary Education

Electrical Personal Transport Project
**Dan Swiatek**, **Ozzie Palmer**, **Kadrii Brown**, and **Alex Tonn**, ENT 465: Senior Design

Evolution and Development In Southeastern Mexico: Evidence From a Coastal City of Chetumal
**Aaron Boci**, Geography

Examination and Study of the Effects of Septic Systems On Water Quality In Gott Creek, Clarence, New York
**Heather Lewis** and **Laura Noe**, GES 460: Environmental Field Methods and Analysis

Extrasolar Planets: Solar Systems Like Our Own?
**Jason Sylvester**, Earth Sciences

Geochemical and Morphological Analysis of the 2005 Eruptive Products, Ilamatepec Volcano, El Salvador
**Mark Tate**, Earth Sciences

Groundwater Degradation and Its Effects On Well Water Quality
**Chad Pawlikowski**, GES 460: Environmental Field Methods and Analysis

Growth and Characterization of $DyMnO_3$ and $HoMnO_3$ Thin Films
**Anthony Delmont**, Physics

High Throughput Measurement of Critical Micelle Concentration of a Surfactant Using Microfluidic Device
**Ashley Wojtkowski**, Forensic Chemistry and **DeAnna Nigro**, Chemistry

House and Structural Vulnerabilities Encountering Hurricane Hazards In Cancun, Mexico
**Mandoud Omar**, Mechanical Engineering Technology and Geography

Influence of Nitrogen and Phosphorus Addition On $CO_2$ Exchange In a Restored Temperate Grassland
**Lynn Socha**, Biology

Living Materials
**Andrew Hutner**, Fine Arts (Sculpture)

Melting Pot
**Aric Verrastro**, Design

New Student Orientation Program: Assessing Outcomes
**Amanda Feldman**, Student Personnel Administration

Original Math and Science Literature Books Created For Elementary Students: The Create, Publish and Share Project Phase III
**Jennifer Grant**, Exceptional Education, **Alicia Tripi**, Exceptional Education, and **Christopher Guidarelli**, Exceptional Education

Pen Pal Project: Integrating Visual and English Language Arts
**Nanci Beckley**, **William O'Flaherty**, **Sonja Peterangelo**, **Robyn Ruiz**, and **Julieann Swan**, EDU 511: Methods of Teaching English Language Arts

Performance of A Newly Constructed Stormwater Detention Pond
**Jessica Bakert**, Individualized Studies

Relating Geophysical Fluid Dynamics Simulations To Real World Applications: Introductory Exercises For High School and Undergraduate Students
**Natalie Alvut**, Earth Sciences and **Michael Ludwick**, Earth Sciences

The State of Education: An Overview
**Leah Kerr**, HON 400: All College Honors Colloquium

Undergraduate Learning Assistants In a Hybrid Economics Course
**Anna Cummings**, Applied Mathematics, **Micha Owens**, Elementary Education, **Amber Buchholz**, Business, **Grace Higginbottom**, Design, **Ronald Deleonardis**, Exceptional Education and Elementary Education, **Heather Dennis**, Exceptional Education and Elementary Education, **Sarah Anderson**, Biology, **Dave Gaiser**,

History, **Alicia Howells**, Exceptional Education and Elementary Education, **Marco Casali**, Mathematics Education, **Katelyn Reese**, Elementary Education, **Desiree Wiley**, Communication Studies, **Jason Dormer**, History, and **Kyle Kunkle**, History

Using GigaPan Technology To Study Stratigraphy Inside the Santa Ana Volcano
**Krista Ventura**, Geology and Earth Sciences

Water Permeability of Junctional Proteins In a Nonjunctional Membrane
**Jaafar Hamdan**, Biology

## Session VII: 3:00 p.m. – 4:00 p.m.

*Presenting:*

Analytical Utility of Surface Functionalized Porous Silicon
**Eedeebari Banuna**, Chemistry

Apathy Toward Numbers: Can College Students Solve Basic Math Problems?
**Michael Krygier** and **Nicole Fry**, HON 400: All College Honors Colloquium

Ball Joint Qualification Test Fixture Design
**Michael Garofolo**, **Brian Sullivan**, **Anthony Rauth**, **Alex Hubert**, **Cody Siezega**, and **Eric Zagmester**, ENT 422W: Machine Design II

Chemical Analysis of Hawaiian Baby Woodrose and Morning Glory Seeds
**DeAnna Nigro**, Chemistry

Classifying the Semiprecious Stone Collection Housed In the Earth Sciences Department
**Maxwell Hain**, Geology

Control Panel Design For R.P. Adams
**Anthony DiMascio** and **Kris Wiktorowski**, ENT422W: Machine Design II

Design of a Lightweight Recreational Pop-up Camper
**Jason Brueggeman**, **Adam Penasack**, **Eric Hill**, **Andy Tarasek**, and **Darren Jackson**, ENT 422W: Machine Design II

The Effect of Excessive Levels of Fertilizers Used By Golf Courses On Local Water Quality
**Shannon Penton** and **Dave Raham**, GES 460: Environmental Field Methods and Analysis

*Escherichia coli* Contamination In Erie County's Bennett Beach Sand
**Nicole Bennett**, Geology and Biology

Guide Bar Redesign For ITT Heat Exchangers
**Justin Walker**, **Brian Demerle**, and **James Burns**, ENT 422W: Machine Design II

Impact Wrench Carrier For Gasketed Plate Heat Exchanger Assembly
**James Burns**, **Brian Demerle**, and **Justin Pratt**, ENT 422W: Machine Design II

The Importance of Being Non-Traditional: Taking a Gap Year In AmeriCorps
**Sarah Clerc**, HON 400: All College Honors Colloquium

Indirect Preparation of Amino-Terminated Organic Thin Films On Silicon Substrates
**Kayla James**, Forensic Chemistry

Lead Concentrations In South Buffalo Soils
**Jennifer Monheim**, GES 460: Environmental Field Methods and Analysis

The Misconceptions of Hookah: Is It Safe?
**Desiree Fuoco**, **Alicia Maneen**, **David Gass**, and **Lindsay Brignon**, CHE 406: Analytical Toxicology

A New Approach and Intervention In Special Education
**Kristi Guinness**, Exceptional Education and Elementary Education

Recognition of Emotion Via Photographic Imagery
**Kristina Subsara**, Fine Arts (Photography)

The Record Newspaper: An Investigation of Resident Student Readership
**Julia Merulla**, HON 400: All College Honors Colloquium

Research In the Efficacy of "Your Baby Can Read" Early Language Development System
**Nicole Davidson**, HON 400: All College Honors Colloquium

Simulations of Geophysical Flows
**Steven Dutter**, Physics

Trommel Chain Drive Tensioner Modification
**Andrew Tarasek** and **Eric Hill**, ENT 422W: Machine Design II

Using Water Level Loggers To Identify the Propagation of Seiches In the Buffalo River
**Amanda Klawinski**, Earth Sciences and Geology

Why Aristotle De-Friended Me: An Examination of Social Networking Websites
**Nadeen Bawa**, HON 400: All College Honors Colloquium

Why Can't I Go Swimming?
**Maxwell Hain**, **Alice Mayer**, and **Ryan Zmuda**, GES 460: Environmental Field Methods and Analysis

Wireless Television Turntable
**Andrew Fromm**, **Sean Lucas**, **Dan Wascak**, and **Fikirte Assefa**, ENT 465W: Senior Design

# Undergraduate Summer Research Fellowship Program

**Arielle Austin**, Biology
Faculty Mentor: Professor Amy McMillan, Biology
Abstract Title: **Genetic Population Structure of North American Common Loons**

Arielle will graduate on May 2011 with a B.A. degree in Biology with a minor in Criminal Justice. She intends to obtain a graduate degree in genetics and become involved in wildlife field research either in this country or internationally and eventually become a genetic counselor.

During the summer and fall of 2010 Arielle conducted research that described Common Loon population genetic structure across North America. She determined the sex of particular birds using a PCR (Polymerase Chain Reaction) assay and genotyped almost 200 loons from Western Canada at six microsatellite loci. Arielle also had the opportunity to work with biologists at the BioDiversity Research Institute to band, collect blood samples, and measure loons in Maine. The results of her research will be presented to Environment Canada and will contribute to a publication on loon population genetics.

**Nicole Bennett**, Biology and Geology
Faculty Mentor: Professor Gary W. Pettibone, Biology
Abstract Title: ***Escherichia coli* Contamination In Erie County's Bennett Beach Sand**

Nicole will graduate in May 2012 with a dual major in Biology and Geology. After graduation she plans to attend graduate school and then work for the New York State Department of Environmental Conservation.

Nicole's project focused on evaluating the amount of the bacterium *Escherichia coli* (*E. coli*) present in water collected at various depths from sand located in sunbathing areas at Bennett Beach in Erie County, New York. Her work showed that *E. coli* was present in higher numbers in beach sands than in adjacent lake water. Her work should be important to public health officials concerned with beach safety. Nicole plans to present her findings at a scientific meeting in Syracuse, New York in Spring, 2010.

## **Janet Black**, Fine Arts (Sculpture)

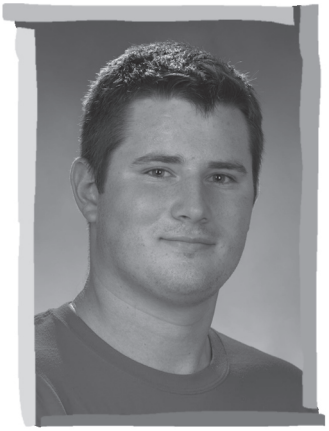
Faculty Mentor: Professor Kenneth Payne, Fine Arts
Abstract Title: **Life-Size Figurative Sculpture: The Loss Wax Method**

Janet Black will graduate with a Bachelor of Fine Arts in Sculpture. After graduation she plans on pursuing her interest in creating commission sculpture for public places. Her interest lays in making sculpture a more integral part of our daily lives.

For her project; Janet took an age-old course of study – a pilgrimage to study firsthand the work of the masters that have influenced her. Upon completion of her travels, Janet returned to Buffalo to apply what she saw and learned. She completed one sculpture that was a copy of a Degas, and started two others, one by Michelangelo and one by Rodin. In addition to studying these masters she was able to experience firsthand how historically sculpture has been integrated into the urban environment.

## **Matthew Brennan**, Biology

Faculty Mentor: Professor I. Martha Skerrett, Biology
Abstract Title: **Comparative Analysis of Cx32 Transmembrane Domains Using Tryptophan Scanning Techniques**



Matthew is a biology major and will graduate in May 2011. He plans to attend graduate school in medicine or biomedical research.

Matthew studied the structure of gap junction channels through tryptophan scanning analysis. Using site-directed mutagenesis he substituted tryptophan for fourteen amino acid residues within the transmembrane domains of connexin32 and tested the function of each mutant using the Xenopus oocyte expression system. He is continuing his summer research through the Honors Research Program in Biology, analyzing data in preparation for publication later this year.

## **Steven Dutter**, Physics

Faculty Mentor: Jude Sabato, Earth Sciences and Science Education
Abstract Title: **Simulations of Geophysical Flows**

Steven is an engineering physics major and expects to graduate in May 2012. He plans to attend graduate school in either physics or engineering.

Steven performed laboratory simulations of geophysical flows in a rotating tank. He mapped out three well-known flow regimes that represent different types of atmospheric flow patterns. The experiments showed symmetric flow; steady wave patterns and turbulence. Steven was also able to observe amplitude vacillation between a 2-wave and a 3-wave pattern, without a change in external parameters. This phenomenon is well documented in the literature but is difficult to reproduce in the laboratory.

**Tegan Ford**, Design (Fiber)
Faculty Mentor: Professor Elena Lourenco, Fine Arts
Abstract Title: **Felting As a Sustainable Media**

Tegan Ford is a Fiber Design major with a minor in Sculpture. She will graduate with a Bachelor of Fine Arts degree in December 2011, after which she plans to attend graduate school. Tegan ultimately hopes to pursue her studio practice at a professional level and to teach in higher education.

Tegan attended a week-long workshop on traditional felting techniques held at a small cooperative farm (croft) in Scotland. After returning to Buffalo, she applied what she learned to fit her 3-dimensional visions. Tegan has been working the process of felting into large molds and has been experimenting with the addition of various non-wool materials. She hopes to publish a book on her interpretations and contemporary applications of these techniques. Currently, she is submitting her work to exhibitions regionally and nationally.

**Eric Frisino**, Design (Visual Communications)
Faculty Mentor: Professor Michael Anthony, Design
Abstract Title: **History and Actualization of Writing Substrates**

Eric Frisino will graduate with a Bachelor of Fine Arts degree in Visual Communication in May, 2011. After graduation he plans to continue his education by pursuing a Master of Fine Arts degree in Design, specifically Typography.

Eric researched the history of making typographic marks and the substrates on which those marks were written. Eric's focused on the materials and fabrication methodologies used in ancient times and a comparative look at those used up to and including the Industrial Revolution. Based upon his research, Eric hand-crafted materials in Papyrus and parchment scrolls.

**Matthew Guminiak**, Philosophy and Physics
Faculty Mentor: Professor Lisa Berglund, English
Abstract Title: **Life After Darwin Is Not So Bad After All**

Matthew Guminiak is majoring in philosophy and physics, and as part of the 3+2 engineering program at Buffalo State will be studying engineering at another institution in Fall 2011; he expects to graduate in 2013.

Matthew studied the Victorian bestseller "Self-Help" by Samuel Smiles and Charles Darwin's "On the Origin of Species". Matthew compared the success and influence of each book on period thought and social ideals, particularly liberalism in terms of social reform. His research builds on the fact that these two books were published on the same day by the same firm, became incredibly successful, and together dominated late 19th-century thinking about the human condition.

## **John Hirtrieter**, Biology

Faculty Mentor: Professor Daniel Potts, Biology
Abstract Title: **Resource Allocation and Canopy Architecture May Facilitate the Invasion of the Nonnative Wetland Plant, *Phragmites australis***

John Hirtrieter completed his B.A. in Biology in December 2010 and intends to pursue a career that combines his interests in technology with his education in biology.

John's research examined photosynthetic resource allocation as a mechanism to explain the invasion of common reed, *Phragmites australis,* into a cattail wetland at Tifft Nature Preserve. John demonstrated that the allocation strategy of *Phragmites*, which more evenly distributes resources between sun and shade leaves than cattail, may help explain the ability of *Phragmites* to invade wetland plant communities. His research reinforces the idea that contrasting resource allocation strategies help determine competitive outcomes between species in turn influencing the composition and structure of wetland plant communities.

## **Alex Hubert**, Mechanical Engineering Technology

Faculty Mentor: Professor James Mayrose, Technology
Abstract Title: **Hydrogen Generator**

Alex Hubert is a major in the Mechanical Engineering Technology program and plans to graduate in May, 2012. After graduation, Alex plans to continue his education at Buffalo State and earn a master's in Mechanical Engineering Technology.

For his research, Alex successfully designed, built, and tested a hydrogen generator. The results led to drafts of further development projects in this field. He currently is working on a manuscript that will be submitted for publication later this year. In Spring, 2009 Alex represented Buffalo State at the "SUNY Undergraduates Shaping New York's Future: A Showcase of Scholarly Posters at the Capitol" and presented his research in the field of renewable energy in Albany to the New York State legislators.

## **Adam Kessler**, Design (Furniture and Fiber)

Faculty Mentor: Professor Sunhwa Kim, Design
Abstract Title: **Traditional Japanese Urushi Lacquer Techniques**

Adam J. Kessler is a senior majoring in Wood/Furniture Design and a minor in Fiber Design. He is graduating in May, 2011. He plans to continue his education at the graduate level in Furniture Design and hopes to open his own furniture studio in the future.

Adam worked with Traditional Asian natural lacquer, also known as 'chil' in Korean or 'urushi' in Japanese, and built a special humidity cabinet called a furo to cure his lacquer pieces. He researched the history of 'chil' or 'urushi' throughout Asia and learned how to use special sanding stones and powders to achieve a high polish finish. He experimented with coloring the lacquer using pigments and creating surface designs using silver powder.

## **Theresa Kruczynski**, Psychology

Faculty Mentor: Professor Michael MacLean, Psychology
Abstract Title: **Stimulant Use Among College Students: Its Relationship to Academic- and Work-Related Variables**

Theresa Kruczynski is a psychology major and will graduate in May, 2011. She is planning on pursuing a doctoral degree in clinical or school psychology.

Theresa's study investigated college students' use of stimulants, ranging from coffee and energy drinks to illegally obtained ADHD medications and methamphetamines. The study included examining students' motives for using and the negative consequences they experience. Overall, stimulant use was more closely linked to work variables than academic variables. Theresa will present her research findings at the Society for Research in Child Development conference in Montreal, Canada in Spring, 2011.

## **Angela Lopez**, Arts and Letter (Dance)

Faculty Mentor: Professor Janet Reed, Theater
Abstract Title: **The Intersection of Dance and Technology**

Angela Lopez is an Arts and Letters major with a focus in dance. She will graduate in May 2011. After graduation, she plans to continue creating work for her intermedia performance group COLLECTIVE and also hopes to continue her education in dance and new media.

Angela's research consisted of work in both dance and technology. In effort to create a different kind of performance environment, she sought to control both sound and lighting elements with her own movement. To create this interactive environment, Angela used the programming language Max/Msp/Jitter that enabled the real-time creation and manipulation of both a soundscape and projected moving images (via wireless sensors) during a live performance. She premiered her piece, "Malpica: Red Herring" at the Hallwalls Member's Exhibit and also performed it during Buffalo State's Faculty Choreographer's Showcase.

## **Daniel Naschke**, Earth Science Education and Geology

Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education
Abstract Title: **Rocks Tell Stories: Sebago Pluton's Migmatites and Associated Granite Bodies**

Daniel Naschke is a dual major in Geology and Earth Science Education. He will graduate in May, 2011.

Dan's research consisted of both field work on rocks in southwestern Maine and subsequent laboratory work on his field data and collected specimens. As a result of his field work, Dan produced a geological and specimen map of the boundary of the Sebago pluton, a 300 million-year-old granite body. The lab work was spent mostly detailing the microscopic aspects of collected specimens. Dan is co-author on a manuscript to be submitted to a geology journal and presented his research findings at the Northeastern/North-Central joint sectional meeting of the Geological Society of America held in Pittsburgh in March, 2011.

## **Chantale Onesi-Gonzalez**, Sociology

Faculty Mentor: Professor Staci Newmahr, Sociology
Abstract Title: **Renaissance Faires: Gender and Power Relations At the Medieval Festival**

Chantale Onesi-Gonzalez is a Sociology major. She will be graduating in 2011, after which she plans to pursue a Ph.D. in Sociology.

Chantale undertook a participant observation study and immersed herself into the Faire-goers experience by dressing in garb and maintaining a Faire persona. She observed Faire workers using jokes and limericks, often of a hyper-masculine nature, to draw attention to the products they were selling. Her paper explores hypermasculine performances and negotiation of insider and outsider statuses in the context of consumerism at Renaissance Faires.

## **Jeff Rich**, Psychology

Faculty Mentor: Professor Robert Delprino, Psychology
Abstract Title: **The New Traditional Student: How School, Work and Family Contribute To Academic Success**

Jeff Rich will graduate with a B.A. in Psychology in December, 2011. After graduating, he plans on pursuing a Ph.D. in Social Psychology.

Jeff's research examined how the demands and perceived level of support students received from the workplace, family members and school support programs contributed or diminished students' academic success and experiences. Using the nominal group technique, he was able to identify how supportive or not each factor was, as well as obtain information as to how the school could better assist students to provide an enhanced college experience. Jeff's research has been accepted for presentation at the 2011 Annual Convention of the American Psychological Association which will take place in Washington DC in August.

## **Seth Rowitsch**, Design (Ceramics)

Faculty Mentor: Professor Robert Wood, Design
Abstract Title: **Crystalline Glazes**

Seth Rowitsch graduated with a B. S. degree in Ceramics in December, 2010. He plans on opening up his own production studio where he will make and sell functional ceramic objects.

For his project; Seth researched crystalline ceramic glazes to find out what materials, firing factors and variables contributed to the growth of micro and macro crystals and how to develop and control the "ringing" effect around the crystals that developed. In addition, he tested for color development and fluidity of the crystal and glaze melt. All of the glazes tested were at the high fire range (23450 F) and conducted on both stoneware and porcelain clay. His research and testing provided a basis for application to his functional ceramic work.

## **Andrew Schick**, Chemistry

Faculty Mentor: Professor M. Scott Goodman, Chemistry
Abstract Title: **Approaches To the Synthesis of Indian Yellow**

Andrew Schick plans to graduate in 2011 with a major in Chemistry. Andrew then plans to go to graduate school and earn an advanced degree in Chemistry or related field.

Andrew conducted laboratory research to develop a synthetic pathway to Indian Yellow, a pigment originally derived from natural sources, but is now no longer available. During the course of his research, Andrew became familiar with many standard techniques used in synthetic organic chemistry. He was also used advanced instrumental techniques, including Nuclear Magnetic Resonance and Gas Chromatography/Mass Spectrometry. Andrew plans to present the results of his research work at a regional meeting of the American Chemical Society.

## **Aric Verrastro**, Design (Metal/Jewelry)

Faculty Mentor: Professor Stephen Saracino, Design
Abstract Title: **Melting Pot**

Aric Verrastro is a Bachelor of Fine Arts Major in the Metal/Jewelry program and will graduate in Spring 2011. He plans to enter graduate school upon the completion of his undergraduate work and hopes to ultimately teach Metalsmithing/Jewelry at the college level.

Aric's project incorporated research into his Peruvian and Lebanese ancestry to his creative activity in the metals studio. His main objective was to connect historical elements of the past to design conventions of the present using contemporary design principles and metalsmithing techniques. He achieved this through combining visual elements from the ancient civilizations of Peru and Lebanon and through forming and lost wax casting techniques, integrating them into the object. He plans to exhibit his object through competitive juried national exhibitions.

## **Chelsie Whitman**, Anthropology

Faculty Mentor: Professor Susan Maguire, Anthropology
Abstract Title: **Faunal Analysis and Foodways At Old Fort Niagara**

Chelsie Whitman will graduate with a B.S. in Anthropology in May 2011. After graduation, Chelsie plans to attend graduate school to pursue her passion for zooarchaeology.

This research involved the analysis of faunal remains excavated in 2009 by the Buffalo State College Archaeological Field School at Old Fort Niagara. Chelsie cataloged the animal remains and identified, where possible, the species of animals present in the assemblage. These data provide clues about how the soldiers' diet changed over time. Chelsie identified a large number of passenger pigeon remains in the assemblage and has focused her research on passenger pigeon remains from other military sites in the northeast.

**Rachel Wright**, Fine Arts (Painting and Sculpture) and Philosophy
Faculty Mentor: Professor Lin Xia Jiang, Fine Arts
Abstract Title: **In The Open Air: A landscape Painting Project In New York State**

Rachel Wright is a triple major in painting, sculpture and Philosophy and will graduate in May, 2011. After graduation she plans to attend graduate school to earn an MFA in painting and sculpture. Her paintings and sculptures have been represented in several shows both on and off campus.

For her project, Rachel traveled to the Hudson region and inspired by nature and with attention to color, shape, variety, and movement, produced a series of oil paintings, exploring both color and texture. Her time painting out of doors helped Rachel learn about her process of framing: cueing in on seemingly insignificant observations and creating an intimate connection between the object and the viewer. Through her paintings, Rachel hopes that the viewer would assess her personal aesthetic and analyze the intimate relationship between humans and the natural world.

**Pei-chen Wu**, Design (Metals/Jewelry)
Faculty Mentor: Professor Tara Nahabetian, Design
Abstract Title: **Pattern and Fusion**

Pei-chen Wu is a Bachelor of Fine Arts candidate in the Metal/Jewelry program and will graduate in Spring, 2011. After graduation, she plans to focus on working within a commercial jewelry company. In addition to pursuing a career in the jewelry industry, she plans to attend graduate school and complete a M.F.A. degree.

Pei-chen researched the distinctive Japanese metalsmithing technique mokume-gane. This technique involves a lengthy process to achieve a workable sheet of metal. Pei-Chen found that traditional methods of mokume-gane involved hammering, punching, drilling, and chiseling the metal in order to obtain a pattern. Through her experimentation, she discovered several ways to create patterns that pushed beyond traditional methods and developed her own designs. Pei-Chen plans to use mokume-gane in a series of body adornments and exhibit her work in national juried shows.

**Melissa Young**, Psychology
Faculty Mentor: Professor Jean DiPirro, Psychology
Abstract Title: **Exposure To a Predator Stimulus Increases Defensive Responding In the Shock-prod Burying Test**

Melissa Young is a junior at BSC who is pursuing a B.S. in biological psychology. She plans to graduate in the Spring, 2012 and attend graduate school in the pursuit of a Ph.D. in behavioral neuroscience.

Her summer research project was designed to investigate a rodent model of anxiety: predator-scent exposure. She found that rats exposed to cat scent engaged in more defensive behaviors both during exposure to the predator stimulus and later in the shock-prod burying test than did rats exposed to a control (i.e., rat) scent. These data add to a growing body of literature that suggests that predator-stimulus exposure is a valid rat model of anxiety.

**Henry Zomerfeld**, Political Science
Faculty Mentor: Professor Kyeonghi Baek, Political Science
Abstract Title: **African American Churches: Why Not At the Frontlines of the Same-Sex Marriage Battle?**

Henry Zomerfeld is a senior Political Science major and Legal Studies minor and will graduate in May, 2011. He plans to attend law school after graduation. Henry serves as the Chief Justice of the Judicial Council for the United Students Government and is the captain of the American Mock Trial Association where he serves as a student attorney.

For his research, Henry examined African American churches focusing on their views and their political involvement with regard to the issue of same-sex marriage. Unlike Roman Catholics and Mormons, who have fought diligently against same-sex marriage on the front line, African American Christians have been relatively quiet on the issue. Their absence is attributed to larger issues in their communities, worsened by the recent economic downturn, and the lack of trust in conventional political institutions and the media.

# *Arts*

## Ceramic Surface Decoration

**Ryan Gray**, Design (Ceramics)
Faculty Mentor: Professor Robert Wood, Design

My direction as a ceramic artist has been greatly influenced by classical wheel-thrown vessels from ancient Greek and Roman times as well as the study of the simple brushstrokes and philosophy from ancient Japanese pottery tradition. I appreciate the beauty of simplicity in form of these historical references; vessels which are elegant and dynamic yet timeless. My early work focused mainly on the formal elements and principals of design and was a direct representation of classical forms. I created vases and stemware that consisted of intricate banding and collaring separated by curves and lines to create dramatic lift in the form. I have always strived for ideal craftsmanship, precision, and proportions, searching for harmony in exaggeration. After years of trying to master the material and process in the most traditional of ways, I have expanded and started abstracting, dissecting, and altering forms and surfaces in a more modern manner. My current body of work involves vessels with overstated proportions and minimal surface decoration to embrace and support the nuances of the form and natural qualities of the material. I am researching and experimenting with luster overglazes applied to different clay bodies and glazes. My work in ceramics is an outlet for control where I see results that are in direct correlation to the hard work and thought invested.

**Presentation Type and Session**: Poster III

## The City On MP3

**Keri Gould**, HON 400: All College Honors Colloquium
Faculty Mentor: Professor Andrea Guiati, Director,
All College Honors Program

My music is inspired by global artist, M.I.A.'s sound mash-ups and the music theory of circuit bending in which "what is performed challenges the audience's perception of the source material" and captures the vibrancy of New York City street noise (Navas np). As you listen to my pieces, you will hear snips of sound and the words of passer-bys from each title's street, mixed into danceable tracks that embody those neighborhoods. Using a handheld cassette recorder, I collected noises as I trekked from Bedford Ave, Brooklyn to Chinatown, pulsing though the subway and up 7th Ave. With Apple's Garageband software, narrowed down over two hours of audio experiences and I filtered, cut, layered, looped, and mixed them. Using walking sounds and car horns, I messed a musical texture that was harmonious and then added cuts of the tourists and locals' voices to create hooks speckled with off-beats. My pieces are a post modern work; I captured words and noises floating through the heavy air of The City and made them anew in my four original tracks I hope to be appreciated by musical intellectuals to trance dancers in the club.

**Presentation Type and Session**: Poster I

## Crystalline Glazes

**Seth Rowitsch**, Design (Ceramics)
Faculty Mentor: Professor Robert Wood, Design

For my 2010 Undergraduate Summer Research Fellowship I worked on taking the science of glaze formulation and blended it with the creation of my ceramic work to create beautiful one of a kind crystalline glaze patterns on my ceramic vessel forms. Crystalline glazes are specialized types of glaze in which certain percentages of zinc oxide are used in the glaze to grow and produce actual zinc crystals in the glaze. When fired correctly these crystals often create beautiful patterns and shapes that, through lots of research and experimentation, can learn to be controlled. Getting well-developed crystals can prove to be quite difficult. In order for the crystals to develop properly you must "soak" or hold the kiln's temperature at very particular stages during a firing. Also, the glazes must be very fluid at a relatively lower temperature to cause the crystals to grow and that fluidity often time causes some of the glaze to actually flow off the pieces. For my project I ran many tests and fired many kiln loads with different crystalline glazed pieces to find the recipe that created the best results and then manipulated the way the crystals mature to create different patterns. I then tested different colorants such as cobalt oxide and nickel oxide to create different colored crystals and to try and create crystals that are colored differently than the background in order to emphasize the crystals themselves. Come and see the beautiful and elegant results of my summer of crystal growing!

**Presentation Type and Session**: Poster II

## Decal Exploration On Clay

**Emily Chamberlain**, Design (Ceramics) and Art Education
Faculty Mentor: Professor Robert Wood, Design

For my research project I have been exploring different techniques of image transfer through the use of decals on clay. The decal process I am using is with image manipulation through a computer program and then printed with a laser printer onto special decal paper. The printer ink contains oxides that when transferred and fired onto the surface, leave an image on the surface. This is just one of the available techniques for image transfer. In this process I am choosing my own images to transfer onto the surface of clay. Other results that I will be presenting are the use of commercially produced decals. These ready-made decals are applied to already bisqued and/or glazed work. Additionally, using clay slip and china paints have allowed me to develop more than one color in images, which have really impacted my work. Using the slip process gave me

a more natural image, while using the china paints provided me with a more crisp and clean image. Experimenting with different decal processes has aided me in discovering new solutions to the finishing of my body of work rather than glaze or oxides. In using these different decal processes, I have discovered the variations that these processes produce. This has been made possible through the experimentation of testing the decals with different glazes, oxides, stains, and clay bodies in order to discover the best result, and how the different colors will affect the images. This has all further impacted my body of work.

**Presentation Type and Session**: Poster II

## Dresser Without Handles

**Adam Kessler**, Design (Wood/ Furniture and Fibers)
Faculty Mentor: Professor Sunhwa Kim, Design

I created a large dresser that is both functional and aesthetically pleasing. I decided to use oak and purple heart lumber for this piece. I used so much purple heart lumber that I decided to call this dresser "Roxinho" which is the Portuguese word for this type of Brazilian lumber. I designed this piece to have room to hang clothes, over-sized drawers, and a place to hold a television set. I left a large opening near the top of Roxinho to allow sunlight and air to flow throughout the piece. I wanted to have a clean look to the dresser so I decided to use push to open hinges and drawer slides. The dimensions of this piece are 45" wide, by 25" deep, by 75" tall, my most massive project to date. It took me an entire semester to build Roxinho. The frame and purple heart panels are all connected using only wood, dowels, and glue. The only metal fasteners that I used were to connect the hinges and drawer slides to the frame. I learned a great deal about engineering and joinery through this project. I am currently using Roxinho to store my own clothing at home and it has been working out great!

**Presentation Type and Session**: Poster IV

## Exploring Relationships Among Materials

**Jacquelyn O'Brien**, Fine Arts (Sculpture)
Faculty Mentor: Professor Elena Lourenco, Fine Arts

In this particular exploration, I have discovered already the importance that material relationships hold. The premise of my project is to explore, evaluate and utilize the organic nature and quality specific to the relationships of particular materials. I have embarked on a journey into the exploration of material qualities and the expression of change in those qualities as a result of their combination with other materials. My focus primarily is on organic materials and subtle processes such as linen, cloth, dye and sewing. I am looking to push certain organic relationships in a rough or unnatural way. With this grant I have been afforded the ability to work with a variety of structural materials, such as fabrics, screens and veneers, as well as more ephemeral or transformative materials, such as beeswax, tar and dye as I search for relationships in form and tactility that both appear natural as well as communicate conflict or unease. My desire is to use these delicate materials to create a separate understanding then they are normally viewed within; I want to change their context and attach it to a subconscious concept that I have a difficult time escaping from. As I develop as an artist, this process of exploration will bring me to a place of reevaluation in my work and my concepts. This is a major step for my practice as well as my ability to take risks with my work. I am learning that nothing is too precious to be safe from taking a chance to make it a more successful piece.

**Presentation Type and Session**: Poster V

## Felting As a Sustainable Media

**Tegan Ford**, Design (Fiber)
Faculty Mentor: Professor Elena Lourenco, Fine Arts

My research this summer focused on traditional methods of making felt and ways of incorporating felt as a natural and sustainable material in sculptural processes. I participated in two workshops this summer that helped me gather information towards this process. The first was a felt rug-making workshop conducted by felt-maker Christine White, where I learned techniques for making felt that is both strong and durable, with the potential to hold its own form. I also learned the technique of nuno felting (a form of inclusion felting where a piece of woven fabric is imbedded during the felting process) and created many sample works utilizing these processes. Midsummer, I went to Ullapool, Scotland and participated in a ten day natural dying and felting workshop. This took place on a small sustainable farm, called a croft, and covered everything from raising the sheep to producing the final felt product. Using only local wools and local plants for dying, we made the smallest impact on the environment. I plan to present detailed documentation (information and images) from these workshops, sample works created during my research, and one or two finished sculptural works.

**Presentation Type and Session**: Poster IV

## Fiberglass Form Casting

**Zachary Pritchard**, Fine Arts (Sculpture)
Faculty Mentor: Professor Elena Lourenco, Fine Arts

My project was about the exploration of fiberglass resin as a sculptural material. Traditionally, fiberglass resin has been used in marine applications, for one example, due to the material's lightweight, durable, and waterproof properties. The strength, created by the inlay of glass cloth in the resin, allows the material to build incredible strength in only a few layers, maintaining it's lightweight properties. Thus, in sculptural applications, it is often used as a mold backing material. This allows one to make large-scale molds that are incredibly strong, yet manageable in terms of weight. My original intention was to use it for form casting. I got a great feel for the material and developed a good working rhythm in terms of mixing, applying, and set time sequence. I then explored it

various non-traditional applications. As stated previously, I did use the fiberglass for mold making and form casting, and additionally as a stand-alone fabrication material. In creating free-standing sculpture, I also purchased resin specific pigments and experimented with the coloration of the material. I will have these works on display at my poster presentation.

**Presentation Type and Session**: Poster V

## From Concept To Costume: Costume Design For "Julius Caesar"

**Benjamin Streeter**, Theater
Faculty Mentors: Professor Ann Emo, Theater and Professor Erica Fire, Theater

In March 2011 the Buffalo State College Casting Hall Productions and Theater Department presented "Julius Caesar". I had two important positions for bringing this production to stage. This presentation will show my research for the design work and the costume construction process and will illustrate the steps taken when producing costumes for the stage. This presentation will cover the whole design and construction process in which I took part of for the costumes of the Buffalo State College's production of "Julius Caesar". I did much research for all the costumes of the show as well as an in-depth study of the construction aspect of one of the garments that I built. My overall goal of the presentation will be to present the design process for costumes in the theater and the construction process for this garment specifically.

**Presentation Type and Session**: Poster V

## Handcrafted CAD

**Vincent Pontillo**, Design (Metal/Jewelry)
Faculty Mentor: Professor Tara Nahabetian, Design

Computer Aided Design (CAD) design software and three-dimensional printing technology is creating an impact on contemporary craft. Advancements in 3D printing processes have increased the variety of printing materials and created accessibility for artists to utilize this technology. I am interested in the printing of ABS (Acrylonitrile Butadiene Styrene) plastic, and the capabilities that this material and production method offers for the visual artist. Utilizing industrial manufacturing processes in combination with traditional craft techniques, I created a series of art jewelry pieces influenced by my research and experimentation with "RhinoCAD", a software program used to create three-dimensional models and renderings. Using this software, I intuitively built small scale, volumetric forms which were later printed out of ABS plastic using fuse deposition modeling (FDM). After each 3D print was received, I manipulated the form using a variety of goldsmithing techniques while experimenting with the surface using various dyes. By exploring the capabilities of this material in relation to craft art applications, I produced work that blends traditional craft with industrial processes.

**Presentation Type and Session**: Poster III

## History and Actualization of Historic Substrates

**Eric Frisino**, Communication Design
Faculty Mentor: Professor Michael Anthony, Design

My research was based on the environmental impact of historic substrate production in Europe, Asia, and Northern Africa. The main focus was on papyrus, parchment, vellum, and paper up to the 18th century and the industrial revolution in Europe. For each substrate the writing tools and materials that accompanied them in history were also studied. Research for this project was done using the resources of many local libraries as well as taking advantage of The Cary Collection of old books housed in the Wallace Library. This research supported my hypothesis that early craftsman who produced with local materials and later materials that were available through trade across Asia, Europe, and Africa were often more conscious of what they were taking from nature and how they were using it. These craftsmen worked with natural cycles and understood what could and could not be done in order to get the most bounty from the land while not damaging the environment beyond repair. All of this changed during the industrial revolution when machinery was invented and developed that could produce paper from a new material, wood. With this came many caustic additives and the extreme destruction of natural resources including water and forestland. From this evolution is substrate production we have only created more damaging and harmful processes for the production of writing mediums. Now, more than ever before, I believe is the time to change how we think about what we are producing for writing materials, how we are producing it, and how we can once again work with the environment so that we can thrive as a society and nature can return it a balanced ecosystem. After completing the research I was able to create by hand three scrolls, each of a different substrate. One was created with papyrus, one with parchment, and one with paper. Each scroll contains a brief history of the medium and an illustrated 'how to' make that medium. I will have a small bound book available containing my research, resources and photos of my final pieces. The final pieces will also be available for viewing at the time of my presentation.

**Presentation Type and Session**: Poster II

## Image Transfer On Clay

**Stephanie Dukat**, Design (Ceramics)
Faculty Mentor: Professor Robert Wood, Design

This research on image transfer allowed for experimentation with different printing and image transfer techniques. My goal was to gain knowledge and learn the techniques to effectively use on my functional and sculptural ceramics surfaces. To develop these surfaces I explored relief and screen-printing, photolithography and decals. Many ceramicists in the field use these methods today. These techniques allow for manipulation of, and more detailed imagery for a ceramic surface. An image can be transferred using various stains, oxides and glazes. Through this research I was able to develop

these techniques, thus gaining the ability to add a new level of content within my work. This technique is helpful to obtain the same image multiple times or with layers of color. I will be sharing these techniques with the other students in the ceramics program so they can also benefit from my results.

**Presentation Type and Session**: Poster II
Exhibit in the Mezzanine Level

## In the Open Air: A Landscape Painting Project In New York State

**Rachel Wright**, Fine Arts (Painting and Sculpture) and Philosophy
Faculty Mentor: Professor Lin Xia Jiang, Fine Arts

As an artist I am motivated and inspired by nature and our place within nature. Every time I ventured out into the wilderness of the Hudson region, the power and the beauty of nature constantly inspired me. Not just nature alone but also man's imposition nestled within nature. This duality allows for a stunning variety of color and shape within the landscape. I think that every artist has an intuitive aesthetic and that if nurtured with knowledge and experience (and understanding the nature of the material) the artist is fully equipped to exploit the process according to his/her artistic vision. Without the knowledge of how to approach the material the artist may have the vision and an understanding of their aesthetic but may not have the tools to translate their vision into a reality. I needed to demystify the painting process through empirical investigation. The more I painted the more intimate I got with the material. Oil paint has a sensual physicality to it and is a very forgiving material leaving room for many possibilities for form, color and texture. I have come to learn one of the most important qualities of a painter is how they see the world and their ability to translate their vision. I spent a lot of time observing and thinking about color, shapes, and composition. I began to notice the inherent essence of nature and how it already possesses the formal qualities that artists strive for: color, shape, variety, movement, gesture etc. An artist must articulate their vision or perspective by establishing a composition. Through painting and an inquiry of conventional beautiful I realized my interest and aesthetic leaned more toward the insignificant, the displaced and the decomposing. In other words I began to learn my personal process of framing: cueing in on these seemingly insignificant observations and creating an intimate connection between the object and the viewer. After completing this painting project I hope that the viewer looking at my paintings would assess my personal aesthetic and analyze the intimate relationship between humans and the natural world.

Presentation Type and Session: Poster III
Exhibit in the Mezzanine Level

## Intersection of Dance and Technology

**Angela Lopez**, Arts and Letters
Faculty Mentors: Professor Janet Reed, Theater, Professor Brian Milbrand, Communication, and Professor Tomas Henriques, Music

My research consisted of work in both dance and technology. In combining the two media, I set out to create an environment that challenged traditional notions of dance in performance. By incorporating motion sensors into the performance environment I was able to take dance beyond the proscenium to the site-specific, inhabiting a space of my own design. With sensors tracking my motion, calculating my speed, and detecting the light and shadow I cast within my environment, I structured a visual and sonic landscape that was entirely interactive and dependent on my choreographic decisions in real-time. Such manipulation of my immediate environment compelled me to draw parallels with the Deepwater Horizon Spill of 2010. I felt that the devastating ends of environmental manipulation could be far better conveyed with this interactive environment than simply through dance movement alone. I titled the piece: Red Herring. During my presentation I will discuss the process of learning and designing with Max/ MSP/ Jitter. I will also describe the impetus behind creating dance in concert with technology. My lecture will focus on the conceptual aspects of contemporary performance and how emerging genre of dance are founded. Finally there will be an interactive workshop that will allow people to play with the patch I created. The participants will be able to see how the Wiimotes and sensors manipulate both the sound and lighting elements in real-time through their own improvisational movement.

**Presentation Type and Session**: Dance Studio, Rockwell Hall B22, April 29, 2:00 p.m. – 3:00 p.m.

## Kinetic: Partnering Objects

**Vincent Pontillo**, Design (Metal/Jewelry)
Faculty Mentor: Professor Janet Reed, Theater

Jewelry fascinates me. Jewelry can call attention to a multiplicity of sociological topics. It can be worn during high profile events, displaying audacious wealth. It can be worn on a daily basis, adorning the body. The social contexts and underlying comments portrayed by worn jewelry have always sparked an interest to me. Displayed on its own, jewelry objects are inherently precious through the use of materials, and diligence of the craftsman. Unfortunately when this piece is static, we lose touch with the interactivity between object and wearer. The tactile presence of jewelry begs for attention, to be worn and move with the body. I am attracted to the kinetic movement of art objects, and the interaction of the 'wearer' that causes this reactive motion. I enjoy wearable objects that create implied volume in space, responding to actions and movement. Jewelry begins to become a kinetic response to movements made in a certain moment of time. I see this interaction as a dance, partnering between person and object. Most recently, I have had the opportunity to pursue dance. I have found that this addition has begun to

modify my methodology of art object making. I expanded this study of movement through the creation of interactive, large-scale objects used during a choreographed piece. The outcome of this multidisciplinary exploration expresses how each form of art, from dance to visual arts, can inspire experimental forms of creation.

**Presentation Type and Session**: Dance Studio, Rockwell Hall B22, April 29, 1:00 p.m. – 2:00 p.m.

## Life-Size Figurative Sculpture: The Lost-Wax Method

**Janet Black**, Fine Arts (Sculpture)
Faculty Mentor: Professor Ken Payne, Fine Arts

This research involved travel to France and Italy. The lost wax method of casting wax into metal was the basis for my research. My goal was to immerse myself into the culture and art of the masters. I had initially studied two specific sculptures: " The Dying Slave" by Michelangelo and "Danaid" by Rodin. I sketched and built small maquettes of both poses. Traveling to Rome, Venice, Florence, and Paris. Photographing both of these masterpieces in the round, I decided to create "Danaid". I constructed an armature and built the sculpture. I used wet clay, plaster, and wax. The presentation will consist of drawings, maquettes, photographs of both Paris, and Italy, and the process of lost wax method from start to finish. In addition I went back to a copy of a Degas sculpture I had previously started and revised it after having seen the original. I used this copy to learn the traditional method of loss wax casting and prepared the sculpture for casting in Iron. I will present documentation of this process as well. The entire activity gave me the foundation to create life-size figurative sculpture in public spaces.

**Presentation Type and Session**: Poster V

## Living Materials

**Andrew Hutner**, Fine Arts (Sculpture)
Faculty Mentor: Professor Elena Lourenco, Fine Arts

I believe there is an important interaction between material and the space it exists in. When making art, I let materials speak to me and dictate the progress of my sculpture. I have been drawn towards more visceral characteristics in these material studies; like when wax begins to look like skin, and plaster is bone. With my art, I touch on the fantastic reality that we are composed of all these complex structures that we never get to see. I am currently exploring a new technique called "encaustic wax painting" which involves melting and pigmenting beeswax that can be brushed on in layers. As I connect with the material, I plan to use it in as many different ways possible to help progress the creation of future works. I got the idea to use this type of waxwork when I found out about a Belgium sculptor named Berlinde de Bruyckere. Her work captures an amazing sense of decay and transformation of human figures casted in wax that transform into plants. Her waxwork gives a biomorphic effect similar in theme to my own aesthetics, and is a technique I wish to emulate and explore further this semester. There is a supernatural presence to her work; it is an unexplainable magic that sculptures can achieve. It is that sensation that I want to attain with my work this semester, and I believe that further exploration of wax and other new materials will get me closer to that goal.

**Presentation Type and Session**: Poster VI

## Love Allegory

**Derick Sherrier**, Theater, **Cassondra Conrad**, Music and Theater, **London Lee**, Theater, **Paul Gabreillini**, Theater, **Ceceilia Baron**, Theater, **Lee Becker**, Theater, **Raquel Da Souza**, Theater, and **Nadra Dennis**, Theater
Faculty Mentor: Professor Carol Beckley, Theater

Love Allegory is a performance piece composed of a female ensemble dance, a duet dance, a monologue, a scene, slam poetry, live piano and a singing duet. Each mini piece involves at least one man and one woman, aesthetically telling the couples love story using performing arts. The stories are from the female's point of view and showcase what some women go through in their relationships. We want this piece to be a large reflective mirror on male and female audience members so men and women can realize the affects of their actions. The show is centered on the theme, "Listen to your heart." The main objective of this ensemble is to prove if you are truly in love then every day should be Valentine's Day. Everything in this piece is original and has been created by the cast except the ensemble song which is Christina Aguilera's "You Lost Me" and the monologue and scene which were excerptions from Naomi Iizuka's play "Polaroid Stories."

**Presentation Type and Session**: Performance, Flexible Theatre, Donald Savage Building, April 30, 10:00 a.m. – 11:00 a.m.

## Luster On Porcelain

**Stephanie Dukat**, Design (Ceramics)
Faculty Mentor: Professor Robert Wood, Design

Ceramics luster can enhance the surface of a porcelain clay surface. A luster is a liquid metal that is typically applied to the surface of clay or glazes and fired onto the surface. Unlike normal glazes, luster does not adhere to the surface; instead they sit on the exterior and fuse onto the glaze. My research focused on finding the ideal conditions to obtain this metallic surface. Luster depends on various factors to get a successful shine. Some factors include consistency of application, temperature, and atmosphere of the kiln. I experimented with both liquid and pen formed luster, both giving unique results. Learning the steps to acquire a successful luster on a porcelain claybody has benefited my own ceramic work by adding another dimension to the surface. It is excellent for adding accents and fine detail onto both functional and sculptural ceramics. Lustered surfaces allow for a unique contrast between the glaze

color and the high gloss metallic nature of luster. This research has become essential in the development of my work and helped to inspired new ideas for my exhibition this past December and my upcoming June exhibition.

**Presentation Type and Session**: Poster III
Exhibit in the Mezzanine Level

## Making Ghosts

**Andrew Hutner**, Fine Arts (Sculpture)
Faculty Mentor: Professor Elena Lourenco, Fine Arts

I have created a body of work that is a record of how much I learned about material and sculptural form. Through experimentation with latex and nylon to achieve a skin-like effect, I have begun to develop a distinctive style, one that incorporates the visceral qualities of materials with anatomically suggestive form that alludes to the presence of a human or animal being. The forms transition between recognizable anatomical features and biomorphic shapes, while the materials refer to skin, inner tissue and bones; hinting at the temporary nature of living material, I refer to this body of work as 'ghosts.' I have utilized steel rod as a strong and versatile tool to create larger, stronger sculptures. My work has more meaning to me and I believe my sense of control has greatly improved through creating more art that is produced through material exploration. Three pieces I created last semester using these materials and processes were featured in the Fine Arts Student Show in the Czurles-Nelson gallery and one of these pieces was accepted into a national juried exhibition at the Brooklyn Waterfront Arts Coalition. Last semester was a very encouraging beginning to an expanding body of work that has carried over into this year.

**Presentation Type and Session**: Poster IV

## Mastering Materials

**Leigh Johnson**, Art History and Fine Arts (Sculpture)
Faculty Mentor: Professor Ken Payne, Fine Arts

My work often incorporates multiple materials combined in one piece. I search for materials that provoke emotional or tactile responses; different materials each provoke a different emotional response. I combine these materials in a way that layers the emotional content and provokes a similar response in the viewer. I enjoy using a wide range of materials in my work and am always looking for something new to learn. I like to approach new materials with as little technical instruction as possible and explore each on a very basic level gaining the necessary tactile information through my senses. My recent interests have been focused on the natural world and what materials can be used from it. Wood has been of great interest to me as well as silk because of the different tactile qualities and inherent symbolism attached to each. At the same time I have become interested in different industrial casting materials such as resin and plastics. I would like to combine naturally occurring materials with the industrial, man-made materials. I feel this combination of materials will create an interesting dialog in contrasting qualities and as a result some interesting new pieces.

**Presentation Type and Session**: Poster V

## Material and Content: An Investigation of Processes

**Rachel Wright**, Fine Arts (Painting and Sculpture) and Philosophy
Faculty Mentor: Professor Elena Lourenco, Fine Arts

Bound within a social structure, I aim to explore how this containment defines the meaning of my own identity. I express my identity through reason and emotion. The duality of the two establishes a metaphysical umbrella and assists my understanding of reality. This relationship is something I am conscience of in my working process. The process consists of my rational side contemplating formal principles and concept while my emotional side follows intuition or instinct. I think that every artist has an intuitive aesthetic and that if nurtured with knowledge and experience, in conjunction with an understanding of the nature of material, the artist is fully equipped to exploit the process. Pure investigation of materials and processes demystifies the uncertainty for me as an artist; the more I work with a medium, the more intimate I get with the material. I am attracted to natural elements for the seemingly random character of their form and arrangement that allows for a variety of interesting outcomes to occur. I am also intrigued by construction and decay within a metaphorical, figurative, architectural, or even an indigenous structure. I am currently exploring how structures are inherently imbedded into our understanding of materiality and our understanding of personal identity. My intention is for the viewer to connect with the contextual information and find how it relates to their personal human experiences.

**Presentation Type and Session**: Poster V

## Melting Pot

**Aric Verrastro**, Design
Faculty Mentor: Professor Stephen Saracino, Design

My piece was driven by my diverse heritage. I have taken an interest mostly in my Peruvian and Lebanese ancestry, which has inspired creative activity in the studio. I took elements from the ancient civilizations of Peru and Lebanon and incorporated them into my design. The objective was to connect elements of the past to the present using modern principles. The focal point of my piece is a closed vessel with a hinged top. The vessel is six inches in width and fourteen inches in height. It is made of combination of copper, sterling silver, gold leaf, and bezel set stones. The vessel is a stylized version of a murex shell. The snails within the shell were used to make purple dye in a tedious process performed by the Phoenicians (ancient Lebanon). The Phoenicans used and sold this dye as a precious commodity. I placed a vile of purple dye inside the vessel

to preserve this ancient process. On either side of the vessel there are two casted/fabricated llamas made of copper and sterling silver. They are three inches in length, an inch in width and three and half inches in height. The llamas stand proud and hold the vessel up. The overall piece has a number of colors, layers, and textures to keep the viewer interested. I created this piece to share with others my heritage of which I am very proud. I purposely chose references that captivated me and would hopefully captivate others. The piece is very complex in its design to draw the viewer in. My goal is to have others grow an appreciation for these cultures that have influenced the world and me.

**Presentation Type and Session**: Poster VI

## Non-Traditional Crystalline Glazes

**Seth Rowitsch**, Design (Ceramics)
Faculty Mentor: Professor Robert Wood, Design

My research for this project built upon the results of the crystalline glaze research from the Undergraduate Summer Research Fellowship I had received. Often when you see a piece of artwork with a flaunting crystalline glaze, the piece was most likely glazed and then fired in an oxidized (excess of oxygen) atmosphere allowing for only one range of colors to be produced. My research involved re-firing crystalline glazed pieces in both an oxidation and reduction (excess of carbon) atmospheres to vary the final color and look of the glaze. What I discovered was an ability to significantly alter the color of the exact same glaze in almost infinite ways. Two pieces with the same amount of colorant added to a base glaze, say with a small amount of copper, applied in the same manner in oxidation would always yield the same green colored glaze. However, if that second piece is put back into a fuel fired kiln, and heated to the a point where the copper in the glaze will react to its atmosphere, that same glaze will yield several shades of red depending on the amount of carbon introduced. I also found that the use of a stoneware clay-body, instead of the traditional porcelain clay-body which almost every crystalline glazing potter uses, allows for an extra diverse range of colors because iron, which is an impurity often found in stoneware clays, is capable of producing a very wide range of colors in ceramics from greens to blues, even to yellow, golds and brown/blacks. By interacting with the iron from the stoneware clay, a small amount of copper in the glaze, and a base crystalline glaze formula I was able to produce a glaze that was a sort of bland brownish color with blue crystals in an oxidation firing, but in the right reduction firing it became a beautiful almost fuschia color that is very unique in the world of ceramics.

**Presentation Type and Session**: Poster III

## Pattern and Fusion

**Pei-chen Wu**, Design (Metals/Jewelry)
Faculty Mentor: Professor Tara Nahabetian, Design

The focus of my summer research was to design and develop my own patterns using the mokume gane traditional Japanese metalsmithing technique. The term Mokume gane means wood grain in metal. Historically mokume gane was created for sword mounts, which protected samurai's hands during fighting. It is interesting how a piece of beautifully patterned metal is used for both functional and decorative purposes. My designs for body adornments have become influenced by this idea of protection and adornment. Through this research I found that the creation of mokume gane is a time intensive process.It involves a series of processes, such as forging, hammering, drilling and chiseling. Patterning the metal is the most exciting part of this technical process. By researching traditional mokume gane patterns I was able to understand how to go about developing my own designs. As a result, I also began to experiment with non-traditional methods of creating patterned sheet metal similar to mokume gane. During my presentation, I plan to present images of the mokume gane process from start to finish, examples of pattern development and a finish body adornment made with mokume gane that utilizes the ideas of protection and adornment.

**Presentation Type and Session**: Poster V

## Performance Art: Contemporary Art On Campus

**Zachary Pritchard**, Fine Arts (Sculpture)
Faculty Mentor: Professor Ken Payne, Fine Arts

I have been working with the concept that we are all separated from each other on an emotional level this is despite our social interaction with one another. We lead one life for public consumption and another life, a more personal life, behind closed doors. This creates an isolation of spirit that cannot be reconciled. The question I am researching is "what is the long term effect of this emotional isolation on the individual and how does it affect society as a whole." My current project was to live in the school's Bacon Gallery, without leaving for a week. I was filming the entire week with a surveillance camera. I see this performance piece as taking a look at the mind of the isolated person. The work required me to have no outside communication, to be isolated within plain sight. I can see out everyone can see in but there is no social interaction. I wanted to see how a solid week of isolation would affect me personally. I wanted to use the results to further develop my understanding of my concept. I will be presenting a shortened video version of my experience. I will have a projector showing the video on the wall or a laptop streaming the video.

**Presentation Type and Session**: Poster IV

## Portraiture: The Inner Made Outer

**Julia Bottoms**, Art Education
Faculty Mentors: Professor Carol Townsend, Design and Professor Joseph Miller, Fine Arts

Portraiture has served as a means of recording one's existence throughout time. I am keenly aware of how one's face is forever remembered by the act of being rendered. Research into John Singer

Sargent's immediate handling of the human form and Alphonse Mucha's symbolic backgrounds have provided inspiration. One often wonders what is on the sitter's mind when viewing a portrait - my research seeks to bring this question to the next level. Subjects are usually represented in their spaces to provide context - businessmen in offices, judges in chambers, and mothers amongst children. Rather than depicting my subjects in a traditional setting, I am exploring projecting the subject's thoughts onto the paper. I am subsequently developing both a more convincing rendering of the human form and a vocabulary of visual symbols to achieve this. I am experimenting with pastel and other media for making the marks that swirl about my subject's bodies. All of the resulting finished pieces are executed on toned papers, using a hand burnished color pencil technique for a richer effect. Through this exploration, I am gaining the confidence to introduce more of the figure into my work. More importantly, I also am bridging the divide between the tangible and the intangible, providing a setting where both aspects harmonize to show not only what the person actually looks like, but also "who they are"!

**Presentation Type and Session**: Poster III

## Recognition of Emotion Via Photographic Imagery

**Kristina Subsara**, Fine Arts (Photography)
Faculty Mentor: Professor Stephen Saracino, Design

My current project includes having forty photographs that relate to one another visually as well as emotionally in some manner resulting in a body of work that will become an exhibition for a gallery showing twenty of my best photographs. My goal is to be able to have all different kinds of emotions recognized. Each of us deals with fearing their own way and I have taken on the task to portray these fears. Whether it is the actual fear itself, or the way people have learned to cope with them in their lives, each photograph has uniqueness while still staying uniform within the topic. I look forward to a photographic exhibit that allows people to empathize with those who legitimately have these fears and struggle with them everyday.

**Presentation Type and Session**: Poster VII

## Role Call: National Acting Auditions

**Michael Zito**, Theater
Faculty Mentors: Professor Carol Beckley, Theater and Professor Joseph Price, Theater

I will present the research from the monologues and character work developed over three months to prepare for the University/ Resident Theater Association's (U/RTA) national graduate school auditions as well as my preparation to attend the national auditions held in January in San Francisco. Included will be my preparation of two monologues. One piece was from a classical author, William Shakespeare, and the other from a contemporary author, Neil Simon. After making my monologue selections, I conducted research on both the play and each character. I developed a point of view and approach to the language and the storytelling. You will see how I applied my research during my attendance at the auditions and how I developed a workshop for current students who plan to attend in future years. I hope you enjoy being taken "behind the scenes" as I reveal one actor's process from selection through preparation, implementation and presentation. From the U/RTA website: "The University/Resident Theatre Association (U/RTA) advances theatre by connecting educational theatre programs with professional theatre and performing arts industries, promoting professional practices and artistic excellence in higher education, and assisting students with their transition into the profession."

**Presentation Type and Session**: Poster IV

## Screen Printing On Clay

**Stephanie Dukat**, Design (Ceramics)
Faculty Mentor: Professor Robert Wood, Design

Screen printing is a traditional printmaking technique. This research was inspired by my curiosity in seeing how this screen printing technique would transfer to clay using ceramics materials. I researched many types of ceramic image transfer methods and how they reacted with the clay surface. This research allowed me to gain a more in-depth knowledge of screen printing techniques. The benefit of screen printing is its ability to create a clearly defined image that can be transferred onto a ceramic surface and also for its ability to repeat the same image multiple times. The application of my research has inspired a change in my own ceramic surfaces and I will continue to use and explore the benefits of screen printing on clay.

**Presentation Type and Session**: Poster II
Exhibit n the Mezzanine Level

## Sculptural Fibers

**Leigh Johnson**, Art History and Fine Arts (Sculpture)
Faculty Mentor: Professor Elena Lourenco, Fine Arts

Materiality is an important aspect of my work. I choose materials that provoke an emotional response from me. I have always felt that touch is the most important of the senses because of the strong emotional responses I have towards different textures and materials. I often combine different materials in order to create a contrast or a harmony between them. Recently I have become interested in different kinds of fibers, mainly wool. I am attracted to the tactile qualities of wool and also the ability of wool to felt, transforming individual fibers into a solid mass that cannot be torn apart. I enjoy the emotional response I get from various fibers. For Example, wool, and fabrics such as Muslin are warm and soft provoking a sense of comfort and security. I incorporate fibers into my sculpture to provoke the same feelings I get from the materials in my audience.

**Presentation Type and Session**: Poster V

## Sculptural Welding: Expressive Applications For Technical Skills

**Grace Higginbottom**, Design (Fibers)
Faculty Mentor: Professor Elena Lourenco, Fine Arts

My project is focused on learning the technical skills of welding processes, and applying them as an expression of self in the form of sculpture. I am exploring different welding processes, samples of different types of welds, as well as a look into the artistic application of the technical process. My presentation will include documentation of my exploration of materials and the development of creative application by showing chronological pictures of my works as a welder and as a sculptor. To date, I have created a 7' high welded scrap metal sculpture. Later this spring, by invitation from Professor Ken Payne, this work will be displayed at Griffis Sculpture Park.

**Presentation Type and Session**: Poster IV

## Set, Costume, and Lighting Design For "The House of Blue Leaves"

**Daniel Beason**, Theater
Faculty Mentor: Professor Ann Emo, Theater

As part of the class work for Introduction to Theater Design and Technology we were asked to produce concept/research boards for "The House of Blue Leaves" by John Guare. This process involved creating emotional responses to the work, historical research, visual research for the set, lighting and costume designs and appropriate paper work. We discussed our various points of view and were impressed with the similarities and differences in approach to the same play. "The House of Blue Leaves" is set in New York City on October 4, 1965 and centers around the Pope's historic visit to the United States. This time reference gave the class a specific date and era to research. Because the characters are lower middle class we had to look at what an apartment in Queens NY would look like. Many of us looked into items from earlier years thinking that they would not have had the money to update furniture and décor. Our set design boards reflect this research. The play spans many hours so we explored what this time shift would do to the lighting over the course of the play. There are also many dramatic moments, including an explosion that can be affected by lighting. We each put together pictures that show how the mood for each scene can be changed with light. The costume designs tell the most about the characters. We needed to know what socio-economic standing of these people. We discussed where they would have shopped for their clothes, what practical things they needed to wear and how we could tell this to the audience. The outcome of this assignment is an exploration of the dark comedy, history and drama within this play.

**Presentation Type and Session**: Poster IV

## Traditional Japanese Urushi Lacquer Techniques

**Adam Kessler**, Design (Furniture and Fiber)
Faculty Mentor: Professor Sunhwa Kim, Design

Urushi or lacquer painting is a highly revered and ancient Asian art form. Urushi pieces can be elaborately decorated in gold, silver, and mother of pearl. The oldest piece of lacquerware found was over 9,000 years old. Urushi acts as a time capsule; it can only be damaged by direct sunlight or drastic changes in humidity. Urushi itself is the sap from a tree that grows throughout Asia. It is used to cover wood, metal, and ceramic artworks. Urushi requires both warmth and humidity to harden. I had to build a special moisture box called a furo to harden my pieces. Polymer chains are formed when urushi comes in contact with water; it is the world's first plastic. Urushi is also toxic to humans, it contains urushiol which is the same toxin found in poison ivy. I had to build up immunity to the urushiol in order to complete my pieces. Urushi is a very long process, taking months to complete a group of pieces. Many layers have to be built up and sanded every step of the way. I feel honored to have had the opportunity to practice such a beautiful, unique, and ancient art form.

**Presentation Type and Session**: Poster III

## Wood: A Continuous Role Reversal

**Tina Rott**, Fine Arts (Sculpture)
Faculty Mentor: Professor Ken Payne, Fine Arts

I am currently a sculpture student who's primarily interested in sculptural forms that seduce the viewer aesthetically threw a pleasing balance of contrasting materials. My interest lies in pushing materials past their predictable context, to give them a new identity in my work. I have found wood in particular to be an extremely versatile and sensual material, and have been exploring its possibilities in my sculpture. I have used wooden veneers as both an outer casing to contain paper and other material inside of its wooden skin, and also as a delicate interior to more harsh exteriors such as built up cement. I am searching for ways in which to go larger with my sculptural forms, as I feel scale is very important to the level of interaction viewers with have with the work. Creating theses larger pieces of work means finding materials that are durable enough to handle their own size and weight while also retaining a desired aesthetic. I have been working with wooden veneers in combination with various other natural and industrial materials, I will begin to carve solid wood to continue in that vein, while benefiting greatly from its strength and durability I will also access its more natural material nature and the possibility of shaping forms through carving.

**Presentation Type and Session**: Poster IV

# *Business, Computer Information Systems, and Technology*

## Assembly Methods To Increase the Production Rate of ITT Heat Exchangers

**Tyler Oehman**, **John Roeseler**, and **Justin Walker**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

ITT Standard is a heat exchanger manufacturing company located in Buffalo, NY. There has been an increase in demand for their gasketed plate heat exchangers. In order to satisfy the increased demand, management desires to increase manufacturing output by 10% for this line of heat exchangers. To achieve this goal, this project evaluates areas where potential savings can be utilized. Areas to be evaluated include time spent to get units ready for shipping, crane usage, and unit handling. Concepts were proposed in each of these areas in order to satisfy the requirements. Each design concept was evaluated using Lean Six Sigma Cause & Effect matrices in order to determine which design proved to be the best overall. The design objectives include shipping safety, simplicity of packaging, and the necessity to increase throughput. After the optimal design has been selected, production drawings were produced and the concept implemented.

**Presentation Type and Session**: Poster VI

## Assessing the Appropriateness of Jamestown Community College's Engineering and Technical Curricula As These Relate To Industry Need

**Michael Weaver**, INT 689: Research Design and Methods
Faculty Mentor: Professor John Earshen, Technology

The purpose of this project is to determine the appropriateness of Jamestown Community College (JCC) Engineering and Technical program curricula relative to meeting priority needs of business and industry in Chautauqua and Cattaraugus Counties. JCC is a comprehensive, regional, open-access, student-centered, two-year institution that embraces academic excellence and strives to meet its service area's learning needs in diverse ways, including liberal arts transfer degree programs, career programs, community service, developmental education, and business and industry training. JCC's partnership with the greater community contributes to the social and intellectual improvement, economic development, and cultural enrichment of western New York and northwestern Pennsylvania. This study will explore the following questions: 1) How well matched are the engineering and technology programs at JCC to the current and future needs of local industries? 2) Is JJC providing the skill sets necessary for successful employment and career advancement opportunities in the region? The research approach will be to develop, administer and analyze the results of a questionnaire targeted to area stakeholders and also to interview selected industry management personnel. The ultimate goals are to: 1) Determine the degree to which current programs are meeting present and anticipated future need, 2) Identify what changes may be recommended to increase the appropriateness of JCC's Engineering and Technical curricula.

**Presentation Type and Session**: Oral – Education

## Ball Joint Qualification Test Fixture Design

**Michael Garofolo**, **Brian Sullivan**, **Anthony Rauth**, **Alex Hubert**, **Cody Siezega**, and **Eric Zagmester**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

Advanced Thermal Systems Incorporated (ATS) is a leading manufacturer of flexible expansion joints and ball joints. Their products are used in a variety of applications, most commonly in solar energy. ATS has a need to develop a test fixture to analyze their thermal pak flexible ball joints. This test fixture will be a means of evaluating the performance, reliability, and longevity of each ball joint. A test fixture that accommodates multiple sized ball joints must be designed to measure static breakaway torque of rotation as well as axial movement. This test will be performed over a range of cycles to simulate a lifetime of use. A heating and pressurization system must also be designed to model operational conditions. Several design concepts that meet the testing criteria are currently being evaluated. A final design will be determined based upon a cause and effect matrix analysis. This analysis will determine the optimal design that will meet the client's requirements. Engineering drawings for the production of the test unit will be provided as well as a parts list and cost report.

**Presentation Type and Session**: Poster VII

## BengalGram: An Interactive E-Card System

**Daniel Schmidt** and **Andrew Siradas**, CIS 495: Special Project in Internet Development
Faculty Mentor: Professor Robert Barone, Computer Information Systems

Are finals getting to you? Send a BengalGram. A BengalGram is a novel way to send an e-card to a friend. Based on casual web games, your friend must play a game (BengalGram) to read your message and best of all it's easy to do. We have configured and augmented Drupal, the customizable open source content management system, to create the dynamic e-card application. We have furthered our knowledge of internet programming and computer information systems by making extensive use of Adobe Flash ActionScript for game creation and programming, PhP and MySQL for Drupal augmentation, XML for data transfer between Flash and Drupal and various Drupal modules to enhance interaction. For more interactivity, account creation is available and allows you to save and view your high scores. Through our research in the field of Internet development, we have gained knowledge

pertaining to how to create a functioning, manageable and dynamic web application. From this we have concluded that our goal to construct this system has resulted in an end product that achieves a great level of efficiency, usability and entertainment. So go ahead, send a BengalGram and challenge your friends!

**Presentation Type and Session**: Poster I

## Braking System Design For Buffalo State's Mini Baja

**Michael Garofolo**, ENT422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

Annually, the Society of Automotive Engineers (SAE) administers a collegiate design competition known at SAE Baja. This event challenges students to design and build a one of a kind off-road vehicle. Buffalo State College has been a part of this competition for the past 11 years. This year an entirely new chassis will be designed, and one of the main components of the build is the braking system. In SAE Baja, the braking system is the first line of defense from crashing or rolling over, being an important factor for vehicle and driver safety. Several design concepts are currently being evaluation, integrating both front and rear disc brakes. Each can be evaluated using a Cause and Effect matrix utilizing criteria such as braking force, weight, complexity, heat dissipation and driver effort. A vehicle's braking system is simply a mechanism to slow down the rotation of each wheel, by applying brake friction between the brake pad and rotor. Even though the braking system is a simple design, it is a large factor in the overall capabilities of the vehicle. Keeping things simple and easy to maintain is an essential priority. The final design, parts list and cost report of the system will be presented in full detail.

**Presentation Type and Session**: Poster IV

## Catching Up On the News: Bringing the Buffalo Courier-Express Photographs To Flickr

**Kaylene Waite**, EDC 690: Master's Project
Faculty Mentor: Professor John Thompson, Computer Information Systems

After 56 years as one of Buffalo's major newspapers and a history dating back to the 1800s, the Buffalo Courier-Express printed its last issue on September 19, 1982. The newspaper archives consisting of approximately one million news clippings and one hundred thousand photographs were donated to the Buffalo and Erie County Historical Society and Buffalo State College. The files are now housed in the Butler Library Archives. The photographs cover the late 1950s through the date the newspaper closed. This special collection is heavily used and receives over a hundred requests each year. As a result of this heavy usage, it has become apparent that digitizing the collection would be of great value. Digitizing the photographs will assist in the preservation process by reducing direct handling of the photographs. It will also expedite the archivist's task of searching for requested photographs, even allowing the general public to search for photographs themselves. The sharing of the photographs with the public will be done through the online photo management and sharing application, Flickr, the choice of the Library of Congress for their photographs. Through this site, viewing and downloading of the images will be available. The general public will be able to preview a sample of the collection at the photographic exhibit on display in the Butler Library from April 15 - May 15, 2011. The digitized images will be available on Flickr later in the year.

**Presentation Type and Session**: Poster I
Exhibit Along Wall in Lower Level

## Control Panel Design For R.P. Adams

**Anthony DiMascio** and **Kris Wiktorowski**, ENT422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

For more than 60 years, R.P. Adams has manufactured various types of industrial filtration equipment. One of their top selling series of products is the automatic Poro-Edge Self-Cleaning Water Strainers, which are designed to provide clean, filtered water to process, mechanical and other production plants. However, the company recently discovered that their current control panel design is inefficient. The purpose of the control panel is to allow the water strainers to operate unattended and if the filters become clogged the control panel will initiate a backwash cycle to rinse out debris. R.P. Adams current standard control panel was evaluated by a C&E matrix and using a panel feature chart with a weighted average of various attributes to determine the most efficient design. After the design analysis of the standard control panel was completed it was determined that R.P. Adams should upgrade to a panel that encompasses a Programmable Logic Controller (PLC). In today's market PLC panels have become virtually ubiquitous in the electronics industry and the panels are easily programmed using a software application on a personal computer. This study recommended that R.P. Adams should upgrade to a PLC based control panel that will reduce costs associated with special builds, improve quality, and reduce the time to build a panel.

**Presentation Type and Session**: Poster VII

## A Cultural Journey

**Valjeta Ahmeti**, **Marisa Gaiser**, and **David Weaver**, INE 390: International Education Discovering China
Faculty Mentor: Professor Christine Lai, Business

Merry Browne once said "Preconceived notions are the locks on the door to wisdom." Through our reflections on the experience of living and studying abroad in Beijing, China we developed intercultural awareness and changed our perceptions as well. While

we were studying abroad, we immersed ourselves into the culture around us. We attended several classes at the Central University of Economics and Finance that included basic Chinese language, Chinese culture, economy, and current issues. These classes helped us gain a better understanding of the people that we interacted with on a daily basis. In addition to the classes that we participated in, we visited many cultural sites around the city of Beijing. Tien An Men Square, the Forbidden City, the Summer Palace, the Great Wall, the Temple of Heaven, and the Beijing Hyundai Plant gave us an understanding of past and present customs that have shaped the Chinese culture into its present form. Throughout our journey in Beijing we enhanced our problem solving skills, our ability to work with others, and our time management skills while maintaining a reflective journal. These skills that we have acquired will help us both academically and personally in the work force as well. But beyond our skill enhancements, we have formed a strong bond with everyone on the trip that will last us a lifetime.

**Presentation Type and Session**: Oral – Education

## Design of a Lightweight Recreational Pop-up Camper

**Jason Brueggeman**, **Adam Penasack**, **Eric Hill**, **Andy Tarasek**, and **Darren Jackson**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

The purpose of this project is to design a lightweight and cost efficient pop up camper design. Design criteria include a rotating cabin, compact storage and the ability to be towed by a midsize family sedan. This report will focus on different design aspects that will help to reduce weight, while allowing for simple handling of both the storage and rotation devices. Several designs were arrived at for an adjustable tongue, which will reduce length and allow for storage in a single car garage. Additionally a design was created for a rotation system, which will create greater floor space. These concepts have been evaluated using Six Sigma Lean Manufacturing principle that helps us determine the optimal design. Recommended designs will be presented along with final cost analysis, a bill of materials, and 3-D models of the proposed designs.

**Presentation Type and Session**: Poster VII

## Determining the Current Identity of Technology Education

**Carlene Heimiller, Courtney Lewis**, and **Robert Tompkins**, INT 689: Research Design and Methods
Faculty Mentor: Professor John Earshen, Technology

All across the State of New York, at all grade levels and in many different forms, students are exposed to the hands-on, project-based learning that is the hallmark of Technology Education (Tech Ed). Since its inception in 1984, Tech Ed programs have undergone a series of changes in content and teaching methodology. Today's Tech Ed classroom often blurs the line between Industrial Arts, Vocational Technology, Engineering, Science, and Mathematics. In many instances, content from the older Industrial Arts and Vocational Technology programs (which pre-dated Tech Ed programs) can still be identified in contemporary Tech Ed curricula. The Math, Science and Technology (MST) Standards adopted by the NYS Board of Regents ostensibly provide a framework upon which educators in Tech Ed can build curricula. However, the MST standards are vague with respect to specific skill sets and knowledge areas needed by the Tech Ed teacher to build a focused curriculum. As a result, Tech Ed teachers have interpreted MST in a wide variety of ways. In the absence of specific guidance from the NYS Board of Regents, and without means by which to monitor actual curriculum content, it is incumbent upon practitioners in the Tech Ed discipline to develop a unified statement of those principles and goals that define contemporary best practice. There is urgent need for development of such a statement. This study will focus on demonstrating the importance of Tech Ed's specific pedagogy within the current educational system. An invitation will be sent to all Tech Ed teachers in NYS asking them to complete an on-line questionnaire. The objective is to accumulate and analyze data regarding classroom practices and curriculum. Additionally, the investigators will conduct site visits and live interviews at selected schools across NY State. It is hoped that this study will provide useful preliminary information to inform the process of developing a clearer identity for the Tech Ed discipline.

**Presentation Type and Session**: Oral – Education

## Developing a Game of Hangman With Scratch

**Bhypone Xomvilaysack** and **Steven Pardee**, CIS 389: Advanced Topics: Object Oriented Programming
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

Scratch is a programming language that provides an environment to create interactive stories, music, games and art. Scratch was developed by a group at the MIT Media Lab. This program allows individuals to be creative and enhances the ability to create video games or digital stories. Our research project includes development of the classic game of Hangman using Scratch. The objectives of the game were first defined. At the design stage of the project the problems that were encountered with the program were setting up the letters to click on them and to scan in the word and aligning the hint category in the game screen. Solutions provided were the use of two sprites for each letter and to command action from the second letter after the first letter was clicked. Also, specific coordinates were given for the hints and body parts. An advantage of using the Scratch program for this research project was the Graphic User Interface (GUI) that uses blocks and tiles that was helpful in starting the code design. We found Scratch to be user-friendly and easy to use programming tool that should be recommended to new and novice programmers.

**Presentation Type and Session**: Poster I

## Developing a Systematic Approach To the Selection and Validation of a Secondary Source of Supply

**Jason Zika**, INT 689: Research Design and Methods
Faculty Mentor: Professor John Earshen, Technology

AccuMED Innovative Technologies, LLC (AccuMED), is a world-class manufacturer that provides products for medical, sporting-goods, and military customers. AccuMED currently lacks a secondary supplier of stretchable wide fabrics that are the primary raw material for manufacturing sleep apnea headgear and other products. Over the past several years, AccuMED has made several unsuccessful attempts to select and validate a secondary source of supply for these fabrics. Without a steady, reliable supply, AccuMED's ability to maintain consistent production levels is potentially threatened. The researcher, an AccuMED manager, will develop a process for the identification, selection and validation of fabric vendors capable of meeting current and future sourcing needs. To achieve this objective, the researcher will study the literature regarding proven methodologies for vendor selection and validation. Using information gained from this initial research, the investigator will then be positioned to: 1) Develop a supplier questionnaire instrument to collect relevant data, 2) Conduct selected on-site plant assessments and personal interviews, 3) Evaluate sample test results, and 4) Make recommendations. Upon completion of this research, the researcher will have identified a qualified reliable secondary source of stretchable wide fabrics for AccuMED. Additionally, the study will provide a proven process to select and qualify secondary source vendors for other manufacturing requirements within the company.

**Presentation Type and Session**: Oral – Technology

## Drawing People To the Haunted House With Alice

**Timothy O'Toole** and **Jonathan Orcutt**, CIS 389: Advanced Topics: Object Oriented Programming
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

Most people do not have any idea how computer graphics are created or what programming really entails. There are many negative stereotypes about programmers like a nerdy guy with glasses pasted to a command line on his computer. It is hard for students to want to get into programming when they have these images of programmers. It is also difficult for these students to get excited about languages such as C++, Java or Powershell because there are no visual interactions. So how are schools and organizations supposed to get students interested in programming with these stereotypes? We believe Alice is a good starting point for students to get associated with programming. Alice offers students a fun way to get accustomed with functions and variables and allows them to make things that interest them. Alice allows one to actually see what the code is doing. With our Haunted House project we found how easy it was to write a digital storybook using Alice, although we encountered problems with concurrency. Our research shows that Alice can be used as a soft introduction to programming and it can show students that programmer stereotypes are not always true.

**Presentation Type and Session**: Poster II

## Dying To Know: Cosmetics and Animal Testing

**Briandi Little** and **Janelle Zerkowski**, FTT 450: Issues in the Apparel and Textile Industry
Faculty Mentor: Professor Lynn Boorady, Technology

In recent years, the awareness of cosmetic testing on animals has increased significantly to the public. Even though many companies are currently using alternative methods to test cosmetics, other cosmetic companies still choose to utilize testing products on animals, such as rabbits, guinea pigs, and rats. Companies choose to use alternative test methods because these tests do not harm animals, are more reliable, and sometimes less expensive. However, those companies choosing to use animal testing do so because testing on animals has been in practice for years; therefore, these tests have obtained credibility. As a result of this credibility, some of the results of animal testing have been strongly applicable to humans. Our research discusses the laws and regulations of cosmetics according to the Food and Drug Administration (FDA) and includes both the positives and negatives of cosmetic testing. We include results of the tests on animals, examine reliability of tests, and discuss alternative tests. In addition, this paper also mentions how the community has become involved with this issue by promoting non-animal testing and stopping the use of animal tested products. This investigation not only examines the ethics behind animal testing, but also the validity and legitimacy of these tests.

**Presentation Type and Session**: Poster I

## Electrical Personal Transport Project

**Dan Swiatek**, **Ozzie Palmer**, **Kadrii Brown**, and **Alex Tonn**, ENT 465: Senior Design
Faculty Mentor: Professor Steven Barker, Technology

The Electrical Personal Transport (EPT) project consists of a two-wheel self-balancing skateboard that is controlled by an Arduino microprocessor. Two 12VDC batteries, two 24VDC motors, sprocket chains, and only two wheels create the EPT motion. The motors are controlled by an H-bridge, which is controlled by an Arduino microprocessor containing a PID control algorithm. The EPT would allow the speed and direction to be controlled by the rider shifting body weight on the platform. An accelerometer detects the orientation of the platform, balanced or unbalanced. A gyroscope detects the rotation rate of the platform. The accelerometer and gyroscope signals were essential to the microcontroller feedback system that controls the self-balancing. The EPT would be ideal for adolescents and young adults who want to be mobile in an affordable eco-friendly way. The EPT would save travel time in many situations because it is faster than walking and more maneuverable than a car.

Since the total weight of the EPT is approximately 30 pounds, it can be carried when necessary. The EPT project has applied electronics and feedback control systems in a vehicle for transportation and recreation.

**Presentation Type and Session**: Poster VI

## Evolution of "Green Practice" In the United States

**Vandyke Kotoroka-Yiadom**, Economics, Finance and Business Management
Faculty Mentor: Professor Solochidi oL Ahiarah, Business

This is an attempt to explore the evolution of green practice. This study is important because it sheds light on the history and prospects of green practice in the United States. The U.S. EPA defines green practice as the effort to protect human health and to safeguard the natural environment upon which life depends. A narrower conceptualization and operationalization of "green practice" is that suggested by the Toxics Use Reduction Institute (TURI) in Massachusetts, which sees green practice by a business as involving the business' adoption of "safer alternative" options to replace a chemical it currently uses that has potential to harm human health or the environment. This is the view of "green practice" adopted for this exploration. Concern over businesses' role in environmental degradation from traditional energy sources that may also not be sustainable, chemical and water pollution, and green practice to forestall these, leads to this study.

**Presentation Type and Session**: Poster V

## Fashion Diversity Mash: Eastern Harmony

**Gwendolyn Smith**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Elaine Polvinen, Technology and Professor Andrea Guiati, Director, All College Honors Program

This digital fashion design product development concept series is inspired by a "mash-up" of distinct cultural imagery. Beauty can be found in contrast. This collection combines Hindu and Buddhism, using the contrast of these different religious cultural images and symbols; "Eastern Harmony" is formed. Vibrant colors are used to emulate traditional garments and tapestries. Research has been done to look the different aspects of both religious cultures. Research focused primarily on traditional garments and their colors and religious images in both cultures. Comparing and contrasting images of Buddha and different Hindu Deities resulted in a deeper understanding of the cultures and their symbolic roots. Eastern Harmony is a digital fashion design product development series that includes an inspirational concept board, a color board, a fabric and print board and a line collection of six dresses that can be worn out to a special occasion or out to a brunch. The target market is women age's 20s-30s. This collection and other lines can be viewed online at http://www.bleidu.com/GwenSmith.

**Presentation Type and Session**: Poster I

## Fixture Design For ITT Heat Exchanger Support Column Production

**Tyler Oehman**, **Justin Pratt**, and **John Roeseler**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

ITT Standard is a local manufacturer of industrial & commercial heat exchangers. Currently a lengthy process is used for producing support columns for their gasketed plate and frame heat exchangers. Current production requires the use of inaccurate, heavy, and cumbersome drilling fixtures resulting in excessive production time. A preliminary time study of the support column production was conducted to identify the underlying problems of the process. Accuracy and weight of the fixtures were determined as the critical problem areas. Design objectives include development of a method of drilling holes, attaching the raw parts to the drill base, increasing safety, and decreasing task production time. Five alternatives, including new fixture designs and the use of lightweight materials, were proposed and evaluated. Accuracy will be addressed through a new fixture design, and weight reduction is taken into consideration in the new design. Optimal designs will include revised fixtures and an enhanced locking mechanism for securing fixtures and raw material to the drill base. All of which will decrease task production time by 50%.

**Presentation Type and Session**: Poster V

## Foxy Lady: Era-Inspired Fashion Design

**Janine Diaz**, HON 400: All College Honors Colloquium
Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

People say opposites attract. There is truth in combining various elements to make a cohesive statement. As part of the Fashion and Textile Technology program at Buffalo State College, I have spent the past several months creating a collection for the Runway series using computer-aided design software and raw materials. This year, the department is focusing on 'mashing' different themes and topics to create a unified product. I have decided to mash 1920s and 1970s style to develop a sophisticated and modern collection with a retro vibe. In order to go in the direction of my choice, I had to research the histories of the eras, not only in fashion, but also in politics, cultural movements, and influential people. My collection, titled Foxy Lady, (name inspired by legendary guitarist-singer-song writer Jimi Hendrix) derives from past eras in fashion when 'demure' and 'seduction' went hand in hand. The 70s and 20s merge to make a luxurious collection of classic lines and modern trends. These were periods of political and economical uplift for women, allowing them to choose their freedoms and sport risqué fashions. They were also times of social involvement; nightlife, music, dance, and art provided cultural movements. A Foxy Lady balances her ladylike and flirtatious personality complimentary to 1920s and 1970s aesthetic.

**Presentation Type and Session**: Poster I

## Guide Bar Redesign For ITT Heat Exchangers

**Justin Walker**, **Brian Demerle**, and **James Burns**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

ITT standard is an engineering and design company founded in 1917 that focuses on the commercial heat exchanger industry. ITT manufactures a wide range of heat exchangers including gasketed plate heat exchangers. This company is looking to increase production by optimizing guide bar designs. The guide bar is used to position the heat exchanger plates that make up the heat exchanger. There are a variety of production issues that need to be addressed. The most important of these is the high cost of the foreign sourced materials that currently make up the guide bar. Other considerations include the need of skilled labor to fabricate these guide bars, and high assembly time that the current design requires. The optimal solution to this problem is the one that provides the most benefit to the company with the minimum cost to implement. After evaluating various solutions, a custom aluminum extrusion was determined to be the optimal solution. This option simplifies production and eliminates costly manufacturing tasks. Upon completion of the project, ITT will receive production drawings, design prototypes and supporting manufacturing documentation.

**Presentation Type and Session**: Poster VII

## How To Successfully Manage Your Business

**Chelsea Tarasek**, HON 400: All College Honors Colloquium
Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

In today's competitive business market, it is important that corporations use strategic management and planning to achieve goals and thrive within the national and global marketplace. I researched and analyzed the Fortune 500 Top 5 Companies to Work For in America in 2011. These companies include, SAS, Edward Jones, Wegmans, Google and Nugget Market. I focused on what each company did, as well as, why they are known for being the best company to work for. Each company has been ranked high because of their excellence in management, surpassing other major American Corporations. Completing this research will identify the necessary management skill sets and tactics needed for continued success within the business market. Gaining an understanding of how each company operates to achieve success can be crucial in advancing as a manager in such an aggressive job market.

**Presentation Type and Session**: Poster II

## Hydrogen Generator

**Alex Hubert**, Mechanical Engineering Technology
Faculty Mentor: Professor James Mayrose, Technology

Hydrogen is a great source for a fuel because it burns clean and harmlessly into water vapor. It is the main fuel source of the largest power plant in our solar system, the sun. On earth, hydrogen comes from many different sources including water and natural gas (methane). Applying electricity into water allows the elements to become attracted to the charge opposites in a process called electrolysis. In order to improve the electrolysis process an electrolyte is added to the water to increase its conductivity. Obtaining a good mixture of the correct electrolyte and proper type of water, optimize the amount and quality of hydrogen and oxygen produced in the process. Separating the hydrogen from the oxygen is critical because allowing the two to reform after electrolysis makes HHO not H and O and is extremely explosive. In order to capture hydrogen through electrolysis, the containers in which hydrogen and oxygen are collected need to be completely segregated from one another to obtain a pure mixture of hydrogen for consumption. Constructing a watertight container to hold the water that is rigid enough for the tubing sub-assembly to rest against the walls for electrical current to evenly pass between cells was constructed. The goal was to obtain hydrogen from a steady power source combined with an ideal mixture of electrolyte per unit of water. My research involved a thorough investigation of electrolysis system components as well as fabrication of a safe operating unit. I experimented with various configurations to discover the most efficient setup that produced enough hydrogen to be considered viable as an inexpensive way to generate energy.

**Presentation Type and Session**: Poster V

## An Image For Every Woman: Promotional Materials For Everywoman Opportunity Center

**Hannah Burn**, FTT 451: Senior Project
Faculty Mentor: Professor Elaine Polvinen, Technology

This project resulted in a collection of t-shirts and promotional products that were custom created for Every Woman Opportunity Centers of WNY. The Everywoman Opportunity Center, Inc. is a not-for-profit agency that has served WNY since 1977. Each center provides resources for participants including computers, resume building, a professional clothes closet, and a job search library. This project started with research about the work the centers provided, the population that it positively impacted and unfortunately, that they had lost a tremendous amount of funding in the past year. The centers work and dedication to women in the WNY community is impressive. This led to planning and development of a project to help them re-brand their image and logo in time for legislation efforts in Albany, and to generate new buzz in the community about their work. Designs were developed based on research gathered from a focus group of six diverse women who utilize the center. The digital designs represent the centers ideals such as self-sufficiency, independence, and transformation. They are for display on t-shirts, mugs, and fashion projects to be used by the center as promotional materials. The goal of the designs is to visually communicate representations of empowered working women, and to incorporate the values of the center.

**Presentation Type and Session**: Poster II

## Impact Wrench Carrier For Gasketed Plate Heat Exchanger Assembly

**James Burns**, **Brian Demerle**, and **Justin Pratt**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

ITT heat transfer is a comprehensive manufacturer of industrial heat exchangers. For over 90 years ITT has not only met the needs of its customers, but also exceeded them by consistently being ahead of their competitors. This vision has led the company to have many industry firsts, not the least of which is their status as the first U.S. heat exchanger provider to be awarded ISO 9001 certification. The issue faced in this project deals with the assembly of their plate and frame heat exchangers is taking too long and the production costs are excessive. For the foreseeable future, ITT is looking to increase its efficiency by 10% annually; this project will help them reach that goal. The main issue plaguing the assembly operation is its rudimentary nature and lack of a distinct method specified to tighten the frame plate bolts. An overhead crane is the best solution to this problem since it provides the best ratio of assembly time to cost. This design allows the operator to have a mobile workstation that makes his job much easier, safer and efficient. At the conclusion of the project, ITT will receive models, production drawings, material lists, and a full proposal that will allow the integration of this system into their process.

**Presentation Type and Session**: Poster VII

## Improvement of Radial and Thrust Bearings For Turbo Air-2020 Centrifugal Compressor

**Eric Zagmester**, **Anthony Rauth**, and **Jason Brueggeman**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

Cameron Compression Systems is a leading global supplier of centrifugal and reciprocating compressors. Their compressors set the industry standard for oil-free plant air and gas applications. The focus of this project is to evaluate a new bearing design for the Turbo-Air 2020 centrifugal plant air compressor. In this compressor the pinion shaft reaches rotational speeds excess of 75,000 RPM with axial loads of approximately 1200 lbs. These extreme forces are transferred through collars located on the pinion shaft to the bull gear. Expensive machining of the internal components and system inefficiencies justify the need for an innovative new design. Design criteria, proposed by Cameron, includes; an evaluation of state of the art bearing technology, feasibility of the proposed designs, lead time, and minimization of the overall machining cost. Deliverables of this project include an analysis of the current and proposed design alternatives as well as compressor efficiency enhancement. The result of this study will provide Cameron with an efficient cost effective solution.

**Presentation Type and Session**: Poster V

## Improving Motor Mounting Efficiency For TA-3000 and TA-6000 Centrifugal Compressors

**Brian Sullivan**, **Darren Jackson**, and **Adam Penasack**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

Cameron Compression is a global corporation with a centrifugal compressor manufacturing plant in Buffalo, New York. In the manufacturing industry it is necessary to continually improve products in order to remain competitive in today's global Cameron's current motor mounting method is both costly and inefficient. The main objective of this project is to provide a cost effective design to the current motor mounts that are attached to the top of an oil tank of various compressors. Multiple design concepts have been analyzed to improve the adjustability of the motor mounting system in the Cameron TA-3000 and TA-6000 compressors. Design process included the use of Six Sigma and lean methodology to evaluate the designs and arrive at the best solution. Products that have been used in similar applications have been researched and evaluated. A cause and effect matrix has been prepared which details the design alternatives. Accurate cost estimates and approximate cycle times have been prepared as well as detailed fabrication drawings and assembly instructions. Finally, the optimal design was chosen that meets the criteria specified. This design will be produced by Cameron and implemented on future equipment.

**Presentation Type and Session**: Poster V

## Isostatic Pressing Effects On Silicon Carbide

**Lawrence Banach**, INT 689: Research Design and Methods
Faculty Mentor: Professor John Earshen, Technology

Technologists in the silicon carbide (SiC) industry are often challenged to form this material to customer specifications. Wet bag isostatic pressing, a method used to form SiC, theoretically distributes even pressure across all surfaces of the part being formed. However, this pressure may be restricted by elements of tooling design, as well as the material characteristics of green SiC (such as springback) that can ultimately influence both strength and density of the finished product. The purpose of this study is to identify and evaluate those parameters influencing final product quality with respect to density and strength. Laboratory test methodologies will be developed to measure key characteristics of pressed green SiC components and to study the relationship between tooling design and green body mass. Consistency of material within a formed SiC body will be measured and causal relationships identified. Press operation parameters will also be studied to identify optimal operating cycles and to determine if cycle time should vary based on component configuration and specification. Data will be collected using advanced metrology of sintered test structures made from the green SiC samples. Correlation and analysis of data from these initial tests may indicate the need

for additional testing. The study findings are expected to provide considerable new information regarding wet bag isostatic pressing process optimization. Observations and recommendations will be made regarding: 1) Shape constraints, 2) The effects of tooling structure, 3) Optimal tool design, 4) Press operating parameters, and 5) Optimal cycle times based on shape and weight.

**Presentation Type and Session**: Oral – Technology

## Making the Transition To LED Technology

**Dwight Vogel Jr**., INT 689: Research Design and Methods
Faculty Mentor: Professor John Earshen, Technology

Since its development by Thomas Edison in the late 1800's, artificial electric light has quickly become an integral part of human civilization. Today, the incandescent bulb remains a dominant means to produce artificial light. Unfortunately, such bulbs are not energy efficient: 95% of the energy used to light the filament is dissipated as heat and only 5% provides light. In the late 1970's, Ed Hammer invented the compact fluorescent light (CFL), which offered the world an important improvement in artificial light technology. A CFL bulb lasts 12 times longer and requires only 20% of the energy that an incandescent bulb needs per lumen of output. Unfortunately, the manufacture of each CFL requires a small amount of mercury that can eventually have a negative impact on the environment as spent bulbs are discarded. An emerging light source, Light-emitting Diodes (LEDs) produce more lumens per watt than either incandescent or CFL lights, and they do not require mercury to manufacture -- thus making them an attractive new alternative. Many scientists predict that the LED may ultimately replace the incandescent light bulb. The purpose of this study is to investigate the technical and design challenges of achieving such a conversion for a variety of industrial applications.

**Presentation Type and Session**: Oral – Technology

## Mini Baja Drivetrain Design: Powering Past the Competition

**Cody Siezega**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

Mechanical Engineering Technology students at Buffalo State College have been participating in SAE Mini Baja, a collegiate event. The Society of Automotive Engineers (SAE) sanctions the event, where colleges around the world gather to race their self built Mini Baja cars. The objective of the competition is to provide students with real life engineering challenges, which the student might face in their professional career. Each school is limited to a 10 horsepower engine provided by Briggs and Stratton. Since the size of the engine is standard among all schools, the importance of the drive train design is crucial. A lightweight configuration of components must be designed to maximize the engine's power. A drive train configuration with a low center of gravity will enhance handling significantly. Gear ratio will be optimized in order to take advantage of the engines power band. Several configurations are being evaluated in order to achieve the desired design. These designs will be evaluated by using a Six Sigma design matrix. A final design will be presented outlining the advantages of the chosen configuration.

**Presentation Type and Session**: Poster IV

## Mini Baja Suspension Design

**Alex Hubert**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

Mini Baja is a collegiate design series sponsored by the Society of Automotive Engineers. This event challenges engineering students to design an off-road vehicle capable of handling a punishing terrain. The custom cars are to be designed and build by the students. Buffalo State College has been participation in this event for past eleven years, and hopes to remain a strong competitor in the 2011 event. One of the main components of this car is the suspension. A vehicle Suspension is one of the most critical components to these vehicles. The suspension is made up of multiple linkages that control the movement of the wheels. In order to determine the optimal design, a cause and effect matrix was used in the evaluation process. Criteria included: handling, weight, complexity, terrain versatility and, durability. With the demanding environment the vehicles are subjected, the suspension remains one of the most crucial aspects in the vehicle design. Since the suspension must withstand the terrain of the course, it is vital to have a well-designed suspension that is capable of keeping up with these demands. Once the designs have been tested and proven the results will be presented.

**Presentation Type and Session**: Poster IV

## Mini Baja: 2011's Design For Buffalo State's Vehicle

**Michael Garofolo**, **Alex Hubert**, and **Cody Siezega**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

For more than 10 years Buffalo State College has been involved with Society of Automotive Engineers (SAE) Baja. The SAE sponsors an international collegiate competition, which consists of three separate races each year. Our challenge is to build a one of a kind off-road vehicle to compete in various static and dynamic event. Every school must use the same 10 hp engine provided by Briggs and Stratton. With power being a standard among all colleges, weight and drive train are crucial factors in the design of vehicle. Several designs for these components have been evaluated using Six Sigma Cause and Effect matrices to determine the most reliable design for this year's car. This year's car will incorporate several brand new concepts such as a mandrel bent tubular frame and reverse chain case, setting us apart from other schools. The car will be showcased and presented in full detail along with a breakdown of the build process.

**Presentation Type and Session**: Poster IV

## The Power and Simplicity of Python: A Comparison With C++

**Ernesto Miranda**, CIS 389: Advanced Topics: Object Oriented Programming
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

The purpose of this presentation is to demonstrate the Python programming language. Python is a very powerful computer language. It is used for many applications, such as Google, YouTube, and older versions of BitTorrent. It is also used by large organizations such as Yahoo and NASA. Python is not only a popular language it is also relatively simple to write programs compared to other programming languages. Unlike other high-level languages like C++ and Java, Python does not follow strict syntax and structure. In this research presentation, I will demonstrate the ease and simplicity of Python compared to C++, the first programming language learned by Buffalo State students in the Computer Information Systems department. For this research project I will be writing code in both languages to create the game of "Hangman" and show the similarities and differences between Python and C++ in terms of structure and simplicity.

**Presentation Type and Session**: Poster II

## Preserving Vintage Analog Electric Guitar Effects

**Dan Butch**, INT 689: Research Design and Methods
Faculty Mentors: Professor John Earshen, Technology, Professor Stephanie Goldberg, Technology, and Professor Steven Barker, Technology

Contemporary electric guitarists today can access many tools to help create a signature sound. Commercially available solutions are unique stand-alone applications that adhere to few industry standards. The advent of digital signal processing (DSP) and software technology has brought an unprecedented variety of choice to musicians, including the simulation of traditional analog effects and beyond, but digitally produced effects do not precisely reproduce the sound of traditional analog circuits. The problem: today, there is no commercially available system offering a variety of analog guitar effects that are true to their historic antecedents. The purpose of this study is to design, build and evaluate an audio system that can produce a wide variety of true analog effects for guitarists. This system is intended for use primarily with the electric guitar, and will be designed to offer a variety of effects. Allowances will be made for use with bass guitar and keyboards wherever possible. Each effect will have its own analog circuit and input/output jacks for flexible routing. The system will be packaged in a rack mount enclosure and will use a common power supply. A remote foot controller will be utilized for live switching of the effect path. Advantages over commercially available effects will be: novelty, true analog circuitry, vintage feel, flexible routing options, and neat packaging utilizing shared utilities.

**Presentation Type and Session**: Oral – Technology

## Programming With Alice: The Twisted Journey of Little Red Riding Hood

**Sean Reardon** and **Tenisha Jones**, CIS 389: Advanced Topics: Object Oriented Programming
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

As technology evolves, people find new and interesting ways to tell classic stories. With the use of a three-dimensional programming environment called Alice, one of these new and interesting storytelling techniques will be used to tell a twisted version of the classic story "Little Red Riding Hood" combined with "The Three Little Pigs". Using the methods offered in Alice, the readers will follow the main character along her journey and trigger new events and change scenes. The main focus of this research project however, is not to tell the story itself, but to show how the Alice program can be used to manipulate the objects within the designed environment. By showing how basic methods, functions and events work within a 3D environment such as Alice, the advantages offered in regards to giving a designer creative freedom will be conveyed. Through documenting the design process and recording both successes and problems encountered, a detailed overview of the strengths and weaknesses that Alice has to offer will be presented.

**Presentation Type and Session**: Poster I

## Reducing Lead Times At API Heat Transfer

**Robert Kuty**, INT 689: Research Design and Methods
Faculty Mentor: Professor John Earshen, Technology

This research project aims to establish a formal procedure for evaluating the customer order fulfillment process at API Heat Transfer, Basco Division - a manufacturer of heat transfer equipment. API senior management recently assigned high priority to the reduction of customer order fulfillment time. Using well-established principles of Lean Manufacturing, the investigator (an API employee) has accepted responsibility to: 1) Develop a comprehensive current-state process flow model and, 2) Identify and then formally evaluate alternative means to improve process flow, thereby reducing order fulfillment time. This study will take a case study approach. Historic qualitative and quantitative data will be collected to accurately characterize the current state. For each potential process improvement, a cost-benefit analysis will be conducted. For example, one process improvement to be considered is changing the way customer orders are initially processed. Such a change would require the engineering department to create a preliminary bill of materials (BOM). For this and every other potential process change identified, the investigator will evaluate the carry-through effect(s) that implementation would have on cost, work load, and achievement of process time savings. A set of recommendations will be provided to senior management for consideration.

**Presentation Type and Session**: Oral – Technology

## Scratch: A Fun and Easy Way To Learn Programming

**Walter Promowicz II** and **Cassandra Stevic**, CIS 389: Advanced Topics: Object Oriented Programming
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

With the exponentially growing use of computers today, students must become familiar with its use at a younger age. How do we teach middle and high school students to be the programmers of tomorrow? This question has given rise to quite a few software tools that aim to do just that. One of these software programs is called "Scratch". The purpose of our research was to determine if this software could bridge this gap. The research team created a game using the Scratch software to get a feel for the software in action. It was found that the software is extremely user-friendly and employs many of the core programming principles in an easy-to-digest visual manner. Scratch provides an abstracted manner of program execution that allows the user to utilize programming principles free from coding conventions. Our research showed that Scratch not only goes beyond its fundamental use, but is actually a viable tool for those who are already well versed in programming. Many of the implementation details are handled behind the scenes (such as graphics and variables), so that Scratch can be used to create quite involved programs in perhaps half the time normally required.

**Presentation Type and Session**: Poster II

## Trommel Chain Drive Tensioner Modification

**Andrew Tarasek** and **Eric Hill**, ENT 422W: Machine Design II
Faculty Mentor: Professor David Kukulka, Technology

Wendt Corporation produces systems which process scrap metal and non-metal waste. These scrap systems are used to shred, sort and size material for resale or disposal. The screening trommel is a large rotating tube used to size the scrap material after it has been shredded. Currently, the chain tensioner on the drive system of the trommel does not maintain required force on the chain drive system. Proper tension in the drive is required in order keep the trommel operational. Wendt Corporation assigned the task of redesigning the tensioning device. Five design concepts were developed including; a commercial tensioner, torsion spring, extension spring, compression block and a weighted cam. The designs were evaluated using Six Sigma Lean Manufacturing methodology, with criteria that include; ability to be retrofitted, functionality, durability and cost. Analysis, including 3-D models and design calculations were performed in order to provide the optimal design alternative. The final design will include recommendations and include proper mounting instructions and maintenance procedures.

**Presentation Type and Session**: Poster VII

## Two-Wheeled Balancing Wheelchair

**Shawn Kibler**, **Andrew Gier**, **Raul Del Hierro**, and **Gary Johnson**, ENT 465W: Senior Design
Faculty Mentor: Professor Steven Barker, Technology

Two scaled-down prototypes of two-wheeled balancing wheelchairs (P2WWC) were constructed, one using a Buffalo State College robotics kit and the other using an independently designed polycarbonate construction. A full-scale model of the P2WWC would be ideal for people in need of a wheelchair providing a more maneuverable method of transportation, and easier movement over uneven surfaces. The concept of two-wheeled vehicles has increased the prospective for real-world applications ever since the invention of the Segay scooter. General Motors developed a two-wheel electric-vehicle prototype as a future-concept car for city transportation. Both the Segway and the two-wheeled vehicle demonstrated cost effective alternatives to conventional modes of transportation. The P2WWC has fewer parts, less rolling friction, smaller power requirements, and a reduced cost. The P2WWC includes a control system utilizing proportional gain, integral gain, and derivate gain (PID) control theory. An inertia measure unit (IMU) sensor provides the angular position and rate to the control system. Two 12-volt DC motors were used to rotate the wheels, and a 12-volt DC battery provided the power required to operate the P2WWC. A microcontroller was programmed with a custom designed computer program that executed a PID control formula that handled the stability of the P2WWC. Two XBee transceivers were used to transmit data to a computer running National Instruments LabVIEW software for the purpose of monitoring and controlling the P2WWC. The P2WWC project has clearly demonstrated PID control theory, microcontroller programming and LabVIEW programming within a practical application. The final small-scale prototype will also become an excellent model for future students research.

**Presentation Type and Session**: Poster V

## Wireless Television Turntable

**Andrew Fromm**, **Sean Lucas**, **Dan Wascak**, and **Fikirte Assefa**, ENT 465W: Senior Design
Faculty Mentor: Professor Steve Barker, Technology

A Wireless Television Turntable (TVT) has been designed and constructed, which consists of a base resembling a 'Lazy Susan' turntable supporting a television. The TVT system senses a remote control near the television and rotates the base toward the remote control. The remote control is a small, battery-powered radio frequency (RF) transmitter. A directional RF antenna is used by the TVT to locate the transmitter within a room. Two RF-receivers are mounted at the front of the TVT and are separated by approximately 20 degrees. The receiver-signal strengths from the transmitter are analyzed by the Arduino microcontroller. When the signal strengths are equal, the TVT will be facing the transmitter. If the received signal strength is stronger on one receiver, the Arduino will control an H-Bridge, which in turn powers a small servo motor to position

the TVT until the received signal strengths are equal. One TVT home position can be commanded to yield the best simultaneous television viewing for everyone in the room. Standard 120VAC provides electrical power for the TVT. Large laboratory-RF transmitter and receivers were used in the first TVT prototype in order to gain an understanding of the RF subsystem. Smaller commercial transmitter and receivers were used in the second prototype of the TVT that allowed the design to be more marketable. The TVT can be applied to other applications such as sporting event camera automation, concert/theatre spotlight direction automation, and teleprompter viewing angle optimizer.

**Presentation Type and Session**: Poster VII

# *Education*

## Adult Learners and For-Profit Colleges

**Shannon Gordon**, ADE 690: Master's Project
Faculty Mentors: Professor Reva Fish, Educational Foundations and Professor Gerri Hura, Educational Foundations

The purpose of this study is to examine local proprietary schools graduates and how they are faring in debt and wages. This study is important in understanding how people are affected by for-profit colleges. The monetary cost of attending for-profit colleges leaves students in debt and having difficulty finding gainful employment (Hamilton, 2010). The question that I will answer is, "How do for-profit college graduates' income and student loan debt compare to reports of public college graduates' income and student loan debt?" Preliminary findings show that graduates of for-profit colleges do not think their education was beneficial in making better wages. If people attend my poster session, learners will understand how graduates are affected by for-profit colleges. They will be presented with statistics about defaults, minority rates, as well as the data from my own study.

**Presentation Type and Session**: Poster VI

## Bloom's Questions: Applying Bloom's Taxonomy In the Classroom

**Sara Unger**, Exceptional Education
Faculty Mentor: Professor Hibajene Shandomo, Elementary Education and Reading

Bloom's taxonomy promotes higher-level thinking for all students. It consists of six levels of thinking, each successive level becoming more challenging than the previous. Teachers today are required to create objectives and instruction that promote each of these levels. This can be a daunting task. It can be difficult to engage students in activities that involve them to think at higher levels of Bloom's taxonomy. However, my PDS uses an idea called Bloom's Questions. Bloom's Questions can make this task less challenging. Bloom's Questions allows teachers to create a question for each level of Bloom's taxonomy that students must answer in complete sentences. These questions can be used in every subject area to review material being taught. They can be used on a lesson-to-lesson basis, in the middle of the unit, or at the end of the unit. More importantly, the children's responses to the questions posed help teachers to understand student thinking. This presentation will show how these questions can be implemented in all areas of study.

**Presentation Type and Session**: Poster V

## Cause and Effect of QAR and Silent Reading

**Stacey Blatt**, **Cheryl Mohabir**, **Courtney Hammond**, **Daniel Myers**, and **Andrew Pacific**, EDU 511: Methods of Teaching English Language Arts
Faculty Mentor: Professor Maria Ceprano, Elementary Education and Reading

This action research project examined the extent to which using a strategy that helps readers determine the relationship of comprehension questions to the written text versus background knowledge (QAR) enables students to improve higher-level thinking and silent reading comprehension. Groups of five children were selected from second, third and fourth grade classrooms. In total 25 children participated: five (5) second graders, ten (10) third graders, and ten (10) fourth graders. All of the children were determined to be at Benchmark according to the New York State English Language Arts Examination. Students were taught the four types of QAR questions including: In the text, Search and Think, Author and Me, and in My Head questions. All the groups of students practiced responding to these types of questions throughout a five-week period. Results intend to show that QAR enables students to improve in higher-level thinking and reading comprehension when reading silently.

**Presentation Type and Session**: Poster VI

## Efficacy of Creativity and Creative Problem Solving Training On Undergraduate Student Retention and Graduation Rates

**Juliana Sanchez Trujillo**, CRS 590: Independent Study
Faculty Mentor: Professor John Cabra, Creative Studies

School retention is today one of the biggest concerns of higher education. One thing is getting students enrolled in a program, but another thing to make sure they graduate. Moreover, retention and ultimately graduation among college students have received a fair amount of attention in the literature. In response, extant intervention programs continue to be deployed that include attributes that are related closely to strategies used in Creative Studies instruction, namely cognitive ability, motivation, personal vision, effective problem solving, locus of control and self-esteem of the at-risk student and creative person (Puccio and Avarello, 1995). Coincidentally, impact studies on the efficacy of creative studies instruction have shown that individuals can increase their level of creativity with training and that this new enhanced skill can aid them to more effectively break out of self impose constraints (Scott, Leritz, and Mumford, 2004). The research is an archival study of students of the Educational Opportunity Program (EOP) who were in CRS 205 (Introduction to Creative Studies) courses during 1986, 1987 and 1988. It will answer the questions: Does a student taking a creativity course have a better likelihood of graduating? What retains a student? Can the difference in graduation rate be attributed to the influence of CRS205? Is this an isolated phenomenon, or could these results be generalized?

**Presentation Type and Session**: Oral – Education

## Embracing the Challenge of Teaching In Culturally Diverse Environments

**Meryl Hewitt**, Childhood Education
Faculty Mentor: Professor Leslie Day, Elementary Education and Reading

Buffalo State College, located in the heart of economically depressed Buffalo, New York, offers unique opportunities for teacher candidates who often lack both urban experience as well as familiarity with culturally diverse populations. Currently, two-thirds of our Professional Development Schools (PDSs) are urban and the majority of these are high needs schools. As a result, all candidates receive mentored PDS experience in urban settings working with a variety of diverse student bodies. Many of these initiatives are directly linked to specific coursework in our PDSs. Teacher candidates are required to plan and participate in a variety of school-community projects that help build a stronger understanding about the diversity of our populations and the importance of home-school connections. They spend time with master teachers in urban schools; this practice has lead to an increased desire to teach in these environments and to learn culturally responsive pedagogical strategies that are effective with all children. Others participate in children's global book studies by participating with a local supermarket to share global literature with the community. Many of our candidates participate in our PDS Consortium meetings and retreats where the emphasis on meeting the challenges of globalization is the focus. Differentiating instruction, learning to work with speakers of different languages, examining children's literature for stereotyping, and generally striving for equity in education are all critical components of the PDS and the heart of our teacher education program.

**Presentation Type and Session**: Poster I

## The Impact of the Buffalo Urban Outdoor Education Foundation On Great Lakes Education

**Sean Collins**, **Christopher Radamacher**, **Hillary Benesch**, **Kelly Bohlen**, **Nicole Huber**, **Ronald Johnson**, **Jennifer Kimpton**, **Karen Riker**, **Margaret Smith**, and **Dawn Weihrich**, SCI 685: Evaluation in Science Education
Faculty Mentor: Professor Joseph Zawicki, Earth Sciences and Science Education

Students in Western New York have a unique opportunity to understand freshwater aquatic environments. The Buffalo Urban Outdoor Education Foundation has developed a program that provides students the opportunity to experience freshwater environments first hand. This is a great opportunity because the largest freshwater bodies in the world are right in their own back yards. Students are able to take day trips and experience life on the Great Lakes while completing experiments on the Spirit of Buffalo. The issue that arises with the field trips offered to the students is that administrators do not have proof that the students are learning and retaining information as they enjoy a day on the lake. Our class, Evaluation in Science Education, is taking this opportunity to provide evidence that student are benefiting and learning about the science of the Great Lakes as well as learning science skills while taking part in experiments on the boat. As a class, we are developing both pre- and post-tests based on the learning objectives provided by New York State. The results of these tests will be used to evaluate the students' comprehension of the experiments conducted. A final set of items will be validated and prepared for full implementation in the near future.

**Presentation Type and Session**: Poster V

## The Importance of Being Non-Traditional: Taking a Gap Year In AmeriCorps

**Sarah Clerc**, HON 400: All College Honors Colloquium
Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

The question everyone asks you after receiving your high school diploma will hopefully change in the years to come from "What college are you going to?" to "What are your plans now?" The answer will hopefully change from a mundane reply of a college, to "Taking a gap year", more specifically, a gap year in AmeriCorps. My research was to explore the positive impact a gap year in AmeriCorps has as opposed to a monotonous transitioning from high school to college to career. My experience in the 10-month program of AmeriCorps National Civilian Community Corps enabled me to steer away from the mainstream education process where I was starting to loose confidence in my future. Halfway between an associates and a bachelors, I felt that there was much more out there to learn, explore, and change. Not only is AmeriCorps personally fulfilling in numerous ways, members are also able to help others fulfill their personal goals in life. Sixty percent of AmeriCorps Alumni are shown to demonstrate ongoing civic engagement (Wright). This program is developing leaders for our future. The importance of taking time to be on a team, travel the country, meet a variety of people and cultures, explore your interests, and discover your passions cannot be overlooked by some notion to be a "traditional" student. At any level of higher education, it is important to take a step back and gain perspective on how to get more out of the life you are living.

**Presentation Type and Session**: Poster VII

## Keep Spreading the Word...You Want To Be a Part of It...PDS!

**Fred Szafranski**, Exceptional Education and Elementary Education
Faculty Mentor: Professor Leslie Day, Elementary Education and Reading

Buffalo State College Teacher Candidates have a variety of unique occasions to enhance their professional skills through work with the PDS Consortium and its network of elementary schools and community partners. This poster session will highlight these opportunities through the eyes and experiences of the teacher candidates themselves. Please spend time chatting with about our

work for the PDS Advisory Council, our teaching in high needs schools, our commitments in the local communities, our research and presentation involvement, and most excitedly our influence in building strong communication networks across our state and throughout the world through the Buffalo State College PDS website. The usefulness of our website for a variety of PDS partners will be shared and you are invited to explore our website at www.buffalostate.edu/pds. Please, come be a part of it and help us spread the word about how fabulous PDS is for teacher candidates, young learners, mentoring teachers, principals, and college faculty.

**Presentation Type and Session**: Poster I

## Kinde'RRR'garten: An Elementary Effort For a Greener Globe

**Alexandra Baule** and **Sara Stanley,** HON 400: All College Honors Colloquium and EDU 312: The Teaching of Science and Mathematics

Faculty Mentors: Professor Dianne McCarthy, Elementary Education and Reading and Professor Andrea Guiati, Director, All College Honors Program

What can I do with my garbage to help the planet? This was the big idea of a mini-unit taught to a Kindergarten class within the Buffalo City Schools district through our Teaching Mathematics and Science in the Elementary School course. Our purpose behind this hands-on unit was to express the importance of proper waste management at a young age in order to instill a sense of eco responsibility and how to be a good citizen of the world. Prior to the unit being taught, a cross section of six students was interviewed regarding their current understanding of the topic. The same six children were interviewed again after the completion of the unit to find a general understanding of how effective the unit was for each child. Students were introduced to the terms reduce, reuse, and recycle and given tools to implement this thinking into their daily lives. This unit also features components that are considered critical in modern elementary education such as collaboration with families, an application of purposeful technology, and an integration of English Language Arts across curriculum.

**Presentation Type and Session**: Poster I

## Metacognition In the Classroom: An End To the Intellectually Unfulfilled

**Jessica Lardo**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Michele Ninacs, College Writing Program and Professor Andrea Guiati, Director, All College Honors Program

Metacognition, defined generally as thinking about your thinking, is a unique thought process that enables individuals to move beyond cognitive thinking and comprehend information in an advanced way. As a future educator, I believe it is important to understand the benefits of metacognitive thinking in the classroom and what can be done to enhance students' ability to think metacognitively. Students who do so can manipulate information into terms they can understand, particularly when a lesson leaves them otherwise intellectually unfulfilled. It can result in an increased ownership of an individual's education and the byproducts of their learning. There are various activities teachers can implement in lessons to enhance students' metacognition. Incorporating them into a subject's curriculum, particularly English, can be done simply and effectively. This presentation will discuss the benefits of metacognition in the classroom and various techniques that may be used to enhance students' ability to think metacognitively.

**Presentation Type and Session**: Oral – Education

## Modeling Stream Dynamics: Does Inquiry Translate To Regents Performance?

**John Elliott**, SCI 690: Master's Project

Faculty Mentor: Professor Joseph Zawicki, Earth Sciences and Science Education

Constructivist theory tells us that students who spend time engaged in genuine inquiry-based activity will have greater success in the sciences. This project attempts to verify this through the use of a stream-table to model various aspects of hydrology. Success of the inquiry based approach will be quantified through a pre/post test model, and by comparing this years Earth Science Regents results to last years results for appropriate items. It is predicted that student attitudes will be strongly enhanced towards science through such a hands-on approach, but it is less clear if such excitement will directly translate to Regents results in June. Student attitudes will be measured by a survey administered at the end of the project, comparing the inquiry-based model to the direct instruction model. This study will be taking place at a middle-income suburban school near Buffalo, NY. This is the first time stream-tables have been utilized at this school in many years, and the tables were constructed by the author and his Earth Science colleagues.

**Presentation Type and Session**: Oral – Education

## A New Approach and Intervention In Special Education

**Kristi Guinness**, Exceptional Education and Elementary Education

Faculty Mentor: Professor Diane Woolverton, Writing Program

In education, theories, methods, and forms of evaluations are constantly changing, for better and for worse. Sometimes in our society, administrators, educators, and the government forget the purpose and importance of education and focus too much on what is economical and practical, rather than what is necessary. One of the new and most important changes education is taking is called Response to Intervention, known as RTI. RTI is a new model for identifying students who need special education services. Response to Intervention is a multi-tiered approach to the early identification and support of students with learning and behavioral needs. The main goal of RTI is to screen children, at a young age, to identify if a student is at-risk. If a student is at risk, an intervention will be put into place to help the student. If the intervention does not help, then

the next step would be to have the child tested for special services. Many teachers work with students and find they are not meeting the state standards. Instead of giving the student alternative options, they request the child to be tested for special services, which costs a tremendous amount of money and is a long process, sometimes unnecessary. RTI can help students receive the help that is necessary for them to excel, also it is cost effective, as well as a practical way for teachers to help students.

**Presentation Type and Session**: Poster VII

## New Student Orientation Program: Assessing Outcomes

**Amanda Feldman**, Student Personnel Administration
Faculty Mentors: Professor Timothy Gallineau, Student Personnel Administration and Professor Vanessa Cruz, Long Island University

As part of the SPA graduate program, an Independent Study was conducted at Long Island University in the Office of Student Development and Retention, during the summer of 2010. The purpose of this study was to gain experience in analyzing and creating assessments in a higher education setting. Time was spent getting familiar with the university's mission, strategic plan, and goals of the office. After attending new student, transfer, and out of state student orientation sessions, surveys were created in order to review all parts of the orientation program. Assessments were given to groups of students as they completed the orientation program. Data was collected via surveys, from over 200 students and analyzed. The data was then evaluated and utilized to revise the orientation program in order to increase student satisfaction. All assessment tools created for the Office of Student Development will be used to ensure the orientation program is student-centered and positively affecting student success and retention to its utmost potential. On display will be a poster discussing the need and importance of assessment and the assessments created, as well as a summary of the results.

**Presentation Type and Session**: Poster VI

## Original Math and Science Literature Books Created For Elementary Students: The Create, Publish and Share Project Phase III

**Jennifer Grant**, Exceptional Education, **Alicia Tripi**, Exceptional Education, and **Christopher Guidarelli**, Exceptional Education
Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

The Create, Publish and Share Project, Phase III represents the creativity and research of undergraduate elementary Teacher Candidates to create and publish an original science or math book to use during their science and methods teaching course. The students determined the average reading level of the elementary students in their placement. Using the average reading level of the placement class, the Teacher Candidates then utilized New York State Educational Standards to determine science or math contents for that grade level. The Teacher Candidates researched and documented the science or math content with the literacy connections while employing technological strategies to create original books. The completed books are available in Buffalo State College Curriculum Library and in West Hertel Academy Buffalo Public School Library.

**Presentation Type and Session**: Poster VI

## Pen Pal Project: Integrating Visual and English Language Arts

**Nanci Beckley**, **William O'Flaherty**, **Sonja Peterangelo**, **Robyn Ruiz**, and **Julieann Swan**, EDU 511: Methods of Teaching English Language Arts
Faculty Mentor: Professor Maria Ceprano, Elementary Education and Reading

Gardner's theory of multiple intelligences (1989) suggests that the literacy instruction of "at-risk" elementary school students may be enhanced by integrating visuals in texts they are asked to read. This action research project sought to find if the inclusion of artwork in pen pal letters sent to the students resulted in positive improvements in their writing? The project was conducted over a 12=week period and involved 20 at risk students in grades 4 through 6 grades participating in a special literacy program at Enterprise Charter School. Also participating were 10 graduate level teacher candidates enrolled in EDU 511: Teaching Reading and the Other Language Arts. Before exchanging each set of letters, the teacher candidates and each of their assigned students read common trade books having art topics as a major focus. In their letters to the children, the teacher candidates occasionally added visuals related to the art topics discussed in the texts. Using t-units, or 'thought units' as a measure for the study, various changes in the children's written responses, as well as their comments about the arts were examined. It was hypothesized that visuals would encourage higher-level writing as well as an interest in the arts.

**Presentation Type and Session**: Poster VI

## Research In the Efficacy of "Your Baby Can Read" Early Language Development System

**Nicole Davidson**, HON 400: All College Honors Colloquium
Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

If you have ever flipped through the television channels chances are you have probably seen the infomercials for the "Your Baby Can Read" Early Language Development System. The ads feature numerous children, some as young as three months old, identifying words and even reading well beyond their developmental age. The ad claims that between birth and five years of age, in which a child's brain develops more than 90%, you have the opportunity to teach your child to read. They say that by teaching your baby to read early

in life you are giving them a competitive edge in school. Most child development experts agree children do not have the capacity for reading until about age four. However, the ads are convincing and on YouTube dozens of "Your Baby Can Read" users can be seen doing what seems like reading. But, are these babies truly reading, and if so, does it really give them an advantage later on in life? Or is the program harmful? Encouraging children to complacently watch television rather than interact with their surroundings.

**Presentation Type and Session**: Poster VII

## The Secrets Behind Teacher Motivation

**Diane Addes**, SCI 690: Master's Project
Faculty Mentors: Professor Catherine Lange, Earth Sciences and Science Education and Professor Joseph Zawicki, Earth Sciences and Science Education

A majority of teachers would consider motivating their students to be one of the most important aspects of their job. Student motivation is often the topic of discussion; however, in order for the students to be motivated it is essential that the teachers be motivated as well. Teacher motivation is dependent on a complex interconnected set of intrinsic and extrinsic conditions that operate within the school community. This research is an investigation of teacher motivation through a thorough review of the literature on the subject and by collecting data, in the form of a survey given to teachers. Results show that not only do many teachers have strong intrinsic motivators, but there are several prominent external motivators which can further promote or hinder a teacher's motivation.

**Presentation Type and Session**: Poster V

## The State of Education: An Overview

**Leah Kerr**, HON 400: All College Honors Colloquium
Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

Education is a hot-button issue today. Education shapes and defines our image as a country, which can propel us forward or hold us back as a nation while shaping the character and ambition of the minds that will be running our future. I plan on investigating many different aspects of the present educational system. In addition, I will look at Obama's plan for education, societal views on education, teacher perspectives, student perspectives and synthesize what a good education is and if we as a nation are meeting this criteria. Are our schools in a state of crisis? Is the Board of Education responsible for the success or failure of our students? To what standards should teachers be held accountable? What can we do to ensure a better education for all? Are we meeting the needs of 21st century students?

**Presentation Type and Session**: Poster VI

## Travel Around the World To Exotic Countries While Taking Classes With Semester At Sea

**Natalie Jordan**, Student Personnel Administration
Faculty Mentors: Professor Richard Herdlein, Student Personnel Administration and Professor Timothy Gallineau, Student Personnel Administration

Come and learn about my experiences as a graduate student traveling to Spain, Turkey, Croatia, Greece, Italy, Morocco, and Egypt with Semester at Sea. Semester at Sea (SAS) offers students, faculty, staff, and lifelong learners opportunities to travel the world while taking classes on a co-educational floating campus that is sponsored by the University of Virginia. While taking classes and traveling to seven countries, the coursework is coupled with field assignments and service learning projects in international destinations. Through SAS I had the opportunity to take 2 classes while interning as a Graduate Program Assistant for Health and Wellness with a functional role as a Resident Assistant. I helped plan programs that strengthened the shipboard community. While on the MV Explorer, a student has many options to participate in a myriad of activities. One can join a multitude of student organizations, have classes near the pool, or how about having class while snorkeling in Croatia. You can join the captain for dinner, eat with your professors, or even call them by their first name. You can even take part in the historic Sea Olympics event that unifies the entire shipboard community. Most importantly, you can build friendships that will last a lifetime. I was a part of the inaugural class of the Student Affairs at Sea program, where I was able to strengthen my knowledge of higher education on a global level. I was also able to learn from Dr. Kathleen Manning, an expert in the field of Higher Education.

**Presentation Type and Session**: Poster V

## Undergraduate Learning Assistants In a Hybrid Economics Course

**Anna Cummings**, Applied Mathematics, **Micha Owens**, Elementary Education, **Amber Buchholz**, Business, **Grace Higginbottom**, Design, **Ronald Deleonardis**, Exceptional Education and Elementary Education, **Heather Dennis**, Exceptional Education and Elementary Education, **Sarah Anderson**, Biology, **Dave Gaiser**, History, **Alicia Howells**, Exceptional Education and Elementary Education, **Marco Casali**, Mathematics Education, **Katelyn Reese**, Elementary Education, **Desiree Wiley**, Communication Studies, **Jason Dormer**, History, and **Kyle Kunkle**, History
Faculty Mentors: Professor William Ganley, Economics and Finance and Meghan Pereira, Instructional Resources

Economics 101 is a hybrid course that combines classroom instruction with informational technologies such as ANGEL. The responsibility of the undergraduate learning assistants is to manage the online activities, track the progress of the students, and provide some face-to-face interaction as well. ANGEL is used in a variety of ways. We have weekly on-line discussion forums where the students post a response to a given question and then respond to their peers'

questions. This is a good way for students to think critically about course material and to help others in the class do the same. There are also quizzes with unlimited attempts to be used as a study aid for exams. We also do a Toon-Doo activity where the students can create their own cartoon. The students enjoy this because it brings out their creative side. Other than on-line activities we do an in-class review session before all exams. We use turning point clickers and students click in and answer questions taken from lectures and the textbook. At the end, by generating a report we have a good way to gauge how well the students are doing in the class. All the teaching assistants have previously taken the course. A positive aspect to to this is that we see what works and what doesn't. We use this advantage to change or add new activities to help facilitate student learning. In conclusion, Undergraduate Learning Assistants really make a difference in the class experience.

**Presentation Type and Session**: Poster VI

# *Health and Wellness*

## An Apple a Day Keeps the Doctor Away

**Daniel Rogers**, HEW 411W: Critical Issues in Health and Wellness
Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Increasingly, physicians around the globe are retiring at earlier ages due to stress, work overhaul, and bureaucratic guidelines limiting their salaries. In the United States, Canada, and the U.K., general practitioners are retiring well before the age of 65. A Survey study conducted by the Association of American Medical Colleges shows a rapid decline in family medicine for the fourth straight year. These shortages are due to poor medical environments within hospitals and offices that are incredibly understaffed. An insufficient amount of family doctors are being trained although specialty doctors are in full supply. With increasing mandates, lower pay, and longer hours, doctors would essentially give up their posts leaving less and less qualified personal to handle the load. The government has also made it clear that they will cut billions of dollars from health care spending to pay for reform options in the field, furthering the encouragement of early retirement. Currently, the U.S. has 2.4 physicians per 1,000 people (Sterling, 2009). How will elderly patients get the care they deserve if more and more doctors continue to call it quits? Investigating this specific problem will be the sole purpose of the project. Recommendations for this topic include care management that enables the patient to be more effectively taken care of with specific needs designed for each individual. This program would eliminate services that are not needed by teaching family members how to provide personalized care.

**Presentation Type and Session**: Poster II

## Catering To Changing Tastes – Enhancing Fine Dining With Nutrition Information At Campus House

**Ashley Ray** and **Jane Calvert**, HTR 495: Special Project/ Internship
Faculty Mentors: Professor Tina Colaizzo-Anas, Dietetics and Nutrition and Professor Kathleen O'Brien, Hospitality and Tourism

Section 4205 of the Affordable Care Act set federal requirements for nutrition labeling of foods sold at chain restaurants and similar retail food establishments. This has contributed to and resulted from an atmosphere in which customers are more conscious of their health and want to know what they are eating even when they dine out. Though Buffalo State College Campus House Club, Inc., a faculty/staff dining club, is not required to abide by this new federal law, the literature suggests that providing nutrition information when requested can enhance the fine-dining experience for customers interested in weight management. The purpose of this project is to develop nutrition information materials for Campus House patrons. A Hospitality student gathered information on ingredients used in eight standard recipes prepared at Campus House. Nutrient analysis was performed using NutritionistPro software by a Dietetics and Nutrition student. Once the analysis is complete, nutrition information will be made available to Campus House Club members and their guests, upon request. This project serves as a starting point for collaboration between the Hospitality and Tourism Department and the Dietetics and Nutrition Department that will support Campus House in responding to the changing needs of its patrons.

**Presentation Type and Session**: Poster III

## The Environment Can Predict Your Future

**Stefanie Schwagler**, HEW 411W: Critical Issues in Health and Wellness
Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Multiple Sclerosis (MS), an autoimmune disease of the central nervous system, takes its toll on the whole body, usually resulting in death. MS, affecting fifty percent more women than men, has no known cure, although there are treatments that slow the effects of the disease. The prevalence of MS in 1999, was over 25,000 in New York State (Jacobs, et al., 1999). Generally, women have lower Vitamin D levels that may explain why women have a higher occurrence rate of MS. Although no known cause for MS exists, there is considerable amount of research being done in belief that the environment is the biggest factor for this disease. Living in Western New York, it is common for individuals to have low Vitamin D levels. Vitamin D is very important for calcium homeostasis and also for a healthy immune system. Healthy Vitamin D levels can be obtained by diet and environmental factors. This vitamin is made in the skin when exposed to sun but can all depend on skin pigmentation, age, latitude, season, and sunscreen use. Areas such as Western NY do not receive great amounts of sun exposure, compared to others, because summer is the shortest season. Most doctors in certain areas recommend taking Vitamin D supplements, usually in the winter. It is believed that Multiple Sclerosis is caused mostly by environmental factors, such as a Vitamin D deficiency. Although MS can be considered a genetic disease, location can be a contributing factor. Environmental conditions may result in low Vitamin D levels as a child, as well as in adult life, which will reflect the outcome of the disease taking affect.

**Presentation Type and Session**: Poster II

## Is It Worth the Weight?

**Latrice Romeo**, HEW 411W: Critical Issues in Health and Wellness
Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Women in childbearing years should beware of the importance of prenatal care. Prenatal care is the health care a woman receives before and during her pregnancy. When receiving routine checkups and screenings women are protecting the health of their fetus and themselves. Since all childbearing women should receive

prenatal care, is prenatal care the same for all women regardless of socioeconomic status and race? In 2003, thirty-seven percent of childbearing aged women received Medicaid (Anum, Retchin, and Strauss, 2010). Some people may debate women that receive prenatal care while on Medicaid may not be receiving the optimal benefits compared to women with private insurance. Research indicates that there are no significant differences between prenatal care for women insured under Medicaid and those with private insurance. Although, African American women are more likely to receive inadequate prenatal care because of delayed treatment and, have maternal and medical factors that affect prenatal care. Low-income women are more likely to be uninsured before becoming eligible for Medicaid, which delays prenatal treatment. Therefore, the issue affecting Medicaid recipients is not only receiving effective quality treatment, but also the window period to be approved for Medicaid. Whether a woman has Medicaid or other insurance, receiving quality prenatal care is essential for the growing child and important for the mother as well.

**Presentation Type and Session**: Poster II

## Jump Starting a Local School's Fitness and Nutrition Curriculum

**Leah Knott**, HEW 499: Independent Study and HON 400: All College Honors Colloquium

Faculty Mentors: Professor Susan Baldwin, Health and Wellness and Professor Andrea Guiati, Director, All College Honors Program

The objective of the Nutrition and Fitness Curriculum Development, Implementation and Assessment in the Newfane Central School District was to develop a health curriculum to educate children, grades K-5, about nutrition and fitness. The student participant objective of this project was to assess the current curriculum, which did not exist in grades K-5 prior to this project, develop a new curriculum, and implement the curriculum in elementary school classrooms. The plan is to prepare the regular classroom teacher to teach these lessons in the future on their own to maintain curriculum sustainability. The curriculum utilized is called the Student Health Force and was originally developed with a health and wellness company called InnerLink, Inc. The Student Health Force curriculum was designed focusing on all aspects of health including but not limited to nutrition, violence prevention, fitness, tobacco and other drug awareness, self-esteem, decision making, etc. Over the summer months of 2010, the K-6 curriculum was customized to meet pre-identified needs for the Newfane School District by focusing primarily on nutrition and fitness. Time was spent aligning the entire Student Health Force curriculum, including the lessons not associated with nutrition or fitness, with New York State health standards. Finally, an assessment tool was used for the classroom teacher to assess the teaching of each lesson in the Kindergarten classes and to assess the effectiveness of each lesson taught. It is important to not only assess, but also to learn how to develop and implement a curriculum to fit a school's needs.

**Presentation Type and Session**: Poster III

## Nature Did Not Get It Wrong

**Desiree Perrault**, HEW 411W: Critical Issues in Health and Wellness

Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

When the topic of tanning comes up it is categorized as "horrifying," when looking closer, with moderation, the good points outweigh the bad. Vitamin D deficiency is an upcoming problem for New York State; people do not know they have this deficiency until tested by a doctor. The Centers for Disease Control and Prevention (2010) indicate low levels of Vitamin D and sun exposure have been linked to many severe chronic diseases such as autoimmune and osteoporosis. Sunlight exposure is very important; it is the most effective way to absorb this vitamin. People are consuming fewer foods that are high in Vitamin D such as cod liver oil, oily fish, and fortified milk (CDC, 2009). The CDC (2010) also discusses the many factors involved in receiving the optimal sunshine vitamin including time of day, latitude location, season, and skin pigmentation. Taking these factors into consideration, recommended sun time is 5-30 minutes, between 11am- 4pm, twice a week (CDC, 2010). The World Health Organization (2009) states that 10% of Americans are Vitamin D deficient due to the latitude and location of New York State. There are many conflicting reports regarding the right amount of sun exposure for Vitamin D, and the risks associated with over exposure. People have been outside receiving this vitamin naturally for years, as a result nature did not get it wrong, why should you?

**Presentation Type and Session**: Poster II

## Nobody Wants HO

**Donald Beckman**, HEW 411W: Critical Issues in Health and Wellness

Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Heterotopic Ossification (HO) is a serious problem in patient/trauma care. HO is associated with fractures, muscle injuries, burns, and surgical interventions, specifically joint replacement. Joints that are most frequently affected by HO include the hip, knee, elbow, and shoulder. The incidence of HO within a patient is not known for certain, though the chances of acquiring this debilitating disorder escalate when a person sustains an injury to the central nervous system (CNS). Research indicates that HO affects 43% - 90% of patients. The most prevalent cause of HO occurs with trauma a victim suffers from a severe head injury, more specifically, traumatic brain injury (Cullen et al., 2007). A patient who is in a vegetative state is far more likely to develop HO on their affected joints than those who are conscious. HO is very difficult to rehabilitate, due in part too much pain and discomfort, as well as limited joint range of motion. Orthopedic surgeons usually wait between 12 - 18 months for the extra bone to reach a matured state before it is resected. If the bone growth is resected too early, the chances of HO returning are

greater. Successful rehabilitation strategies need to be implemented by rehabilitation specialists to prevent disability, and help improve the patients' lifestyle.

**Presentation Type and Session**: Poster I

## Puppy Kisses Are the Best

**Caitlin Cooley,** HEW 411W: Critical Issues in Health and Wellness
Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

People enter nursing homes for various reasons, but often enough they feel lonely and dependent upon others, which can lead to depression. Reliable research indicates the positive impact canines have on the elderly population, as well as those who live in nursing homes. It been proven that by simply petting a dog one's blood pressure will decrease; being in the presence of a canine can better one's health. Those in nursing homes can go weeks without having a familiar face come to visit. Predeceased by family, visits may be few to none. Research indicates that up to 84 percent of the older population experiences loneliness, which can easily lead to depression (Prosser, Townsend, and Staiger, 2008). There is a reason canines are labeled "Man's Best Friend." Canines minimize the feelings of loneliness and help with the socialization of residents. The dogs provide practical physiological, psychological and social benefits including increased independence and confidence, as well as increased motivation and self-esteem (Sable, 2005). Canines give unconditional love, show companionship, and do not ask for much in return. They help when one feels down, and are always there when needed the most, no matter what.

**Presentation Type and Session**: Poster I

## Stretch Out the Stresses of Cancer

**Jessica Campas**, HEW 411W: Critical Issues in Health and Wellness
Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Yoga has been known to be an exercise for the mind and body. Yoga classes usually consist of asanas, or postures, which exercise every muscle, nerve, and gland in the body. Yoga integrates one's awareness of breath, relaxation, exercise, and social support that are all crucial factors for enhancing the quality of life in all types of cancer patients. Cancer accounts for one in every eight deaths worldwide (American Cancer Society, 2010). If cancer is not a big enough burden, the therapies used also take a toll on patients' bodies, making them weak, sick, tired, or in pain. Yoga can be used as an alternative therapy. It is possible that yoga may assist cancer survivors with managing symptoms of depression, anxiety, insomnia, pain, and fatigue. There are a variety of postures that cancer patients can practice that will help to boost their energy, support deeper and freer breathing, strengthen their muscles, and help to heal their damaged lymph nodes. Aside from postures, patients can practice using a rhythmic control of breath. Few studies exist supporting yoga integration for cancer patients, however, improvements have been seen for depression, anxiety, mental health, and overall quality of life. The purpose of this project is to determine the effects that yoga has on patients with cancer and patients who have had cancer. Also, to determine how it affects their overall well being and quality of life.

**Presentation Type and Session**: Poster II

## The Whopping Whooping Cough

**Nija Solomon**, HEW 411W: Critical Issues in Health and Wellness
Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Pertussis, also known as Whooping Cough is a bacterial disease that has been on the rise for the last two decades. Pertussis disease is most common in infants and children causing a painful, violent cough and can be fatal in infants. In 2009, nearly 17,000 cases of Pertussis were reported in the United States, although many more cases go unreported (CDC, 2009). According to the Centers for Disease Control and Prevention (2011), more than half of the infants under one year of age must be hospitalized for respiratory infections. Every year, approximately one million adolescents and adults are infected with this disease that contributes to the yearly infant incidence rate. In 2005, a new vaccine was released to prevent Pertussis, tetanus, and diphtheria (Tdap). Now that the Tdap vaccine is available it is important for the families of infants to take advantage of this opportunity and get vaccinated. Research has shown that 75% of infant mortality rates decreased and hospital costs were reduced due to Tdap (Shakib et al., 2010). Tdap should be required for parents and siblings of infants during prenatal care because the earlier the vaccine is administrated the better the disease can be controlled. You never know what a child may become if they are not given a chance to live.

**Presentation Type and Session**: Poster I

## The Triple Threat

**Marissa McMullan**, HEW 411W: Critical Issues in Health and Wellness
Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Female athlete triad is a serious syndrome marked by eating disorders, amenorrhea, osteoporosis, and is potentially life threatening. The syndrome is most common in endurance sports as well as appearance sports. Thompson (2007) states the prevalence of amenorrhea in long distance runners is as high as 66%. Being a college athlete places tremendous pressure on young women who must perform at their very best. Usually, this means being slender with a low body weight. Thus, eating disorders form which can contribute to amenorrhea, due to the lack of calories. Thompson (2007) also discusses that up to 65% of these athletes will have eating disorders. Those who desire to win the most are the most willing to give up anything to be the best. Many athletes are under enormous pressure to perform so the only way they feel in control is to control

their eating. Athletes generally reflect the same characteristics: they strive to be the best, seek perfection, and maintain high self-expectations causing the development of eating disorders. Many coaches believe that lighter athletes run faster. As a result, coaches have power over their athletes; if athletes do not perform, they will not get the chance to perform.

**Presentation Type and Session**: Poster I

## Vending Wisely At Buffalo State College?

**Zachary Trunzo** and **Angela Hastings**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Kristina Garcia, Health and Wellness and Professor Andrea Guiati, Director, All College Honors Program

Research indicates college students who consume healthier diets are academically more focused and productive (Haberman, 1998). In and around Buffalo State College (BSC), vending machines offering snack and drink options are common among various campus buildings. During preliminary research, it was observed that vending machines contain various food items depending on the machines' campus location. However, it's uncertain if these vending machines are providing BSC faculty and students with the best nutritional options. The purpose for our study is to identify how the food and drink selections in various campus vending machines are chosen. Healthy People 2020 encourages an individual's diet to include a high variety of nutrient-dense foods such as fruits and vegetables. Further, according to mypyramid.gov, the recommended daily serving for fruits and vegetables is two cups. Currently, many colleges do not provide these healthy options in the easily accessible campus vending machines. We are trying to answer the following questions: Can students and staff influence what goes into campus vending machines? Are food items already determined due to brand loyalty or profit focus? Would students and faculty choose the healthier option if it was provided for them? Data for this project is being collected using surveys and observation. These data could provide an opportunity to create policy change within BSC food services to implement more nutritious food options on campus.

**Presentation Type and Session**: Poster I

## Weight Loss Strategy Preferences: How Does Experience Influence Them?

**You Lin**, Dietetics and Nutrition

Faculty Mentor: Professor Tina Colaizzo-Anas, Dietetics and Nutrition

In 2009, 63.2% adults were overweight/obese (BMI>25) in the metropolitan area. Overweight/obese individuals often try different strategies for weight loss. Previous studies have documented the potential value of investigating past weight management experiences in designing more individualized treatments. The purpose of this study was to explore whether weight loss strategies preferred by women were associated with their weight loss experience. A questionnaire was mailed to 118 women who responded to an ad to participate in a larger study on calorie expenditure. Eligible women were non-pregnant, non-lactating, age 19 or older with BMI>25. One hundred and four (88%) returned questionnaires. The mean age was 43.2+/-12.3 years; BMI was 33+/-6. The most frequently used strategies were Weight Watchers (WW) (53.2%), lifestyle modification (LM) (48.6%), low carbohydrate diet (LC) (44.0%), and calorie counting (CC) (34.9%). Reported weight loss was 21.6+/-15.5 lbs. (WW), 16.5+/-10 lbs. (LC), and 20.4+/-19 lbs. (CC). Chi-square analysis was used to evaluate associations between dieting history and weight loss strategy preferences. Sixty-two percent, 74%, and 91% with WW ($p<0.003$), CC ($p<0.000$), or LM ($p<0.007$) experience, respectively, prefer the same strategies. Past experiences with weight loss treatment is associated with weight loss strategy preferences.

**Presentation Type and Session**: Poster III

## Who's That In the Mirror?

**Ashlie Kohlhagen**, HEW 411W: Critical Issues in Health and Wellness

Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Alzheimer's disease is the leading cause of dementia. Mostly associated with people older than 65 years, this disease can develop earlier in life creating numerous concerns and problematic situations for the patient and family caregivers. Early on-set dementia (EOD) can affect 3% - 5% of patients with dementia. This form of dementia can be more debilitating than late on-set dementia (LOD) as a result of the patient's phase of life; the earlier the onset, the more responsibilities the patient holds. The consequences caused by EOD affect the family and caregiver and can include behavioral and cognitive issues. However, the caregiver also needs to focus on finances, other family members, and plan ahead for long term care, all while maintaining their own life. This can become extremely difficult when dealing with one less income and eventually one less person. In contrast to other degenerative diseases, there is no real answer as to why people contract and develop EOD. Current research supports the theory that small mutations in chromosomes 14, 21, and 1, can influence the onset of the disease (Binetti, 2006). Research also noted four genes that can influence the onset of Alzheimer's and EOD; three of those four genes are linked to EOD while only one is linked to LOD. In addition to genetics, lifestyle and other health conditions can influence the development of Alzheimer's (Alzheimer's Association, 2011). Therefore, the need to shed light on the millions of people affected by EOD is important in order to meet their needs.

**Presentation Type and Session**: Poster I

## The World Wild Web: A Sinful Pleasure

**Mehrnoush Vahid Tareshi**, HEW 411W: Critical Issues in Health and Wellness

Faculty Mentors: Professor Barbara Olivieri, Health and Wellness and Professor Scott Roberts, Health and Wellness

Increasing people's understanding of the significant role the Internet plays in their lives is a crucial subject in today's society. The Internet is altering human life in many different aspects of social behaviors, including sexuality. According to Cooper (2000), sex is the most frequently searched subject online. Cybersex is a relatively new problematic issue. Thus, it is important to identify what factors cause people to gravitate toward it. Said factors include: isolation, affordability, easy access, anonymity, and low self-esteem. To be at risk of developing compulsive behavior only requires one influential factor. Literature shows a correlation between the hours spent online to cybersex engagement. Moreover, there are two dimensions to cybersex: positive and negative. However, when cybersex becomes an integral part of a person, it negatively impacts their life. Personal relationships, work, and social interactions are all affected by this phenomenon. The virtual world could be considered dangerous because it alters a person's perception of reality. People with cybersex compulsive behavior can develop contradicting identities. This can lead to disruption of a person's sense of self. In an era dominated by technology, it is critical to consider cybersex compulsion as a growing public health concern.

**Presentation Type and Session**: Poster I

# *Humanities*

## 21st Century Marriage: The Union of a Couple In Love Or Who Designed the Dress?

**Stephanie Hacker**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

Women today feel the need to have that perfect wedding and will go to almost any length to do so. This is shown in such reality TV shows as Bridal Plasty and Four Weddings. My research focuses on the effects that reality wedding shows have on women. It focuses on how wedding consumerism and has affected how women view their special day. What used to be the most important day in a couple's relationship has now become one of the most expensive and stressful days in their lives. I will show how reality TV has pressured women into buying into the idea that they need to look perfect and have the perfect wedding in order to have a fulfilling, meaningful, long-lasting marriage.

**Presentation Type and Session**: Oral – Humanities II

## Advertising and the Formation of Women's Self-Identities

**Meaghan O'Connor**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

We are bombarded with advertising every day of our lives. Advertising influences our every day mannerisms and choices. Women are pressured by advertisements to think and act in certain ways. Advertising degrades women. Women in advertisements are barely dressed using their bodies to sell products. Advertising sells women to men as commodities. This objectification not only affects the way men view women but it also affects the way women view other women and themselves. We see what the advertisements are doing to us but we can't seem to stop being influenced by them. The advertisers also invent problems and anxieties for women. They give us the supposed solution to the problem with their product. When we use the product, and it doesn't fix our problems, we are left with more doubt and anxiety than ever before, which creates more buying. The advertisers convince us that our relationships with products are more important than our relationships with humans. Women are being affected worldwide by advertisements. As women's magazines emerge in China, for example, a shift in gender ideology happens. Advertising influences our lives and will continue to unless women are aware of what is being done to them. Awareness is the only protection women have against advertisers. When we understand what they are doing to us, we are less likely to fall into their traps.

**Presentation Type and Session**: Oral – Humanities I

## Advertising Embraces Violence As Much As We Do

**Ken Obstarczyk**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

I will look at print advertisements in order to provide evidence these messages merely reflect our global attitude about violence. I will argue that these newspaper and magazine advertisements, online advertisements, billboards and posters are not sending a message to us telling us that we must act violent. What these ads are doing is reinforcing our already violent behaviors. Print advertisements show women being blatantly disrespected, abused and emotionally embarrassed or tortured. Men too appear in print advertisements as objects that are prone toward fighting over trivial issues. However, this is not why we as a global culture continue to act violent. I argue that we were raised in a world that promotes violence. People like excitement, which is an aspect of violence. I will also present the other side of this issue. That is, do print advertisements use violent images to entice us to act violently? Is such violence really natural? If the product in a print advertisement is something we really want, does an image of violence make us act violent? For my research, I will be looking at print advertisements from both the United States and Europe.

**Presentation Type and Session**: Oral – Humanities I

## Advertising, Tourism, and the American Dream

**Philip Leone**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

In 2010, the United States national unemployment rate reached 9.7% (the highest since the early 80's), yet Americans spent roughly $700 billion on travel expenditures in the U.S. and abroad. Though the economic downturn of the early 2000's crippled many industries in the U.S, it is clear that the American desire to travel, though diminished, still remained strong. Tourism advertising plays an important role in creating "magical destinations" where individuals can explore new cultures while escaping from the pressures of the real world. These ads often romanticize specific destination features and omit others. Some omissions could endanger visitors, for example, by playing down certain dangers. "You can do whatcha wanna in New Orleans," a New Orleans tourism ad reads. New Orleans' economic revival depends heavily on its tourism industry, yet in 2009 the city had the highest murder rate in the U.S. My research employs a systematic content analysis of advertisements, contextualized by peer reviewed journal articles. I am ultimately attempting to deconstruct advertisements created by the tourism industry, and identify how romanticized destination data impacts tourism consumer decisions.

**Presentation Type and Session**: Oral – Humanities II

## Advertising: It Is Just the Crazy World We Live In

**Jeff Buchman** and **Catherine Setlif**, COM 450: Communication and Society
Faculty Mentor: Professor Joseph Marren, Communication

Advertising in the media is the most prevalent today, more so than it has ever been. In fact, advertising plays such a key role in the media nowadays that it seems that neither can exist without the other. Additionally, media has found a way to entirely re-invent itself and generate a whole new advertising media world all together. Advertising manifests and attaches itself to all the different media mediums. There is no television station, radio station, or Internet media that does not rely upon, and coexist with some type of advertising. Video streaming, television shows, radio broadcasts, are now all interrupted periodically by commercials. This doesn't stop here either, as advertising has also morphed to constantly have ads all over the sides and bottoms of web pages. Readers can expect to be able to identify and understand the motives and techniques advertisers use to be effective, as well as the rationale behind specific marketing decisions. In addition, one will also be able to understand that advertising is part of almost every aspect of everyday life. This essay also examines and brings to light the idea that we live in one big play pen of impressionable children; just waiting to be influenced by both advertising and the media. As a whole, media and advertising thrive off of one another, and together form a dynamic duo of generated revenue and information.

**Presentation Type and Session**: Poster IV

## Beyond Silence: Women and Truth In William Faulkner's "Go Down, Moses"

**Amy Widman**, English Education
Faculty Mentor: Professor Aimable Twagilimana, English

Many American literary texts in the twentieth century depict a struggle between black men and white men. The struggle of masculinity has always been fought and displayed in literature, but what may be less apparent is the role that women play in within these texts. We typically see women being silenced and violated and having little to no impact on life, the lives of others or their surroundings. In the novel Go Down, Moses by William Faulkner it appears that we see the same situation: men fighting for their masculinity against other men and nature. What is missed is the significant role that women play in this text. Women have a significant impact on everything in this text; in fact there would be no story, and this text would not exist at all, if it were not for the women and their actions in this text. I argue that although women are silenced and violated throughout the text, they hold the main story within their characters.

**Presentation Type and Session**: Oral – Humanities I

## Branding Sports Uniforms: Will This Be the Final Chapter In Commercializing American Sports?

**Sean Vara**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

My research focuses on advertising that uses uniforms on professional athletes as its media. In particular, I examine audience responses to the on-jersey advertising that is omnipresent on the uniforms of European soccer teams. I am conducting a literature search to examine how European audiences respond to these commercialized jerseys, both as consumers of the advertised products and brands, and as consumers of the overall sporting experience. I will aim to answer the obvious commercial questions: is such advertising effective in selling products? Can this structure of advertising potentially pilot professional-American mainstream sports into commercializing their franchises? Further, I want to learn what other visual impacts of such commercialism impose upon the sport.

**Presentation Type and Session**: Oral – Technology

## Can Advertising Transform Us Into Physicians?

**Lindsay Hawkins**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

Prescription medication advertising is no longer directed solely to prescribing physicians, but to the patients. This direct-to-consumer marketing occurs when a product, in this case prescription medication, is marketed directly to consumers (patients) instead of solely to the healthcare professionals who have the power and responsibility to prescribe them and regulate their use. Researchers, doctors and consumers see this development as either a pro or a con. Does this type of advertising strengthen patient knowledge, and hence, the patient-doctor relationships? Or does it encourage consumers to seek prescription medications for ailments that do not require such measures, thus challenging the patient-doctor relationships? This research will analyze the impact that prescription drug advertisements have on consumers, their perceptions of both drugs and doctors, and how this affects patient-doctor relationships and doctor visits.

**Presentation Type and Session**: Oral – Humanities II

## Can Buy Me Love: How Advertising Influences Online Dating Profiles

**Patricia Krehbiel**, COM 450: Communication and Society
Faculty Mentors: Professor Michael Niman, Communication, Professor Ann Liao, Communication, and Professor Ron Smith, Associate Dean, Arts and Humanities

This paper examines profiles posted to online dating web communities by people seeking potential mates. This paper semiotically and linguistically compares language and image choices that users employ in creating profiles at various online

dating websites with advertisements for common products. In doing so, it documents how people use classic advertising techniques to market themselves to potential mates. Through literature reviews and personal interviews, contextualizes how online dating participants present themselves in their profiles as they strive to find a date or life partner. Moreover, I hope to discover what, if any, influence advertising has on the way online dating site participants present themselves to prospective mates. I am comparing both advertisements placed by gay and straight men and women. My hypothesis is that people seeking mates are influenced by advertising both in the way they market themselves and how they shop for an ideal mate. I am utilizing an extensive literature review process on related topics in order to gain insight into the world of online dating. I am also conducting content analysis of dating websites, choosing a random selection of twenty four profiles posted on free to join dating web communities such as OKCupid and Match.com. I will use twelve women's profiles and twelve men's profiles. I am using a 50/50 mix of straight, and gay and lesbian profiles. My hypothesis is that most profiles will show both the influence of advertising, and the reality that many of the dating community members have unrealistic expectations of potential mates, just like we often have unrealistic expectations from products.

**Presentation Type and Session**: Oral – Humanities I

## Does Body Image In Advertising Change What We Look Like?

**Amy Klosowski**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

One thing that women learn from advertisements is an appreciation for a set body image standard. Ads, and hence, their viewers, often focus on the model (body image) rather than the product being marketed. Many of the body images celebrated in these ads are unobtainable. The result of this barrage of unobtainable body images is that there are many women in the U.S. who are constantly getting plastic surgery to change the way they look. My research asks, does advertising have a direct connection with the number of plastic surgeries that women get every year? How many women get plastic surgery to look like a celebrity or model they see in advertisements? This research will analyze the impact that mediated body images have on women, specifically with the number of women getting cosmetic surgery. It will also analyze what types of cosmetic surgery women are getting, and what motivates their decisions to seek such elective surgeries.

**Presentation Type and Session**: Oral – Humanities I

## Drawing a Thin Line: An Analysis of the Media's Impact On the Diet Industry

**Rianna Greenfield**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

The mass media is notorious for portraying ideal, yet unrealistic, body images. Whether it is in television or in magazines and print advertisements, we are constantly looking at individuals with physical characteristics that are often humanly impossible to obtain. Both women and men start to objectify themselves and criticize their own bodies, as well as those of others. This leads them to turn to the diet and health industries for salvation. According to Business Week, the diet and health industries together gross an average of $40 billion annually, with much of this spending being media-driven, especially when unrealistic body types of celebrities surround consumers. I am interested in applying feminist theories of objectification to analyze the impact media has on the diet and health industries. I focus on fad diets and diet moguls that use the media as a platform to convince consumers to utilize their techniques for fast weight loss.

**Presentation Type and Session**: Oral – Humanities II

## Drunk On Advertising: Under the Influence of Social Marketing

**Nicholas Sessanna**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

In this research paper, I will examine the new phenomenon known as "Swagbucks" and the effect it has had on our society. For years, we as a civilization have sat through countless commercials on television in order to be rewarded with "quality" programming. Similarly, Swagbucks is a new service that awards a certain number of fictional dollars, aptly known as "Swagbucks," for watching the content that streams on their website. Recently, social marketing sites like Swagbucks, Gosocial.com, Groupon, and Living Social, have been a rising force in the advertising industry, offering a service, reward, or bargain to users of their site. In the case of Swagbucks, the fictional "bucks" that the user earns can eventually be traded in for rewards from companies like Amazon.com and Southwest Airlines, just two of many options offered through the site. I will use a convenience sample to conduct interviews with users of Swagbucks in order to gain valuable insight about the service and will ultimately compare the value of a "Swagbuck" to an American dollar from my own perspective - a college student with a minimum wage job.

**Presentation Type and Session**: Oral – Humanities I

## "Earnesty" vs. Honesty: Analysis and Implications of Title In Oscar Wilde's, "The Importance of Being Earnest"

**Alison Stroczkowski**, HON400: All College Honors Colloquium
Faculty Mentors: Professor Andrea Guiati, Director, All College Honors and Professor Roswell Park, Director, Academic Support Programs

Although it may only consist of five simple words, all of which clearly correspond to the work itself, Oscar Wilde's title for "The Importance of Being Earnest" is not to be overlooked. This paper and presentation will serve to analyze Wilde's choice of title ("The Importance of Being Earnest") and its many implications. Relevant research of literary critics will be included as a means to support the implications uncovered by this analysis of title as it corresponds

to literal, meta-linguistic, and contextual (concerning both Wilde's controversial lifestyle and the "time" in which the play's writing occurred) interpretations. Additional interpretations may be included as research progresses.

**Presentation Type and Session**: Oral – Humanities I

## The Evolution of Mythology

**Matthew Kanaley**, English Education
Faculty Mentor: Professor Michael Johnson, Modern and Classical Languages

Through a poll of my peers, I seek to discover how much an average student knows about Greek Mythology. My hypothesis is that the modern student knows only a few facts about what used to be considered history, and that most of the knowledge they have about the old Greek fables has been skewed by modern retelling of the myths. I am studying the ancient mythological stories of a few heroes in particular: Heracles, Perseus, Achilles, and Prometheus. I will include information about the modern retellings of these stories from the latest versions of them. This would include the movies: Clash of the Titans, Troy, Disney's Hercules, and the play: Prometheus Bound. Data can also be gathered from the latest popular mode of story-telling, video games. These games, (such as the God of War trilogy) not only allow the audience to see these stories, but also to act them out. My research will look into the history of education to discover at what point were Greek stories excluded from education. This includes information about specific periods in time where Latin works were not performed or told, the effects of oral tradition and modern directors using "poetic license" when retelling stories.

**Presentation Type and Session**: Poster IV

## Exploring Nature and the Arts Through Poetry

**Ryan Meyer**, English
Faculty Mentor: Professor Peter Ramos, English

This collection of poetry examines the often nebulous distinctions between the intangible value of the natural world and the need for industrialization and technological advancement on the part of the more business-oriented portion of society. My works attempt to engage both philosophies, and, in doing so, illustrate the brilliant dichotomy that exists there. The overall goal, however, is to establish a new value system, one that is molded to the ideals of an environmentally-friendly and hopefully increasingly artistic and expressive generation, and to explore the duality of twenty-first century wealth and fortune. Extending upon the ideals of great writers, poets, and thinkers like Frost, Thoreau, Williams, Wordsworth, and Whitman, my work attempts to appraise the ever-elusive value of nature and the arts.

**Presentation Type and Session**: Oral – Humanities I

## Freedom of Information: How Twitter Is Changing Media and Our World

**Darryl Granger**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

Twitter is not simply a new social network for connecting with friends; it has become an essential force in organizing revolutions and spreading information worldwide. This project will examine how in an age of corporate downsizing in the media, Twitter has taken a unique stand in breaking and covering stories from the ground and broadcasting them to the world. The ability for users to follow a source is opening the world more and more and is threatening the power of regimes to conceal information. This presentation will focus on specific examples of Twitter as a platform for activism and as an unfiltered source of information. I will also make the case that these direct bursts of information circumvent any filtering by the mainstream media and often serve as a more reliable narrative of events as opposed to a media networks interpretation. My research will highlight the posts of specific Twitter users who have drawn attention to crisis and how their tweets brought attention and sparked reaction to these events. These events include the 2009 Iranian Election protests and the 2011 Egyptian and Tunisian protests. I will also show how mainstream media outlets are embracing this social network to add depth to their own stories or discover leads.

**Presentation Type and Session**: Oral – Humanities II

## 'Hate' Drunk On Alcohol Advertising

**Jarrad Mendel**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

Globally, alcohol advertising has adverse effects on gender relations. Alcohol advertising historically has pooled various visual methods together to portray, and inherently promote, misogynistic and other sexist values globally. The body of my research will consist of a literature review examining critical media theories, such as feminist theory, and apply it to the deconstruction of contemporary advertising around the world. My work documents the misogynist nature of consumer culture and argues that this misogyny promotes both the objectification of women, and the violence against women that such objectification breeds.

**Presentation Type and Session**: Oral – Humanities II

## Historic Representations of Mental Illness In U.S. Society

**Devon Slobodzian**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Michael Niman, Communication and Professor Andrea Guiati, Director, All College Honors Program

Our media, which breeds prejudices and stereotypes, often stigmatizes the mentally ill. In colonial times, the media skewed representation of the mentally ill through newspapers, court records, and personal diaries. These publications began to create words, which would categorize and ostracize those suffering from diseases.

Today, these same stereotypes appear in books, movies, and television. Past and present movies such as Shutter Island (2010), Psych 9 (2010), Mirrors (2008), A Fine Madness (1966), Shock Corridor (1963), and Through A Glass Darkly (1961) work to deepen these negative stereotypes. The stigmas increase the burden that those living with mental illnesses are forced to bear, which will hinder their treatment and acceptance into society. The media should be working towards using outlets to eradicate, rather than reinforce false notions. It can be concluded that these publications, past and present, have skewed the public's perception of the mentally ill, making integration into society and recovery near impossible. This group often is ignored by the public, however, when we discuss groups such as African-Americans, Italian-Americans, or women, who are the victims of negative stereotypes. This presentation will explore historically uncomfortable issues surrounding representations of mental illnesses from the early 17th century.

**Presentation Type and Session**: Oral – Social Sciences

## The History of Cool: What Is It and How Is It Determined

**Joshua Brown**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

Throughout our lifetimes, we have seen numerous trends, fashions, and popular entities come and go. It sometimes seems as if there is one wizard in control of what society considers to be "cool." I remember when you weren't "cool" unless you had a JanSport backpack. I also remember when you weren't "cool" unless you had Nike high top shoes. All this changes by the moment. My question asks who or what is in control of this chaos? My paper explores available research on the topic of cool, looking at the history of cool, and ultimately exploring what forces define and determine that elusive concept we call "cool," while also looking at how "cool" trends have changed in the past two decades. My work identifies types of consumer behavior associated with "cool." My ultimate goal is to answer the burning question of, "What is cool?"

**Presentation Type and Session**: Oral – Humanities II

## How Does eBay Change Our Consumer Behavior?

**Aaron Fisher**, COM 450: Communication and Society
Faculty Mentor: Professor Micheal Niman, Communication

In consumer societies, consumers buy things and their purchases keep the economy moving. Advertisers repeatedly ask us to buy more things than we need, and this conspicuous consumption accelerates that pace. What causes us to want things we don't need? People have been around for millennia, surviving and interacting with other people. With a new era of technology, obtaining things (being a consumer) has become so easy that we don't even have to leave our houses. We can log onto our computers, go to our browsers, type in eBay, and start clicking away to find the best deals. After a few clicks, our new things will soon be delivered to us. We often overlook what we do to earn money, not realizing that working an hour at minimum wage isn't usually enough to buy a value meal at McDonalds. EBay encourages us to price check, watch bids, and enables us to find out what the highest rated tech devices are going for in the global marketplace. As consumers in a waste-riddled society, we sometimes buy things to throw away. EBay ensures that when we're done with our most recently purchased things and are ready to throw them away, we will have spent the least amount of money possible in this waste-consume cycle. This paper examines how eBay, as a communications medium, has changed the way people shop, and has also changed peoples' relationship with products.

**Presentation Type and Session**: Oral – Technology

## Magazines: Fashion Bibles Or Couture Commandments?

**Naomi Defensor**, COM 450: Communication and Society
Faculty Mentor: Professor Joseph Marren, Communication

My scholarly activity poses the question "Magazine: Fashion Bible or Couture Commandments?" I will extensively research the negative effects that fashion magazines have on an adolescent's self-esteem (specifically focusing on the younger female demographic and eating disorders). I will start by posing some commandments that fashion magazines reflect on younger girls. Example: Thou shall be tall and thin to be beautiful. I will answer my initial question by examining several statistics, scholarly journals, and primary documents that will help me to gain more knowledge in this topic. I will also interview a doctor and examine the correlation between young girls and eating disorders since there is an obvious relationship between fashion magazines and eating disorders. Statistics show that 40% to 60% of girls who attend high school are dieting and 50% of the girls between the ages of 13 to 15 believe that they are overweight. It is estimated that 1,000 women die every year due to this illness. According to The National Center for Health Statistics, anorexia nervosa was the primary cause of death on 101 death certificates in 1994, and was acknowledged as one of multiple causes of death on another 2,657 death certificates. To demonstrate the correlation between fashion couture and eating disorders, I have decided to use some case studies that portray this. One example is a story about a young French model named Isabel Carro who suffered with an eating disorder for years. So, then, are fashion magazines pure entertainment, or is it a way of life that young girls take on, even if it's deadly?

**Presentation Type and Session**: Oral – Humanities II

## The Objectification of Women In Mass Media: Effects On Self and Society

**Stephanie Berberick**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

Objectification of women in mass media is a long-standing practice, but often critics dismiss such arguments against the use of sexual exploitation as "overly feminist" critiques or exaggerations. This paper and presentation uses both quantitative and qualitative data to demonstrate that the "ideal" image of women presented by the media is clearly harmful to women and gender relations in our society. This paper discusses how such objectification is detrimental to women's self image and to society as a whole. This paper samples the effects of these images on women by examining increasing rates of cosmetic surgery, eating disorders and premature deaths. It uses statistics to illuminate the effects on society that appear in the form of violent crimes, STDs, teenage pregnancy and sexual activity. This paper also contextualizes the topic from a sociological perspective that aims to explain why, considering the adverse effects, the widespread mediated objectification of women continues, and how a convenience sample of people who are exposed to the objectification react to it.

**Presentation Type and Session**: Oral – Humanities I

## Preying On Cool: Coolhunters and the Commodification of Hip

**Nick Sodaro**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

In America, corporations hire "coolhunters," essentially culture spies, to go out and find new "hip"trends which they can then market to consumers. My research uses data from journal and magazine articles,books, and documentaries, to define coolhunting and understand the ways coolhunters gather and use their information, and the impact that this commodification of popular culture has on society. My research will examine how consumers appropriate and destroy specific fashion trends that are marketed by corporations, bought by consumers, and then disposed of by consumers after mass marketing destroys their "cool" factor. Though an American phenomena, coolhunting is now global. My research contrasts coolhunting in the US and the UK.

**Presentation Type and Session**: Oral – Humanities II

## Reality Television and Its Social Media Effect

**Jenn Jankowski**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

My research examines how the new wave of reality television has affected, and has begun to dominate, social media today. Much of what we consider "popular" these days is influenced by reality TV. Whether or not you believe everything you see on TV, there is no doubt that you are affected by the reality TV phenomenon. To research this phenomenon, I examined articles on the subject both in academic journals and the popular press, as well as contextualizing this data with my own personal observations, after viewing many hours of reality TV programming. My research documents how reality television dominates television today, and also how it has changed social media for better or for worse.

**Presentation Type and Session**: Oral – Humanities II

## Reality TV....Why?

**Christopher Kos**, COM 450: Communication and Society
Faculty Mentor: Professor Michael Niman, Communication

Millions of people tune in every night to watch their favorite Reality TV programs, whether it is Survivor, The Apprentice, Big Brother, The Bachelor or The Real World. It's an addiction that feeds an industry that seems to perpetually create new "real" shows. It's easy to understand why media conglomerates produce and air these shows -- they're cheap to make. But the real question is why do we watch them and how is this viewing affecting our culture? This viewing not only impacts our culture, but global cultures that follow our lead as well. I have assembled a number of papers and articles that focus on the US and India, speculating on why and how reality TV has become so popular in these two giant media markets. What drives a person to watch a man attempt to find a mate, or seven 20-year-old housemates getting drunk and arguing about who didn't help clean the house? My research also utilizes interviews that I have conducted with a convenience sample of 20 random college students, examining what really drives them to watch reality TV? What are they immersing themselves in? What part of reality TV intrigues them? Reality TV has a demonstrable effect on our culture, with people humiliating themselves in front of millions of viewers in a quest for fame.

**Presentation Type and Session**: Oral – Humanities II

## The Record Newspaper: An Investigation of Resident Student Readership

**Julia Merulla**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Annemarie Franczyk, Communication and Professor Andrea Guiati, Director, All College Honors Program

In the nearly 100 years of the Buffalo State Record's existence, there is no evidence of a readership survey having been conducted. A key objective of any newspaper is to understand its target audience and to provide a publication the readers want to read. There is often talk of Buffalo State students being unaware of the presence of a campus newspaper or not sure where to find one. This project investigates the awareness and visibility of The Record among on-campus residents at Buffalo State. About 250 students total will be surveyed, 25 from each residence hall. Elements that are taken into consideration are year in school, major, gender, and ethnicity. The results will allow the newspaper to have a better understanding of its on-campus readers, with the goal of making any appropriate changes based on the findings. For the purposes of this project, and to be able to draw definite conclusions from the data collected,

subjects have been limited solely to on-campus residents. This project lends itself to further research, most notably of the commuter population, which is a significant part of the student body. Additional information could be gained by asking more specific questions about readership of The Record, such as who reads which sections of the newspaper and which stories or elements interest them most.

**Presentation Type and Session**: Poster VII

## Roles of Gender In Contemporary Media

**Kevin Kilmurray,** COM 450: Communication and Society
Faculty Mentor: Professor Joseph Marren, Communication

Gender roles in America have always specifically defined relationships and American culture. Though the apparatus of communication technology, culture has gone through slight and radical variations, especially when defining gender roles. The role gender now plays in American culture has seen many changes because of the new communication infrastructure and the introduction of new media. These variations are both predictable and unimagined. They shape the future of our society's culture and how individual relationships in that culture are dictated. The relationships that are formed around the new media are developing in both healthy and horrible ways. A percentage of young adults abuse pornography, and become enthralled with video games during some of their most important relationship/developmental years. However, other young adults have created relationships using the Internet and hold careers that deal exclusively with the Internet. The new media infrastructure has specifically changed details of the roles of gender when it comes to relationships, responsibilities and lifestyle choices.

**Presentation Type and Session**: Poster IV

## Salvation Through Storytelling

**Devon Cozad**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Craig Werner, English and Professor Andrea Guiati, Director, All College Honors Program

Stories are our lifeblood. They have the power to instantly transport us to a different time and place and to entertain us on a whim; moreover, they encapsulate core values and preserve our very souls. I propose to examine the theme of 'salvation through storytelling', focusing particularly on examples found in children's literature where characters' very lives hang on the words of a story. I will present "The Tale of Despereaux: Being the Story of a Mouse, a Princess, Some Soup and a Spool of Thread" by Kate DiCamillo, "Shadow Spinner" by Susan Fletcher, and "The Guardians of Ga'Hoole: The Capture" by Kathryn Lasky. Each book shows a prime example of how a tale can raise a character from the jaws of their own personal darkness or from an outside threat. In "The Tale of Despereaux" and "The Capture", we watch as the characters gain courage and revive their spirits through their storytelling. They become their heroes through their choice to carry on. "Shadow Spinner," in contrast, presents us with the well-known tale of Shahrazad. Through her thousand and one tales, she was able to soothe the wounded heart of the sultan, preventing any more of his wives from being murdered out of vengeance. Shahrazad did not have a choice once she began her quest; the success of her storytelling decided the course of the next day. And so, storytelling keeps far more than a dream alive; it keeps our entire beings alive as well.

**Presentation Type and Session**: Oral – Humanities I

## Sexism Still Alive In Sportscast

**Alexa Myers**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Tom Koller, Communication and Professor Andrea Guiati, Director, All College Honors Program

I am researching the sexist struggles women have had to endure in the sports broadcast field and how they have changed the sports media industry. I am researching using Internet archives, scholarly journals, magazines, and newspapers. My research begins with Jane Chaistan as she was the pioneer of women in the sportscasting industry. I will be describing milestones throughout the history all the way up until January of 2011 when Jeannine Edwards had to deal with sexism at her job. In doing research on this topic and conveying the acts to the public I hope that it is seen that sexism is still very alive today; that although women have made huge strides in the sports field, they still have a long struggle ahead of them. My poster will highlight the stepping stones of these strong women in sports broadcasting but it will also stress the improvements because of women in this business.

**Presentation Type and Session**: Poster I

## Smiles: Life After Darwin Is Not So Bad After All

**Matthew Guminiak**, Philosophy and Physics
Faculty Mentor: Professor Lisa Berglund, English

This research project addresses an alternative to religious based morality by focusing on "Self-Help" - a book written by Samuel Smiles - and "On the Origin of Species" by Charles Darwin. As both works were published in November 1859, this project looks at the impact each had on public thought within Victorian Britain and beyond by discussing implications of Origin toward Natural Religion and presenting Self-Help as an alternative to religious morality. In particular the topics to be discussed are: the shift of man from near God to near Ape, the English Liberal push toward increased public education and suffrage, and a resurfacing of humanistic ideals. In general each topic will give way to the concept that education, hard work, and perseverance, for their own sake, can lead to a morality devoid of supernatural purpose. The topic above resulted from an investigation into publishing information concerning "On the Origin of Species." That investigation found Samuel Smiles's book published not only in the same year as "Origin" but on the same

day, with great success during its time and relative obscurity now. After research into Smiles and an understanding of his book the connection addressed above began to develop. It was also discovered that those topics were deeply embedded in Mid-Victorian English reform, which pressed the boundary between Authoritarianism, or government in the hands of few, and democracy.

**Presentation Type and Session**: Oral – Humanities I

## Social Networking Saturation: The Electronic Soapbox

**Jon DAvolio**, COM 450: Communication and Society
Faculty Mentor: Professor Joseph Marren, Communication

The Internet is undoubtedly one of the most groundbreaking inventions in human history. It has revolutionized the modern world in an inconceivable number of ways, even if you're unaware of its impact. It has universally made the human race more efficient. But those benefits are bound to come with a few problems. Social networking websites like Facebook and Twitter have not only handed out soapboxes to anyone who signs up for their services to say whatever is on their mind, but through ever-changing social norms have encouraged people to "speak" freely and openly– sometimes dozens of times per day. It's no secret that the last few years have shown us news networks migrating toward integrating viewer feedback into their broadcasts – but is this really something that should be considered newsworthy? In addition, the slew of teen suicides as a result of social network bullying in the past several years has made it clear that the social dynamics of the schoolyard playground aren't what they used to be. The next generation will be raised with the knowledge that they can be and say whatever they want with no filter necessary, as long as they're concealed behind their computer screens. But what does this mean in the long term? Humanity is begrudgingly starting to realize that the Internet's unexpected detriments may outweigh its benefits in some instances. But how did we get here? What's next? And is it too late to change?

**Presentation Type and Session**: Oral – Humanities II

## South Africa's Apartheid Crisis In J. M. Coetzee's "Age of Iron" and the Absence of Action

**Kelsey Till**, ENG 346: Non-Western Literature After 1945
Faculty Mentor: Professor Barish Ali, English

During the late 1970s and 1980s, the apartheid system in South Africa underwent a crisis. The system, originally intended to separate the various racial categories and to keep blacks under submission, was failing. The racism inherent in the system was no longer popular with the rest of the world and the proportion of the white population in South Africa was declining, among several other internal issues. While there were attempts to "reform" the system, resistance and violence resulted; a state of emergency was declared. In the midst of this turmoil lives the main character of "Age of Iron" by J.M. Coetzee, Mrs. Curren. Mrs. Curren has been sheltered from apartheid her entire life until her prognosis of cancer and her befriending of a homeless man mark the beginning of her awareness to the horrors of apartheid. She is desperate and propelled toward action, but ultimately fails in her futile resistance efforts. Three factors contribute to her inaction: the belief that it is not her responsibility to act, she is limited in both her physical and mental capabilities, and she cannot fight a system that is so entrenched in her country's past and present.

**Presentation Type and Session**: Oral – Humanities I

## Stepping Over the Line: Stereotypes

**Kelsey Dieter**, COM 450: Communication and Society
Faculty Mentor: Professor Joseph Marren, Communication

I will discuss crossing the line when dealing with stereotypes. I will be working with any type of stereotypes that deal with gender, age, women and men, gays and lesbians, and the elderly. I will focus more on the aspects where the society has crossed the line on their stereotypes. I will also discuss how these stereotypes are formed and how it affects opinions on the subjects. I plan to also do a survey to find out what people think about some of these topics and if they feel like society and the media take a toll on their opinions and the opinions of others. I also plan to have scenarios that will show that with different people surveyed will come different results.

**Presentation Type and Session**: Oral – Humanities II

## Stop! You've Been Emotionally Seduced

**Felicia Williams** and **Porsha Coaxu**, COM 450: Communication and Society
Faculty Mentor: Professor Joseph Marren, Communication

We are looking at the psychological effects of advertising. Values affect the ideas that consumers adopt yet this theory has been given little attention. However, there are ways advertisers may influence consumers by knowing and focusing on their values. Understanding how emotions are linked to behavior is another way to determine what products consumers are willing to test and use. Our assumption is that psychology plays an imperative role in advertising, and that each ad must first get a consumer's attention so that the consumer can then deduce a need or want from the product or service in the advertisement. Our plan is to research periodicals, books and journals, as well as to observe and question consumers. A preliminary finding would suggest that consumer purchasing follows emotion rather than logic. So it is crucial to study people, learn their values and determine what incites excitement, fear or grief.

**Presentation Type and Session**: Oral – Humanities II

## Why Aristotle De-Friended Me: An Examination of Social Networking Websites

**Nadeen Bawa**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Jason Grinnell, Philosophy and
Professor Andrea Guiati, Director, All College Honors Program

Aristotle lived centuries before the beginning of social networking sites such as Facebook. With this new development of social network sites and the techniques they provide to form and maintain relationships, would Aristotle modify his definition of a true friendship or would he argue, that now, more than ever, it's nearly impossible to form a truly virtuous friendship? Through this research project, I examine whether it is possible that social networking sites have completely undermined the meaning of friendship as a whole, as I discover how well your Facebook friends really know you. I investigate how it is possible for an average college student to have over 400 Facebook "friends," in a world where communication is limited to 160 characters per comment or wall post. I also explore how much of an impact social networking websites have on how we communicate with our friends, as I try to discover whether there is such thing as a true friend on Facebook.

**Presentation Type and Session**: Poster VII

## You've Got a Friend In Group Communication: Communication Concepts in Toy Story 3

**Molly Jo Lundquist**, SPC 307: Group Communication and HON 400: All College Honors Colloquium
Faculty Mentors: Professor Hsiang-Ann Liao, Communication and
Professor Andrea Guiati, Director, All College Honors Program

In my research, I will apply the concepts of group communication to Disney/Pixar's Toy Story 3. I will provide an analysis of processes, advantages and disadvantages among the toys in Andy's room. I will create a case study on the film, showing how group communication concepts are played out in the animated children's film. The study will show how ideas like groupthink, social roles and norms, group synergy appear during the interactions of the toys. Toy Story 3 shows both primary and secondary groups, while the toys' communication is characterized by both a prescriptive and descriptive approach to solving problems and making decisions. The familiar characters from the series, personify the concepts known in group communication. Woody, known as the leader of the group, leads the other toys on multiple occasions. Often times the toys are seen showing a disadvantage of group communication by experiencing groupthink, and all agreeing on one answer, and letting Woody make all the decisions for the group.

**Presentation Type and Session**: Oral – Humanities I

# *Physical Geography, Sciences, and Mathematics*

## Analytical Utility of Surface Functionalized Porous Silicon

**Eedeebari Banuna**, Chemistry
Mentors: Dr. Sandra Washington, Director, McNair Scholars Program and Dr. Frank Bright, Chemistry (University at Buffalo)

Phosphonates are an important chemical class of molecules found in common pesticides, adenosine triphosphate (ATP), and even deoxyribonucleic acids (DNA). This research aims to develop a reagent free, phosphonate-responsive sensor using nanoscopic porous silicon (pSi). In this research we chemically modify the pSi nanocrystalline surface with a molecule that selectively complexes phosphonates ( I). In operation, phosphonates selectively associate with I at the pSi surface, and this alters the pSi luminescence in a concentration-dependent manner. This poster describes our trek toward complete sensor characterization and development.

**Presentation Type and Session**: Poster VII

## Apathy Toward Numbers: Can College Students Solve Basic Math Problems?

**Michael Krygier** and **Nicole Fry**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Chaitali Ghosh, Mathematics, Professor Bob Stalder, Mathematics, and Professor Andrea Guiati, Director, All College Honors Program

It seems as though in recent years, students have become more dependent on calculators to complete relatively simple computations. When posed a question involving any sorts of numbers in a math or science class, most students instinctively reach for a calculator before even looking at or considering the question at hand. All too often, math is viewed as unimportant at large (how many times has the question, "when am I ever going to use this?" been posed in a science or mathematics classroom). In a country that is falling behind in math and science, it is ever important to discover if there is a problem, so that steps can be taken to fix it. In this study, a "math test" was given to several college students, comprised of basic functions (addition, subtraction, multiplication, division, and square roots). In answering these six questions, the students were instructed not to use a calculator (they were also supervised to ensure that a calculator was not used). With the results of the tests, it is hoped that an idea of whether or not it seems that students are heavily reliant on the calculator can be obtained.

**Presentation Type and Session**: Poster VII

## Approaches To the Automatic Discovery of Patterns In Biosequences

**Chris Rajczak**, AMT 495: Special Project in Applied Mathematics
Faculty Mentor: Professor Valentin Brimkov, Mathematics

Algorithms are proving useful in the context of biological sequences analysis, as the presence of biologically significant patterns. To help discover the patterns that are involved, a researcher would have to figure out an approach using the different algorithms available to them. By using the available databases, it's possible to see the patterns and how they come about. Looking at repetitions in sequences is key when analysis is brought out in sequences. Powerful automatic pattern discovery algorithms may enable us to look for patterns in a large variety of potentially related bio sequences. In this talk we will first consider several fundamental problems of computational biology and discuss on theoretical (mathematical) challenges related to their solution. We will then present a number of computer systems for solving a variety of problems of that kind. We will compare these computer systems with respect to different criteria, thus exhibiting possible advantages or disadvantages of using one system versus another for certain specific applications. The outcomes of initial experiments will be discussed as well.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Approaches To the Synthesis of Indian Yellow

**Andrew Schick**, Chemistry
Faculty Mentor: Professor M. Scott Goodman, Chemistry

Indian Yellow is a translucent yellow dye that was formerly extracted from the urine of cows feeding exclusively on mango leaves. There has been no source of this dye since this process was banned in India in 1908. Previous work by Buffalo State researchers has succeeded in synthesizing the chromophore of Indian Yellow, 1,7-dihydroxyxanthone, which is also known as euxanthone. The current research explored several routes to synthesize the magnesium glucuronate derivative of euxanthone (Indian Yellow). Two main approaches were examined; one in which a protected version of the glucuronate was used as a glycosyl donor and another in which a tetra-acetylated glucose derivative was employed in the glycosidation reaction followed by selective oxidation of the primary alcohol group at C6 of the sugar. Glycosidation reactions were attempted using traditional Koenigs-Knorr methods, phase transfer conditions, and a boron trifluoride etherate–catalyzed reaction. The results of the various approaches to the total synthesis of Indian Yellow will be presented.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## The Atmospheric Components of a Wetland's Water Budget: Woodlawn Beach State Park, New York

**Joseph Petre**, Multidisciplinary Studies
Faculty Mentor: Professor Stephen Vermette, Geography and Planning

As part of an ongoing hydrologic study of a 10-acre wetland within Woodlawn Beach State Park, just south of Buffalo, NY, this study focuses on the atmospheric inputs and outputs of a wetland's water budget. Properly representing the atmospheric output of evapotranspiration is a key component in the balancing of a wetland's dynamic water budget. However, the methods to calculate evapotranspiration vary considerably. This research seeks to compare these various methods, from the basic to the complex, with the goal to determine if long, elaborate calculations are really necessary, or if simple approaches produce agreeable results. Using an assemblage of collected meteorological data from on-site weather stations, numerous evapotranspirational equations were calculated for 2010. An in-field physical instrument was also used to mimic evapotranspiration rates and was compared as well. In addition to examining evapotranspirational measurements, this study also investigates the input of precipitation and its influence on the water budget. Precipitation is further explored through the monitoring of rainfall pH and the exploration of the potential impacts of acid rain.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Bilateral Bone Development and Fluctuating Asymmetry In Common Loons (Gavia immer)

**Sarah Anderson**, Biology
Faculty Mentor: Professor Amy McMillan, Biology

Bilateral bone development plays an important role in many organisms ability to survive life threatening contaminants. In humans, bilateral bone symmetry is correlated with good mental health. Male birds that are bilaterally symmetrical are chosen by females more often than males that are not symmetrical. An individual's inability to undergo identical development of a bilateral trait on opposite sides of the body is called Fluctuating Asymmetry (FA), so a high FA indicates less bilateral symmetry. FA has been associated with a lack of heterozygosity or an increase in homozygosity. A negative correlation between fitness and asymmetry has been observed in studies of sexual selection, behavioral ecology and parasite load. The Common Loon (*Gavia immer*) is an obligately aquatic bird that breeds on freshwater lakes of North America. *G. immer* is in a high trophic position where it is exposed to contaminates, including the BoNT/E toxin and heavy metals. FA may play a role in how loons respond to environmental stressors. I will be measuring loon skulls from birds that died from the BoNT/E toxin in Lake Erie in the winter of 2008. Each skull will have a total of four measurements on each side (left and right) repeated three times. An asymmetry index will be calculated from these measurements. Preliminary results show the percent FA in loons varies from 0.2% to over 3%. Also magnitude of FA decreased with trait size. Ongoing studies of contaminate effects on loons could benefit from this information.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## A Biotelemetric Study of Homing Behavior In Response To Displacement and Homeward Orientation of the Diamondback Terrapin (Malaclemys terrapin) In Barnegat Bay, NJ

**Nicole Wood**, Biology and **Julianne Winters**, Biology (Drexel University)
Faculty Mentors: Professor Edward Standora, Biology and Professor Hal Avery, Biology (Drexel University)

Over one-third of the Barnegat Bay estuary has been altered due to coastal development, causing habitat loss for various wetland species. The diamondback terrapin is susceptible to increasing anthropogenic disturbances affecting their home areas and survival rates. Using biotelemetry, homing behavior was determined for six non-gravid females in response to 4 km displacements both north and south of their original capture locations. All displaced terrapins successfully returned home within 1-8 days as confirmed by daily tracking and GPS. Terrapins displaced to the north returned home in significantly less time than terrapins displaced to the south, suggesting topography may be influencing homing behavior. Homeward orientation was also determined for 184 terrapins in an outdoor, 16 square meter octagon arena. Most terrapins moved easterly, towards water, and less than 45 degrees from their homeward direction. There were no significant differences in orientation between clear and overcast days, suggesting the sun may not be a primary aid in orientation. Terrapins displayed both homing behavior and homeward orientation; however more research needs to be conducted to further understand these behaviors. Due to high site fidelity, limitations on human activities should be enforced to conserve high density home areas of this species of special concern.

**Presentation Type and Session**: Poster V

## Cellular Automata, Fractals, Properties of Pascal's Triangle Mod m and Generalizations

**Michael Jansma Jr**., Mathematics Education (7-12), **Michelle Rua**, Applied Mathematics, and **Katherine Sember**, Mathematics Education (7-12)
Faculty Mentor: Professor Joaquin Carbonara, Mathematics

We construct the $n \times n$ matrix (PMn Mod m) by letting it's (x, y) entry be the (x-1 ) choose (y-1) entry times Mod m with (x-1) choose (y-1) $= 0$ if $y > x$. In particular, (PMn Mod 2) is frequently identified with Sierpinski's Gasket. If we let overline(PMn Mod

m) be (PMn Mod m) where any entry greater than 1 is replaced by 1, and we let fm(x) be the number of 1's in the first n rows of overline(PMn Mod m), then liminf as n approaches infinity of f3(n)/nlog36=2*(log_3 2)-1 . However, an equivalent closed form for liminf as n approaches infinity of f2(n)/n*log_2 3 has been an open question for over thirty years. To understand this open question and how it relates to the rest of mathematics, we have used fractals, cellular automata, combinatorics and created algebraic structures. We have also generalized open questions previously asked and developed new proof techniques. We have created a "natural" definition of Discrete Geometry Fractal that lends itself to a technique we call fractal induction. Finally, we created a monoid, MOn, with elements the matrices {overline(PMn Mod m) } which allows us to study the fractal dimension and fractal measure of these objects.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Chemical Analysis of Hawaiian Baby Woodrose and Morning Glory Seeds

**DeAnna Nigro**, Chemistry
Faculty Mentor: Professor Jamie Kim, Chemistry

Lysergic acid diethylamide (LSD) is a semisynthetic psychedelic drug of the ergoline family. LSD is non-addictive and well known for its psychological effects which can include altered thinking processes, closed and open eye visuals, synaesthesia, a sense of time distortion, ego death and spiritual experiences, as well as for its key role in 1960s counterculture. It is used mainly as an entheogen, recreational drug and as an agent in psychedelic therapy. Lysergic acid amide (LSA), a relative and precursor to LSD, is found in the seeds of the Hawaiian baby woodrose (Argyreia nervosa) and morning glory (Ipomoea violacea), which can provide a 4 to 8 hour intoxication that is similar to that provided by LSD. The goal of our research is the detection and quantification of illegal and controlled substances including LSA in a variety of commercially available morning glory and Hawaiian baby woodrose seeds by high performance liquid chromatography (HPLC) and gas chromatography (GC).

**Presentation Type and Session**: Poster VII

## Classifying the Semiprecious Stone Collection Housed In the Earth Sciences Department

**Maxwell Hain**, Geology
Faculty Mentor: Professor Bettina Martinez-Hackert, Earth Sciences and Science Education

A semiprecious and precious mineral specimen collection was found in the depths of the Geology stockroom drawers. My project involved organizing, identifying and cataloguing this collection by putting the specimen in correct holdings and labeling them with the correct gemstone name, mineral classification and chemical formula. Some of the methods used to identify the mineral were a specific gravity meter, all the classic mineral identification tools such as luster, hardness, cleavage, streak, color, crystal structure, reactivity to acid, and other properties. Each mineral was given a number, so that is it now easy to find in the collection, but also in a recorded hardcopy catalogue. The semiprecious gemstones will be displayed in a case that is being refurbished, to have the collection exposed to students and visitors of the science building.

**Presentation Type and Session**: Poster VII

## Comparative Analysis of Cx32 Transmembrane Domains Using Tryptophan Scanning Techniques

**Matthew Brennan**, Biology
Faculty Mentor: Professor I. Martha Skerrett, Biology

Gap junction channels form between adjacent cells in vertebrates. These channels are responsible for intercellular communication necessary for maintenance of homeostasis, regulation and growth. In vertebrates gap junctions are formed by connexin proteins that have four transmembrane domains. Both the C-termial and N- Terminal ends of the protein are found in the cytosol and the protein has two extracellular loops. Six connexin proteins oligimerize to form a hemichannel or connexon. Connexons from adjacent cells couple to form functional gap junctions. Connexin32 (Cx32) is one member of the group of 21 mammailian connexins and is expressed in the skin, liver cells and the myelin sheath of the peripheral nervous system. Tryptophan scanning was used in this experiment to better understand the structure and thus the function of Cx32. Tryptophan scanning is the process of changing one amino acid ata time to tryptophan that has a large and bulky sidechain. The sidechain is likely to cause steric interactions that disrupt function when inserted in a transmembrane domain where residues are tightly packed together. In this experiment one amino acid is changed at a time through the four transmembrane domains. The mutant proteins are then expressed in Xenopus laevis oocytes and gap junctions are allowed to form between paired cells. The level of protein function is assayed through the level of conductivity between the two cells.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Cosmic Rays and the Decay of Muons

**Carrie O'Donel**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Michael DeMarco, Physics and Professor Andrea Guiati, Director, All College Honors Program

This is a study of cosmic radiation hitting the Earth and the transformation of pions to muons, depicted by the equation: $\pi+ \rightarrow \mu+ \nu\mu$ and $\pi - \rightarrow \mu- \nu\mu$. As the Earth is assailed with an

influx of high energy particles, or cosmic rays, these particles collide with the nuclei of the air molecules in our atmosphere. This process yields a cascade of new particles, including pions. These second generation particles undergo further transformations by means of nuclear and electromagnetic interactions to create muons, which in turn decay. This ongoing study researches the effect that distance and density of matter have on the lifetime and decay rate of muon particles. By utilizing a plastic scintillator, we were able to measure the mean muon lifetime along with the relative flux of muons as a function of height while concurrently observing the effect matter had on the two. We first found the mean lifetime of the muons to be $2.170 \pm 0.010 \mu s$. It is known that muons lose energy as they travel through the atmosphere and that the distribution of muon energies changes with height in the atmosphere. In our study, we decided to use denser matter than air to simulate the effect of increased height to test if this would affect the number of decays observed by the detector. After adding concrete and lead bricks above the scintillator to simulate an effective height change, we found that the number of muon decays remains the same within the statistics of our counting time. We also found the half life of the muons, which led us to discover the number of $\mu+$ and $\mu-$ that entered the scintillator. As our study continues, we plan to check the muon flux over time to see if it remains consistent and attempt to understand why the number of decays remains constant even though we are sampling a different distribution of muons.

**Presentation Type and Session**: Poster V

## Creating Online Geologic Field Experiences Using 3D Virtual Rocks In Google Earth

**Amanda Klawinski**, Earth Sciences and Geology and **Peter Zaffram**, Geology
Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

3D scanning was not originally developed with natural science in mind but has recently taken root in the geoscience community. In our case the 3D NextEngine Laser Scanner is being used as a tool to document rock specimens collected from all over the world with two aims. First, 3D scans of rocks will allow anyone to "visit" those locations via a geobrowser such as Google Earth. This benefits all, but it has the added advantage of permitting anyone to "visit" the locations relatively instantly regardless of any limitation (physical, financial, time, etc.). Second, the scans are intended to be used to teach geological principles to a general audience while connecting the specimens to the field locations from which they were collected. The 3D views allow for better understanding and visualization of structures within the rock and how they would relate to an outcrop. Thus far several scans have been completed of selected rock specimens with particularly useful textures and structures. The successful first scans revealed strikingly clear features, but have proven challenging in practice of obtaining the best quality scans for our application of the scanner. We document the progress of our work in this presentation. Nevertheless, we are presenting our results to the world via the Internet, importing our scans as keynote markup language (kml) files for use with Google Earth. We connect them to the original outcrop and the visitor can "fly" to this location and examine the outcrop and specimen by rotating the rock. The intent is that our work and created databases can add to a growing database in order to make the inaccessible information accessible in a virtual setting.

**Presentation Type and Session**: Poster VI

## Deletion of the Chaperone GRP170a Causes Accumulation of Unfolded Proteins In the Roundworm Caenorhabditis elegans

**Mark Lojacono**, Biology Secondary Education
Faculty Mentor: Professor Gregory Wadsworth, Biology

Molecular chaperones are highly conserved proteins involved in protein folding. Proper protein folding is essential for maintaining normal cell processes as well as overall cell viability. GRP170 is a molecular chaperone located within the endoplasmic reticulum of eukaryotic cells. The roundworm *Caenorhabditis elegans* has two isoforms of GRP170 (GRP170a and GRP170b). The functions of the individual isoforms are not well understood. Loss of both GRP170a and GRP170b is lethal. However, the loss of a single isoform has almost no phenotypic effect on the worm. My project was to investigate if loss of GRP170a resulted in an accumulation of unfolded proteins in any of the roundworm's tissue. A reporter transgene (hsp4::gfp) had previously been constructed which produces the green fluorescence protein in any cell that accumulates unfolded proteins in its ER. I generated a strain of worms that was deficient for GRP170a and contained the hsp4:gfp reporter gene. To do this I interbred a strain carrying the gfp transgene with a strain homozygous for a deletion allele of GRP170a. The dihybrid progeny were allowed to self-fertilize to generate an F2 generation. The F2 progeny were genotyped using duplex PCR to identify worms that were homozygous for the GRP170a deletion. These F2 worms were allowed to self-fertilize and their progeny were screened by fluorescence microscopy to identify a true-breeding strain homozygous for the hsp4:gfp transgene. Preliminary analysis of this strain suggests that loss of the GRP170a chaperone results in an abnormal accumulation of unfolded proteins within a subset of tissues.

**Presentation Type and Session**: Poster VI

## Documentation of Garnet Occurrences In Western Connecticut

**Michael Ludwick**, Earth Sciences
Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

Penetrative fabrics in rocks of western Connecticut have recorded regional deformation associated with the Devonian Acadian orogeny (about 400 million years ago). As part of an ongoing study of the tectonic record of the Northern Appalachian Mountains, I observed in the field, sketched, analyzed and listed the physical properties of hand samples from western Connecticut. The samples analyzed in the lab were collected by previous undergraduate research students that worked in the Laboratory for Orogenic studies in the Department of Earth Sciences. The studied samples of metamorphosed rock contain alternating mica-rich/mica-poor layers, with quartz being the dominant mineral in the mica-poor layers. The mica-rich layers contain an abundance of garnet porpyroblasts that significantly project out of the exposed outcrop section due to differential weathering and preferential erosion of matrix minerals. Because garnet porphyroblasts are used as a pressure-temperature index mineral, their field occurrence is interpreted to mark the location of where the appropriate conditions occurred, and, in turn, what the depth of the rocks were during the mountain-building episode. In fact, garnet in rocks helps us to trace the "record" of the entire history of mineral composition and the processes that formed the rocks. In order to place the garnet occurrences into context, matrix mineral fabrics of their samples were examined to document spatial variation of the porphyroblasts in relation to the rock, and then the regional variations. This examination was done with both hand specimens and under the microscope using "thin sections" cut from those rocks. Thin sections were cut according to the fabrics, parallel to the lineations as well as perpendicular for each selected sample. In many cases, garnet has strain shadow tails defined by matrix minerals recording the flow of the matrix during deformation. Garnet occurs either with or without staurolite in the rock (another index mineral). Using these and other mineral-textural relations, results permit the interpretation of the significance of the garnet occurrences in these rocks.

**Presentation Type and Session**: Poster V

## The Effect of Excessive Levels of Fertilizers Used By Golf Courses On Local Water Quality

**Shannon Penton** and **Dave Raham**, GES 460: Environmental Field Methods and Analysis
Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

We believe that the potentially excessive use of fertilizers and pesticides by golf courses could be having a negative effect on water quality in nearby streams. Fertilizers are composed primarily of nitrogen, phosphorus, and other secondary nutrients. By studying the levels of these chemicals in nearby streams, we can assess whether or not the golf courses we tested are causing harm to local water quality, or if management of the fertilizers is efficient and successful. High levels of nitrogen and phosphorous promote algae growth, which deplete oxygen in streams and rivers. This results in the death of many fish causing an upset to the ecosystem. High levels of phosphorous may cause damage to human health after prolonged exposure. Five to seven golf courses will be tested during this experiment. We will be taking samples upstream and downstream from each location. We will test each sample for pH level, level of nitrogen, phosphorous, dissolved oxygen, turbidity, and algae. We will then compare these levels to the EPA set standard for each component and conclude whether or not golf course fertilizers cause harm to water quality and if stricter regulation needs to be put in place.

**Presentation Type and Session**: Poster VII

## The Effects of Caffeine Consumption On Sleep and Academic Performance

**Timothy Webb**, AMT 495: Special Project in Applied Mathematics
Faculty Mentors: Professor Joaquin Carbonara, Mathematics and Professor Chaitali Ghosh, Mathematics

Caffeine is a component in many beverages including coffee, tea, soda and energy drinks. Caffeine consumption is a recurring habit in the lives of most Americans and more than half of American adults consume at least 300mg of caffeine every day. Students are not exempt from this statistic considering that caffeinated beverages often fuel their activities. This project is being conducted to assess the relationship between caffeine consumption, hours slept and grades of approximately 200 students at Buffalo State College. Data are collected using LimeSurvey to assess students' caffeine intake from various beverages, amount of sleep per night and GPA. The PASW Statistics 18 package determines that approximately 84 percent of the surveyed students drink caffeinated beverages on a daily basis, have a mean GPA of 3.10 and sleep an average of 7 hours each weeknight. This study will identify subgroups of the students who are more or less likely to consume caffeinated beverages and its association with sleep patterns, as well as performance in school.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## *Escherichia coli* Contamination In Erie County's Bennett Beach Sand

**Nicole Bennett**, Geology and Biology
Faculty Mentor: Professor Gary Pettibone, Biology

Bacterial contamination at freshwater beaches has been an ongoing concern among beach goers and researchers world-wide. Extensive water quality monitoring has been done on public beach waters but few evaluations of the water quality of interstitial water of beach sand have been carried out. In this study, a modified gas

vapor probe was used to extract water from beach sand weekly at three depths along a transect at Bennett Beach between May and August 2010. Samples were collected at the water/beach interface, at 1.5 meters and 3 meters up-beach from the shoreline. Water samples were analyzed for *E. coli* using mTEC medium according to EPA Method 1103.1. and were compared to Erie County's beach water sample data. Antibiotic susceptibility testing also was carried out on selected isolates of *E. coli*. Almost all interstitial water samples were found to have *E. coli* densities higher than the EPA standard of 235 *E. coli* per 100 ml of water. Moreover, *E. coli* levels generally were 1-3 logs higher in the interstitial water than in adjacent lake water. There was no significant difference among *E. coli* densities collected from the three depths along the transect, but isolates resistant to tetracycline ranged from 0 - 18% ($n = 118$) in these samples. Even when bacterial levels in swimming waters are considered safe, elevated bacterial levels in beach sand could cause adverse health effects for beach goers, especially children, who are the most likely to put their hands in their mouth when digging in the sand.

**Presentation Type and Session**: Poster VII

## Evolution and Development In Southeastern Mexico: Evidence From the Coastal City of Chetumal

**Aaron Boci**, Geography
Faculty Mentor: Professor Vida Vanchan, Geography and Planning

Along the Southeastern coast of Mexico, an evolution is occurring. The city of Chetumal is expanding outwardly at a rapid pace. As the city grows, the inner city has become less inhabited and developed. The purpose of this study is to examine factors and progress of development in the Southeastern coast of Mexico based on evidence from Chetumal. The evidence comes from satellite images, census data, and on-site data collection. A GPS point was taken at various predetermined locations as well as other locations that were deemed important. At each point, scores were given to the area as a figure of development. Photos were also taken as evidence of the score that was given. Based on the 2000 Census data, initial maps using Geographic Information System are created to show different types of development. Mexican 2010 Census data are used to show new areas of human and physical development and changes over the last decade. A preliminary result indicates that development is occurring outwardly. Cookie cutter style homes are being built 100 per block on the outskirts of the city. A poster will be presented showing new development in the city of Chetumal as well as changes in physical development since 2000. Also included will be census data mapped themes showing various human development indicators.

**Presentation Type and Session**: Poster VI

## Examination and Study of the Effects of Septic Systems On Water Quality In Gott Creek, Clarence, New York

**Heather Lewis** and **Laura Noe,** GES 460: Environmental Field Methods and Analysis
Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

With an ever-increasing awareness of the detrimental impacts of anthropogenic contaminants in our environment, the study of septic system failure and the significance of their pollutants to groundwater has remained an area that is literally out sight and ultimately out of mind. With a lack of homeowner knowledge in septic system mechanics and maintenance, escalated concern regarding residual contaminants from failing septic systems has become an ever-increasing topic in watershed management. The focus of this study is to evaluate contaminant levels at several testing locations within a 1.6-mile section of Gott Creek corridor in Clarence, New York, taking into account residences with public sewer and those with septic sewer systems. Levels of specific septic system contaminants (E. coli, phosphorus, nitrogen, sulfates and chloride) will be compared with the Environmental Protection Agency's legal limits for Class C waters. It is expected that contaminant levels at each testing site within the corridor will coincide with the locations of septic system users. However, digital aerial imagery analysis will be conducted in order to take into account any surrounding industry, sewer treatment plants, and agricultural land uses that may also be contributing to elevated contaminate levels within the testing site.

**Presentation Type and Session**: Poster VI

## Extrasolar Planets: Solar Systems Like Our Own?

**Jason Sylvester**, Earth Sciences
Faculty Mentor: Professor Kevin Williams, Earth Sciences and Science Education

From the beginning of 1995, scientists have discovered hundreds of planets orbiting other stars, or extrasolar planets. Extrasolar planets are being discovered rapidly with the help of NASA's Kepler mission. Kepler is a powerful telescope that orbits the Earth and takes pictures of stars in our own galaxy. There are 15 confirmed extrasolar planets that have been discovered by the Kepler mission since March 2009. There are also 1,235 candidate planets orbiting 997 stars, just in a small portion of our Milky Way Galaxy. In order to determine whether or not the orbiting object is indeed a planet, scientists look at the path of the object while it passes across its host star, or its transit. Another method used is called the Doppler Wobble. The Doppler Wobble uses infrared cameras to study the movement of the host star caused by the transiting planet. Using the Doppler Wobble helps scientists estimate the mass and density of the orbiting planet or planets around a host star. My research aims to make a connection between our solar system and other solar systems in

our galaxy. The data from Kepler will be compared to properties of planets in our own solar system.

**Presentation Type and Session**: Poster VI

## Foraging In the Landscape of Fear: Coyotes and Deer In New York State

**Anthony Hartman**, BIO 495: Problems in Biology
Faculty Mentors: Professor Thomas White, Biology, Professor Lucina Hernandez, Biology (SUNY Oswego), and Professor Robin Holevinski, Environmental and Forest Biology (SUNY ESF)

With the extirpation of wolves and mountain lions, coyotes have become one of the dominant predators in New York State. Coyotes, however, are not the same as wolves. Can coyotes act as a natural check on the deer population? What impact, if any, do coyotes have on deer? Two studies areas were selected -- one of high deer density (Steuben County; deer density = 17/sq. km) and one of low deer density (Otsego County; deer density < 7/sq. km). The diet of coyotes in both coyotes was ascertained by analyzing the content of scat (n=40). Prey items were identified through comparison of bone fragments or microscopic analysis of cuticular scale patterns on hair. A Chi Squared test revealed significant differences between the diets of coyotes in both counties ($p<0.005$). In areas of high deer density, coyotes tend to eat mostly small mammals. In areas of low deer density, coyotes eat mostly deer. These findings support the theory of the "Landscape of Fear" which states that prey animals tend to be more abundant in geographic areas where predation is more difficult.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Genetic Population Structure of North American Common Loons

**Arielle Austin**, Biology
Faculty Mentor: Professor Amy McMillan, Biology

The Common Loon, *Gavia immer*, is one of the most recognizable wildlife symbols in North America. Any person who has seen the Canadian Dollar coin or summered on a northern North American lake has most likely seen these beautiful birds. Many Common Loons breed in the lake regions of Canada and the northern USA. They do this shortly after ice out and leave in the late fall. Very little is known about loon population structure except that they are philopatric and frequently the same breeding pair is found for multiple years on the same lake. Since loons tend toward philopatry, this suggests that loons found in one lake region may be genetically distinct from loons that are found in a neighboring lake region. Loons like many other organisms are vulnerable to environmental contaminants, especially bioaccumulative toxins. To better understand the effects these toxins have on loons breeding in North America, loon populations need to be identified so we can study the geographic distribution of effects. An efficient way to identify populations is by genotyping individuals at genetic loci that are environmentally neutral. For this study I used six polymorphic microsatellite loci to genotype 190 loons from three western Canadian provinces. A preliminary analysis showed some differences in allele frequencies between provinces. Populations were not very differentiated across four loci, however two loci showed moderate differentiation. These data will be compared to loon genotypes collected from central and eastern North America to determine population differentiation across a broad geographic range.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Geochemical and Morphological Analysis of the 2005 Eruptive Products, Ilamatepec Volcano, El Salvador

**Mark Tate**, Earth Sciences
Faculty Mentor: Professor Bettina Martinez-Hackert, Earth Sciences and Science Education

The El Salvadorean, Central Amercia, Ilamatepec Volcano, also known as the Santa Ana, erupted in October of 2005. Luckily, the extent of ash dispersion deposition, and travel around the volcano was not as damaging to human life as this volcano's typical behavior usually is. Was this only the onset of a magma chamber recharge, with a more ominous eruption to be expected? Thousands of people live near this volcano and are at risk, should a major eruption occur. Indeed, the second and third largest cities and the most important sugarcane fields are in the vicinity of a 5 km radius from Ilamatepec's deep, active and highly explosive crater. Samples of the recent volcanic products, especially of pyroclastic flows were collected during field work in January of 2011. We present in this study the analysis of samples taken on the Western flank of the volcano to determine the composition of the volcanic deposits from this last eruption. Using grain size analysis and SEM (Scanning Electron Microscope) we determined that a lot of gypsum is mixed into the pyroclastic flow deposits. This indicates a highly water rich environment, causing the initial speculation of the eruption being a new magma eruption to change to a steam eruption. These data helped to at least for the near future, to suggest that there is no imminent danger of a recharging magma chamber, and hence not an enormous eruption to be expected anytime soon.

**Presentation Type and Session**: Poster VI

## GIS Spatial Analysis of Recycling In the Town of Cheektowaga

**Nicole Kmiotek**, Planning
Faculty Mentor: Professor Tao Tang, Geography and Planning

The objective of this study is to learn the spatial relationship of recycling with household income and household education level in the Town of Cheektowaga. It is hypothesized that people who have a higher education level are more likely to focus on being more environmentally friendly such as recycling than those who have a lower education level. Also, it is hypothesized that people

who have a higher income are more likely to focus on being more environmentally friendly such as recycling than those who have a lower income. Residential waste accumulates every day and does not stop. Eventually towns are not going to know where to dump the residential waste due to the high build up and just throw it into the rivers and oceans because it is the easiest solution on how to rid of it all. Today, society and lawmakers are coming together and making people realize that one empty plastic bottle can make a difference. By not throwing a renewable product into the garbage bin or on the ground but to simply just throw the product into a recycling bin plays a huge environmental role. An anonymous survey will be conducted in the Town of Cheektowaga that will investigate the percentage of the residents that do recycle and what they recycle. Also, this anonymous survey will give information pertaining to the resident's socio-economic characteristics and their socio-demographic characteristics. Spatial analysis of these factors is conducted using ArcGIS software.

**Presentation Type and Session**: Poster V

## Good Clean Fun: Maximizing Recycling Potential At an Amusement Park

**Michelle Rua**, AMT 495: Special Project in Applied Mathematics
Faculty Mentor: Professor Hongliang Xu, Mathematics

As the world sees a lack of natural resources, the need for companies to become more conservative is increasingly necessary. This research project will entail the hypothetical creation of a recycling center in an amusement park, which will collect and prepare materials generated by the park's operations for recycling. Using Operations Research, a science that employs the use of complex mathematics to arrive at optimal solutions to complex decision-making problems, the study will involve building a model which will be mathematically manipulated to test the most likely outcomes of a a set of determined conditions. While looking into realistic average daily amounts of recycling materials, the study will illustrate a financial profit that can be made from the combining and selling of these materials as well as a better look into the necessary frequency of tasks by employees of the plant and the way they will vary during different seasons. The end result of the study will be a series of models representing different likely outcomes based on a set of constraints. The situations illustrated in the models and the methods of changing the models will be discussed.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Groundwater Degradation and Its Effects On Well Water Quality

**Chad Pawlikowski**, GES 460: Environmental Field Methods and Analysis
Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

The following study will attempt to qualify the implication that contaminants are seeping into The Mohawk Watershed's groundwater from septic and gray water leach systems. Further examination of this possibility is needed. With empirical evidence the issue can then be remediated through proper engineering techniques. This will result in an increase in water quality, reduced health risks, and sustainable eco-systems. This research will require the use of sterile polyethylene sample bottles, and various tests consisting of litmus strips and colorimetry test kits for pH, heavy metals, dissolved oxygen, and nutrients such as nitrates and phosphates. By purging drilled wells to eliminate stagnant water I will be able to obtain fresh groundwater samples at various site locations for testing. The tests will take place on site and data will be recorded immediately after samples are evaluated. I expect to find phosphates associated with detergents, nitrates from fertilizers, traces of copper ions from water pipes, bacteria stemming from fecal matter, as well as an acidic pH levels from the regions acid rainfall. I also expect to find deviations in contaminant concentration, site-to-site, dependent upon age and distance of wastewater systems from well water.

**Presentation Type and Session**: Poster VI

## Growth and Characterization of $DyMnO_3$ and $HoMnO_3$ Thin Films

**Anthony Delmont**, Physics
Faculty Mentor: Professor Ram Rai, Physics

We prepared two multiferroic oxides DyMnO3 and HoMnO3 by a conventional solid state method. To gain a better understanding of the physical properties of these compounds, we deposited DyMnO3 and HoMnO3 thin films on different single crystal substrates (such as sapphire, quartz, YSZ, and LiNbO3) using a 3 kW electron-beam evaporation system. We studied the growth parameters, such as substrate temperature and oxygen partial pressure to optimize the growth conditions during the deposition process. Subsequently, we annealed (post-deposition) thin film samples at temperatures ~673 – 1073 K to improve stoichiometry and crystalline quality. The structural studies of the thin films using XRD will be completed by our collaborator. We utilized a dual beam spectrophotometer (190 – 3000 nm) equipped with a liquid nitrogen-cooled cryostat to measure variable-temperature (78 K to 400 K) transmittance. The optical properties of both DyMnO3 and HoMnO3 thin films show insulating character with a pronounced electronic excitation at ~1.7 eV. We found that the electronic excitations of the thin films are weaker than the corresponding excitations in bulk samples.

**Presentation Type and Session**: Poster VI

## Hazard Mapping: Applying GIS and RS To Predict Impacts of Hurricane Landfall In Chetumal, Mexico

**Eric Snyder**, GEG 595: Independent Study
Faculty Mentors: Professor Tao Tang, Geography and Planning and Elias Montes, Director, Center for Geographic Information, Quitana Roo University, Mexico

Hurricanes are one of the worst and deadliest natural disasters. Many of them cause significant damages. The objective of this study is to determine and pinpoint specific geographic areas within the city of Chetumal which will be significantly impacted by flooding, direct damage from a storm surge, direct wind damage and damage from surrounding building collapse. Chetumal, Mexico is the second largest city in the state of Quintana Roo and the state capital, second only to Cancun. This region of the Yucatan Peninsula is frequently hit by hurricanes and some of these are severe. Hurricane Janet, a Category five hurricane, struck Chetumal in 1955 according to the National Hurricane Center of the U.S., this storm is used as a baseline for the worst case scenario in our study. A team of Buffalo State College faculty and students traveled to Chetumal and Cancun during the winter break of 2010-2011, and conducted fieldwork with faculty of Quintana Roo University. Global Positioning System (GPS) unit was used to randomly select investigation points and evaluate the qualities of building structures, roof, and building materials of the two cities. Along with map data supplied by Quintana Roo University faculty and high spatial resolution satellite images acquired by Buffalo State College Research Foundation, maps were created in analyzing areas of vulnerability encounter different categories of Hurricanes. Areas prone to flood, storm surge, wind damage, population affected, and other factors will also be mapped and spatially analyzed.

**Presentation Type and Session**: Poster V

## Hazard Mapping: How Structure of Southeastern Mexican Homes Stand Up To Hurricanes?

**Aaron Boci**, GEG 495: Independent Study
Faculty Mentors: Professor Tao Tang, Geography and Planning and Elias Montes, Director, Center for Geographic Information, Quitana Roo University, Mexico

The objective of this study is to map the housing structure vulnerability against hurricanes applying Geo-Eye high resolution satellite image. The quality of housing structures in Chetumal, Mexico and how it relates to access to health services are analyzed. Chetumal is southernmost city along the Mexican east coast and the capitol of Quintana Roo State. Chetumal is developing outward at a rapid pace. The city's high income and middle class residents are moving outward into new homes that are built in a cookie cutter fashion while the inner city is left for the low income people. As Chetumal develops its infrastructure, other developmental issues lag behind. One such issue is health care services. As of 2000 over half the residents are without any type of health care service. The analysis is being done in three steps. These are digital mapping and analysis using satellite images, on-site field investigation, and post field work re-mapping and analysis. The detailed block level map layers were made for structure, roof, and building material qualities. The basic spatial data generated by research team is spatially related to the health care service infrastructure mapping of the population. The results show that worst areas of housing structure in the city also have the lowest health care service rates. The Mexican census data of 2010 will be applied to visualize the changes of health care coverage infrastructure.

**Presentation Type and Session**: Poster V

## High Throughput Measurement of Critical Micelle Concentration of a Surfactant Using Microfluidic Device

**Ashley Wojtkowski**, Forensic Chemistry and **DeAnna Nigro**, Chemistry
Faculty Mentor: Professor Jinseok Heo, Chemistry

Previously, my colleague and I have shown that the hydrolysis reaction of carboxy fluorescein diacetate acetoxymethyl ester (CFDA-AM) can be used to determine the critical micelle concentration (CMC) of a surfactant. We relied on a spectrofluorometer to determine the CMC. Here I propose a new method of measuring CMC of a surfactant in high-throughput by expanding upon our previous discoveries. I will use a micro-fluidic device consisting of 10 $\sim$ 15 parallel micro-channels having dimensions of tens to hundreds of microns and the chemical system as mentioned above. The device will be fabricated using the similar technology employed in semiconductor industry. Each channel holds just $\mu$L $\sim$ nL volume of a reagent, which can significantly save the consumption of reagents. An optical/fluorescence microscope equipped with CCD camera can take the image of the multiple parallel channels in one frame. The use of micro-fluidic device and optical/fluorescence microscope will allow the simultaneous measurement of chemical or physical property of many solutions containing different concentrations of a surfactant. With this new method, the analysis of CMC can be finished in 5 min, while conventional method could take more than 30 min.

**Presentation Type and Session**: Poster VI

## House and Structural Vulnerabilities Encountering Hurricane Hazards In Cancun, Mexico

**Mandoud Omar,** Mechanical Engineering Technology and Geography
Faculty Mentor: Professor Tao Tang, Geography and Planning

The City of Cancun, Mexico is home to a visually, culturally, and climatically aesthetic part of the globe. However, it is also situated in climatically precarious location in the world, where tropical storms and hurricanes capable of devastations on great magnitude. The Yucatan region of southeast Mexico, where Cancun is located, frequently encounters hurricane landfalls every year. The

objective of this study revolves around "measuring" the capacities of the housing and other buildings, their adequacy in meeting the challenge of a hurricane. We analyzed the overall housing structural integrity, and roof and building material qualities. High-resolution satellite images were obtained and applied for this analysis. A field study was conducted in December 2010 and January 2011 to obtain measurements firsthand based on preliminary mapping by a team of Buffalo State College graduate and undergraduate students, faculty and faculty Quintana Roo University. There were four basic factors examined, structural quality, building material quality, rooftop integrity, and distance to coastline. The analyses were accomplished through interpretation of satellite images with additional, supplemental aid of Google Street Viewer of the city, as well as field investigations. The final results of the study will answer the question of whether or not vulnerable structures exist. If they are, where are they located in the City of Cancun. This study is significant for the city in preparation for future hurricane landfalls. Preparatory efforts can be executed efficiently by targeting those vulnerable locations and areas.

**Presentation Type and Session**: Poster VI

## Indirect Preparation of Amino-Terminated Organic Thin Films On Silicon Substrates

**Kayla James**, Forensic Chemistry
Faculty Mentor: Professor Jamie Kim, Chemistry

Until recently, 3-aminopropyltriethoxysilane (APTES) was employed to prepare amino-terminated organic thin films on a silicon surface. Although there are many advantages using APTES as an aminating agent, the formation and structure of APTES thin films were intimately affected by the experimental conditions. In addition, a significant portion of surface amino groups are inactivated due to the reaction with carbon dioxide in air. To overcome the disadvantage, I will conduct the experiments using a new class of aminating agents such as 3-cyanoethyltriethoxysilane (CETES), 3-aminopropyldimethylethoxysilane (APDES), and 3-cyanoethyldimethylethoxysilane (CEDES). The structures of aminated organic thin films will be characterized by FTIR spectra via a grazing–angle attenuated total reflection (GATR) method for silicon wafer. Ellipsometric thickness measurements for aminated thin films on silicon wafers will be conducted. The availability and reactivity of amino groups in organic films on silicon wafers will be estimated by fluorescence measurements after a reaction with NHS-carboxyfluorescein dye molecules to measure availability and reactivity of surface amino groups.

**Presentation Type and Session**: Poster VII

## Influence of Nitrogen and Phosphorus Addition On $CO_2$ Exchange In a Restored Temperate Grassland

**Lynn Socha**, Biology
Faculty Mentor: Professor Daniel Potts, Biology

Nitrogen (N) and phosphorous (P) affect the structure and function of grasslands by altering plant competitive interactions, shifting patterns of above- and belowground biomass allocation, and by increasing net primary productivity. However, the influence of N and P on net ecosystem productivity is poorly understood. In the context of a field-based factorial N and P addition experiment, we measured soil moisture, canopy development and component fluxes of ecosystem $CO_2$ exchange in a restored temperate grassland at Tifft Nature Preserve near Buffalo, New York. We predicted that N addition would enhance photosynthesis while P addition would stimulate ecosystem respiration. As predicted, N increased photosynthesis that had the effect of increasing net ecosystem $CO_2$ exchange (NEE). In contrast with our prediction, P did not significantly influence ecosystem respiration. However, P interacted with N to significantly reduce NEE in comparison with plots that received N alone. Moreover, water limitation and phenological constraints during the middle and late growing season appear to limit ecosystem responses to nutrient addition. These results suggest that influences of N and P on ecosystem processes are seasonally dynamic and that N and P interact to influence net ecosystem $CO_2$ exchange.

**Presentation Type and Session**: Poster VI

## The Initial Exploration of the Eruptive History of the Mighty Santa Ana

**Elisabeth Gallant**, Geology and Earth Sciences
Faculty Mentor: Professor Bettina Martinez-Hackert, Earth Sciences and Science Education

The hazard potential of Santa Ana (Ilamatepec) volcano is a prevalent part of every day life in El Salvador, and therefore requires a greater understanding of the eruptive history. Samples of deposit material, consolidated as many layers, were collected at various points within the western edge of the summit crater by students and faculty of Buffalo State College, SUNY Buffalo, and El Salvador's premier geological survey, Servicio Nacional de Estudios Territorales (SNET), to facilitate this knowledge. These samples were scrutinized using a variety of analytical techniques, including radiocarbon dating, optical microscopy, scanning electron microscopy, and grain size analysis. From these data we determined the mineral composition, grain size, ages of the samples that contained carbon material, and the origins of the layers (if they were made of new magmatic material or reconstituted from previous eruptive products). From these findings and observations made in the field we were able to recognize a distinct and repetitive eruptive pattern. The primary phase of the eruptive events begins with a steam based (phreatic) eruption, the secondary with a magma-water based

(phreatomagmatic) eruption, the tertiary by an entirely magmatic event, while the terminal phase reverts to phreatomagmetic activity. Our heightened understanding of how the volcano behaves will help make life saving decisions in the event of an eruption for the 2 million Salvadoreans who live within a 15km radius of the crater.

**Presentation Type and Session**: Poster IV

## Lead Concentrations In South Buffalo Soils

**Jennifer Monheim**, GES 460: Environmental Field Methods and Analysis

Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

This research will investigate locations of higher lead concentrations in the soils of a South Buffalo neighborhood and try to identify its source(s). My hypothesis is that the lead concentrations will be highest around the base of the houses built well before 1977. This is due to the paint that was used on them since at the time paint contained lead. I also believe that the concentration of lead around the houses will increase with the age of the house due to lead paint being scraped off and reapplied several times. I plan to test this by taking soil samples from properties belonging to houses built both before and after 1977 as well as the neighborhood park. The samples will then be tested using X-ray fluorescence (XRF) that analyzes elemental composition by identifying the characteristic x-rays released by atoms in their excited state. I expect to find very low concentrations of lead in the soil of the park and the newer houses and higher levels of lead in the soils surrounding the older houses. This research is important because of the health problems caused by lead poisoning, which some of the children in the neighborhood have been diagnosed with.

**Presentation Type and Session**: Poster VII

## Mapping Ballistic Spatial Distributions On Santa Ana Volcano

**Krista Ventura**, **Mark Tate**, and **Annabelle Wardzala**, GES 497: Volcanology and Geology of El Salvador

Faculty Mentor: Professor Bettina Martinez-Hackert, Earth Sciences and Science Education

Santa Ana Volcano in El Salvador is a mafic to andesitic composite volcano with an extremely deep center vent crater (350m), indicating that its eruptions are violent and can cause huge amounts of damage to the countryside as well as the volcano shape itself when it erupts. Once the volcano erupts, ballistics may shoot out accompanied by ash and other volcanic products. Ballistics are non juvenile material ejected from the vent as an eruption starts and continues. Sizes may range from fine sand to house size and can be ejected to a significant distance. Ballistics on this volcano tend to be more prevalent on the Western to Southeastern flank of the volcano which has a lower rim elevation, so collection of data focused on that area. The size of the ballistics is an indicator of the energy of the eruption, hence, one can estimate a minimum energy that an eruption needed to eject a certain size ballistic using a computer model called BALLISTIC. Ballistics need to be studied to help predict Santa Ana hazardous areas and potential strength. To study ballistics, spatial distribution specific data from each ballistic had to be gathered. Latitude, longitude, and composition were measured and recorded. The maximum diameters trending North/South and East/West were measured and the distance from the vent was equated. These data were compiled into a spreadsheet and used to run the model to obtain energy estimates. A map from the collected 2005 eruption ballistics and preliminary results of model runs are shown.

**Presentation Type and Session**: Poster IV

## Mathematical Modeling of Syphilis

**Mike Kourt** and **Stephen Bell**, AMT 495: Special Project in Applied Mathematics

Faculty Mentor: Professor Saziye Bayram, Mathematics

In our society today, the knowledge of the severity of sexual transmitted diseases (STD) can often go unnoticed. Syphilis, in particular, is a disease caused by microscopic bacteria, known as spirochetes, that live almost anywhere in the body. Unless it is treated, Syphilis can infect major organs in the body, can cause brain damage, and might lead to death. In this talk, we will focus on a mathematical model describing the dynamics of this disease. Our model is a departmental model and categorized into three groups: Susceptible, Infectious, and Removed. We have incorporated the four known stages of the disease into our model, and in this talk we will present our analytical and numerical findings. We will also provide the comparison of our results to the raw data received from the Erie County Health Department.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## The Misconceptions of Hookah: Is It Safe?

**Desiree Fuoco**, **Alicia Maneen**, **David Gass**, and **Lindsay Brignon**, CHE 406: Analytical Toxicology

Faculty Mentor: Professor Alexander Nazarenko, Chemistry

To many people, Hookah is thought to be a healthy alternative to smoking cigarettes because of its smooth and flavorful taste. Hookah bars have become a popular hangout for young adults due to the relaxed and carefree atmosphere. Hookah is not a new phenomenon and has been present in the Middle East for thousands of years. Most people do not realize the potential dangers that shisha, the tobacco that is smoked, may have on a smoker's health. Shisha is typically smoked through a water pipe and inhaled into the lungs. Through different extraction techniques, the components of several shisha samples will be analyzed using Gas Chromatography, Gas Chromatography/Mass Spectrometry, and High Performance Liquid Chromatography and other available analytical instrumentation. The results will show that shisha contains components that are known to be hazardous to your health.

**Presentation Type and Session**: Poster VII

## Modeling Cold Air Drainage In Watertown, NY Using ArcGIS

**Alyssa Russell**, Geography and Planning
Faculty Mentor: Professor Stephen Vermette, Geography and Planning

During winter months the Automated Surface Observing System of the National Weather Service at Watertown, NY occasionally shows extreme drops in temperature under radiational cooling conditions. With funding from the National Oceanic and Atmospheric Administration, I was able to investigate the reasoning for this cooling event by looking at regional air flow. Using ArcGIS and ArcHydro by ESRI, I am able to view the surrounding area as a 3-dimensional landscape, simulating the path of cold air drainage through depressions in the topography. Through manipulation of ArcHydro (usually used to model stream flow) I plan to objectively model the cool air movement to determine the significance of Tugg Hill and the terrain surrounding the study site.

**Presentation Type and Session**: Poster II

## Monitoring of Thermal and Hydrothermal Activity of Santa Ana Volcano Post-2005 Eruption

**Elisabeth Gallant**, **Morgan Swieczkowski**, **Jamie Mischner**, and **Michael Grzeskowiak**, GES 497: Volcanology and Geology of El Salvador
Faculty Mentor: Professor Bettina Martinez-Hackert, Earth Sciences and Science Education

Santa Ana volcano, also known as Ilamatepec, in El Salvador, has shown a high level of geothermal activity throughout the past century. Its most recent eruption in October of 2005 claimed the lives of two individuals and caused a significant amount of property damage through lahars and the expulsion of ballistics. No substantial seismic activity was associated with the 2005 eruption; it was characterized instead by an increased level of activity in the hydrothermal areas of the crater, with a focus on the western inner crater walls. Increased surveillance of the volcano in the five years post-eruption was undertaken. A FLIR P 65 infrared camera was allocated to help track any geothermal irregularities, specifically through the measurement of fumarole activity. The analysis of a monthly sequence of IR (infrared) photographs taken from January 2008 through January 2011 showed a steady decrease in the overall temperature of the crater, but indicated periods of increased fumarole activity. Further analysis showed the presence of variances between measurements taken in the rainy season versus those taken in the dry season. These were resultant from seasonal affects and not periodic geothermal activity. Continued survey of the volcano and its geothermally active crater indicate further thermal (and possibly magmatic) activity. It has been determined that the use of such an expensive camera will likely be reduced to crisis-level monitoring rather than a regular temporal pattern, as the camera is already showing damage from the rough transportation onto the volcano.

**Presentation Type and Session**: Poster V

## Performance of a Newly Constructed Stormwater Detention Pond

**Jessica Bakert**, Individualized Studies
Faculty Mentors: Professor Kim Irvine, Geography and Planning and John Bleech, Environmental Health and Safety

Under U.S.EPA Phase II stormwater regulations Buffalo State was required to develop a stormwater management plan. This plan pursues both hard-engineering and low impact development approaches for stormwater management. As part of the plan, a detention pond came on-line in early summer, 2010, to collect flow before it discharges to Scajaquada Creek. The objective of this study was to assess the detention pond impact on water quantity and quality prior to discharge to the creek. A meter was installed in 2007 (pre-construction) and 2010 (post-construction) to record stormwater discharge to Scajaquada Creek. Regression analysis between rainfall and runoff characteristics showed that peak discharge was higher in 2010 than 2007 for the same rainfall depth, while the relationship between peak discharge and peak rainfall intensity was similar for the two years. Total discharge volume for rainfall events $>0.5$" was greater in 2010 than 2007. Samples for total suspended solids (TSS), *E. coli*, total phosphorus, and nitrate were collected at the inflow to the pond, within the pond, and at the outflow from the pond throughout 6 storms, May-September, 2010. On average, the pond did not reduce TSS and *E. coli* levels, but is becoming more efficient in reducing TSS as vegetation becomes better established. There were mixed results for phosphorus and nitrate, as levels were reduced for about 50% of the storms, but were higher at the outlet for other storms. Because the pond is new, there is a need for continued monitoring to determine the time required for it to reach design performance.

**Presentation Type and Session**: Poster VI

## Relating Geophysical Fluid Dynamics Simulations To Real World Applications: Introductory Exercises For High School and Undergraduate Students

**Natalie Alvut**, Earth Sciences and **Michael Ludwick**, Earth Sciences
Faculty Mentor: Professor Jude Sabato, Earth Sciences and Science Education

Geophysical fluid dynamics involve complex concepts that can be difficult to understand, especially when first introduced to the subject. Students in high school and undergraduate programs often have trouble grasping the mechanics involved. When exposed to elements like rotation and agitation, as fluids are in our atmosphere and oceans, these dynamics become even more complicated. Providing concrete examples to students that mimic the true nature of these processes can be very helpful when it comes to their comprehension of this material. Four simple experiments are good introductory exercises that may aid in clearing up common misconceptions many students have about how fluids behave in the presence of rotation and agitation. They are done using a tank of water that rests on a rotating apparatus. A camera is mounted above

connected to the tank to give the ideal perspective on what happens during experimentation. Videos are also useful in cases where such an apparatus is not available. This method allows the conditions in our oceans and atmosphere to be simulated in the laboratory, giving students a first-hand look at phenomena to which they would otherwise not be exposed. Colored dye is dropped into the water to allow visibility of fluid-flow. There are four sets of conditions used in these exercises: no agitation without rotation, no agitation with rotation, agitation without rotation and agitation with rotation. Each trial is recorded for an average of 8-10 minutes, allowing the full scope of dynamics to develop. By providing students with concrete examples of the mechanics that fluids on our planet are subjected to, the hope is that their further exploration in this area of study will be easier to handle and understanding will be stronger in the long run.

**Presentation Type and Session**: Poster VI

## Resource Allocation and Canopy Architecture May Influence the Invasion of the Nonnative Wetland Plant, Phragmites australis

**John Hirtreiter**, Biology
Faculty Mentor: Professor Daniel Potts, Biology

*Phragmites australis* (common reed) is currently invading wetland communities formerly dominated by *Typha spp.* (cattail) in western New York. Because light availability may limit wetland plant productivity, we hypothesized that species' contrasts in canopy architecture, photosynthetic capacity, and leaf nitrogen allocation might facilitate the invasion of Phragmites into these wetland communities. We predicted that light would diminish more rapidly in *Phragmites* canopies than in *Typha* canopies, and that these trends would be reflected in canopy profiles of maximum photosynthetic rates (Amax) and leaf nitrogen concentration (%N). In a managed wetland at Tifft Nature Preserve near Buffalo, New York, we measured canopy profiles of light availability, AMAX, and %N for both species in adjacent mixed and monospecific stands. Compared to stands of *Typha*, light does not penetrate as deeply into stands of *Phragmites*. Furthermore, among *Phragmites*, we observed consistent, intermediate values of AMAX and %N regardless of canopy position, whereas among *Typha*, AMAX and %N were greatest in sun-lit leaves near the canopy top and least in shaded leaves near the canopy bottom. Increased light penetration in *Typha* canopies, combined with increased AMAX of *Phragmites* shade leaves, may contribute to the ability of *Phragmites* to invade *Typha*-dominated stands. Conversely, because *Typha* shade leaves have low AMAX and because less light is available in *Phragmites* canopies, *Typha* may be unable to establish in *Phragmites* stands. We conclude that canopy architecture and patterns of plant resource allocation combine to favor the spread of *Phragmites* into *Typha*-dominated wetlands.

**Presentation Type and Session**: Poster V

## Rocks Tell Stories About Building Ancient Mountains: The Sebago Pluton, Migmatites and Associated Granites, Maine

**Daniel Naschke**, Earth Sciences Education and Geology
Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

The Sebago region in southern Maine is part of the Appalachians where there were ancient mountains long eroded away, but were probably Himalayan-sized about 300 million years ago. The area contains interesting rocks called migmatites that form when rock partially melts and mixes during the deformation of the rocks while the mountains are forming as a continent collided with ancient North America. Resulting from high temperature solid state metamorphism, deep inside the forming mountains, these rocks begin to melt at even higher temperatures, and small magma bodies are developed. If the magma becomes volumetric enough to allow flow, magma can escape to form igneous rock bodies (plutons when developed below the surface, and volcanoes at the surface) when crystallized at higher levels in Earth's crust. So, migmatites (and their associated granites) record the deformation and movement of the magma as it travels through the crust, allowing determination what kind of activity or conditions were present as this rock was forming. I studied these rocks in the field and in the lab (using my collected specimens) at multiple scales including outcrop, hand specimen, microscope, and map scales. I observed mineral textural patterns at all of these scales. At the map scale I used data taken at various outcrop stations within the region to map out the contact zone of the pluton where it is in contact with surrounding metamorphic and migmatitic rocks. In the end, my work confirmed the location of the contact (postulated by previous work), but the nature of the contact is still under investigation. However, it is clear that the contact is sharp, owing to the pluton's intrusive relationship to its surrounding migmatites. The pluton is believed to be about 100 million years younger than the migmatites that suggests the two different rocks recorded two different mountain-building episodes.

**Presentation Type and Session**: Poster V

## Simulations of Geophysical Flows

**Steven Dutter,** Physics
Faculty Mentor: Professor Jude Sabato, Earth Sciences and Science Education

A differentially heated rotating annulus is used to carry out general circulation experiments meant to simulate large scale circulations. We explore three regimes present in general circulation systems; symmetric, steady waves, and turbulence (irregular flow). These regimes are analogous to Hadley circulation in Earth's tropics, midlatitude storms on Earth and Mars, and Jupiter's turbulent eddies and eddy driven jets respectively. Another regime found that was not expected was a regime of amplitude vacillation that is seen on Mars. Data collected is presented as two dimensionless numbers, Rossby and Taylor, which help describe fluid flow. Experimental data points are plotted on a Rossby vs. Taylor graph and compared

to previous studies, both experimental and numerical. Also noted are the boundaries between the separate regimes and critical wave numbers. Critical wave numbers ranged from 3 to 16. In order to fill out some regions of parameter space, a new working fluid, with a different viscosity was selected (oil). Having compared favorably with previous studies, these results demonstrate the robustness of the apparatus and its ability to simulate rotating flows in the laboratory.

**Presentation Type and Session**: Poster VII

## Supplemental Mapping and Field Checking of Granites From the Eastern Sebago Pluton, Maine

**Krista Ventura**, Geology and Earth Sciences
Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

As part of a large-scale, ongoing project, this research focused on rocks in the northern Appalachians, north of Portland, Maine where rocks exposed were part of the deep sections of Himalayan-scale mountains that formed about 300 million years ago. Evidence in the rocks shows partial melting during their deformation as the mountains formed in response to a continent that collided with North America at that time. At the same time, emplacement of associated granite bodies of various sizes occurred within the area. Study of the relations of the mineral patterns and associated granite body locations and shapes at several scales is a means of understanding granite magma production, travel and emplacement as granite bodies during this process. My work focuses on the microscopic textures and mineral patterns of granitic rocks from the Eastern Sebago Pluton. Field work was required in order to both (1) check field data against my lab results, and to (2) continue mapping in unexplored parts of the field area. My focus was the granite exposures within the field area, however I expanded the collection and study to include rocks that partially-melted (migmatites) that are associated most closely with those granites. New mapping was conducted along an E-W corridor along the north contact of the Sebago pluton. Results show that rocks in the pluton are typically medium-grained, and homogeneous two-mica granite, whereas the rock complex outside the pluton is dominated by plastically deformed, strongly heterogeneous migmatites, and granites with varying solid-state fabrics. Field data include exposure locations, and rock information such as mineral and textural variations, rock type interpretations, mineral pattern orientations (fabrics), and cross-cutting relations between rock types. Granite at the contact has recorded some solid-state strain locally as seen in thin section only. In collaboration with others in my laboratory group (Naschke, this conference), data are interpreted to show the pluton is intrusive to the regional rocks during mountain building, but after the intruded rocks were already deformed, suggesting their history is much older than the pluton's.

**Presentation Type and Session**: Poster V

## United States Demographics and Health Care Expenditures: The 2003 Medical Expenditure Panel Survey

**Kathryn Boughton**, AMT 495: Special Project in Applied Mathematics
Faculty Mentor: Professor Chaitali Ghosh, Mathematics

Health care costs seem to be a major problem in the United States, and its reduction remains a top priority of this nation. This project investigates the relationships between demographic factors and medical expenditures in a cross-sectional study of 2,000 participants from the national 2003 Medical Expenditure Panel Survey (MEPS), conducted by the United States Agency of Health Research and Quality. The chi-square test of independence indicates that people with outpatient medical expenses are more likely to be female, have health insurance with a high educational and income level and to rate themselves in poor or fair physical and mental health. The Kruskal-Wallis nonparametric test shows that median outpatient expenditures are significantly different by gender, insurance coverage, employment and marital status, race, and self-rated physical and mental health but not by region. Subgroups of the cohort most likely to incur medical expenses are identified who can be targeted to reduce future expenditures.

**Presentation Type and Session**: Oral – Physical Geography, Sciences and Mathematics

## Using GigaPan Technology To Study Stratigraphy Inside the Santa Ana Volcano

**Krista Ventura**, Geology and Earth Sciences
Faculty Mentor: Professor Bettina Martinez-Hackert, Earth Sciences and Science Education

GigaPan (Gigapixel panoramas) technology is a new tool that combines a regular digital camera, with a precisely rotating base that allows us to take panoramic pictures of an area. These photos are composed of hundreds to thousands of high resolution images along with a "stitching" software that is able to put all the pictures together to make one panoramic image that can be zoomed into for further analysis. We will produce a preliminary geological and stratigraphical map of the inner crater walls in Santa Ana volcano, El Salvador. This stratigraphy is highly complex and holds many answers to unanswered questions about the volcano's eruptive history. The vast area inside the crater, over 1.5km in diameter, is inaccessible in many places due to the steep slopes of the crater wall, and crumbly volcanic deposits, can be studied with GigaPan technology because the panoramic camera allows us to take high-resolution pictures that can be enhanced to a very fine scale. In areas that are accessible, probing samples will be taken to further validate what will be seen in the panoramic picture. We will be able to zoom in on the strata to see boundaries and anomalies. As a result of such little work having been done on the stratigraphy inside the Santa Ana crater and this project being in its initial stages, we hope to be able to put together a 360degree panoramic picture to help identify what happened during this volcano's explosive episodes.

**Presentation Type and Session**: Poster VI

## Using Water Level Loggers To Identify the Propagation of Seiches In the Buffalo River

**Amanda Klawinski**, Earth Sciences and Geology
Faculty Mentors: Professor Jill Singer, Earth Sciences and Science Education and Professor Jude Sabato, Earth Sciences and Science Education

The Buffalo River is an urban river that flows into the eastern end of Lake Erie. The lower 9.2 km of the river is designated as a Great Lakes Area of Concern (AoC) because of poor water quality, contaminated sediments, and degraded habitat, particularly along the riparian zone. The location and orientation of the river allows waters from Lake Erie to flow upriver (reverse) in the river and this often causes the river's elevation to increase by as much as two feet. Reverse flow has been documented in previous studies on the river using horizontal and vertical Acoustic Doppler Current Profilers (ADCPs), but until this study, the record of water level changes in the river was limited. To better understand water level changes in the river, three water level loggers were placed in the river at the mouth, middle and the upper river (approximately at river miles 0, 3, and 6 upriver). These three loggers were deployed in late August 2010 and three sets of data were collected until the water loggers were removed in early December, 2010. The loggers almost simultaneously read and store the water level of the river every five minutes. I have plotted these data using Matlab, a high-level programming language and interactive environment that is used for various applications such as data visualization. This program allows me to efficiently repeat display each new data set. The Matlab script is written to plot both the raw data as well as a high pass filter. I can also adjust to zoom into specific areas of interest. The plots allow events in the river to be identified so that we can then pinpoint changes by looking at the raw data points. Theses data are beginning to show evidence of high flow (runoff from rain) and Lake Erie seiches. There is also evidence of the river's short period (one to two hour oscillation). By interpreting this water level data, we hope to identify certain events so that we can focus our attention on data collected from the other equipment in the river, particularly the ADCPs.

**Presentation Type and Session**: Poster VII

## Water Permeability of Junctional Proteins In a Nonjunctional Membrane

**Jaafar Hamdan**, Biology
Faculty Mentor: Professor I. Martha Skerrett, Biology

Intercellular junctions involve channels between cells and are found in all multicellular animals. Junctional proteins include connexins and innexins from post- and pre-chordate lines respectively. In cells, connexins and innexins oligimerize to form transmembrane channels that tend to remain closed prior to docking events that create intercellular channels. Junctional proteins contain four transmembrane helices and two extracellular loops that are structurally essential for the docking of hemichannels. In this study I addressed the issue of water permeability through hemichannels in a nonjunctional membrane. Might junctional proteins have an additional functional role, for instance as water channels, prior to gap junction formation? Using the Xenopus oocyte expression system, different junctional proteins were used (Cx26, Cx31, Cx32, and Cx43) to address the question. Oocytes were injected with the desired RNA and dropped in water while monitoring "time-to bursting". All were compared to AQP1, a water permeable channel, as a positive control to conclude if hemichannels can function as water channels. Preliminary data suggests that hemichannels mediate a significant movement of water across the oocyte membrane.

**Presentation Type and Session**: Poster VI

## Why Can't I Go Swimming?

**Maxwell Hain**, **Alice Mayer,** and **Ryan Zmuda**, GES 460: Environmental Field Methods and Analysis
Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

We will be studying the effect heavy rainfall has on the level of *E. coli* in the water at Woodlawn and Hamburg beaches in Hamburg, NY. *E. coli* poses as a serious health risk to humans. In the past, Woodlawn Beach has experienced many closures due to high pathogen levels. Hamburg Beach has not experienced closure as consistently. We will be comparing the levels of *E. coli* at Woodlawn Beach to those at Hamburg Beach. Over the course of the next five weeks, we will be collecting water samples from Woodlawn Beach and Hamburg Beach. Five water samples will be collected from each beach during a dry period. Three water samples will be collected from each beach immediately following a rainfall event, and then two more samples from each beach will be collected two days after the rainfall event. We will be using the data we collect to determine the impact heavy rainfall has on the levels of *E. coli* present in the water. We can determine how long levels of these pathogens stay increased after heavy rainfall events and better estimate how long the beaches should remain closed after said events, as well as determine how often the water should be monitored.

**Presentation Type and Session**: Poster VII

# *Psychology and Social Sciences*

## ADHD, Sex and Fear of Intimacy

**Lyndsey Marsh**, Psychology
Faculty Mentor: Professor Jill Norvilitis, Psychology

Those diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) struggle as they attempt to establish secure social relationships. ADHD often overlaps with behavioral and conduct disorders. Data suggest these problems persist through adult sexuality, as those diagnosed with more ADHD symptoms engage in less peer intimacy, have fewer close friends and reveal contrasting tendencies regarding sexuality and intimacy. Individuals with ADHD show greater fear of intimacy yet low rates of sexual anxiety, suggesting conflicted ideologies and behaviors pertaining to romantic and sexual relationships. In an attempt to better understand the role that symptoms of inattention and hyperactivity play in this relationship, three hundred students from Buffalo State College will answer questions regarding sexuality and emotional intimacy. It is hypothesized that those with more symptoms of ADHD will report greater fear of intimacy, and will be more accepting of risky sexual behaviors. Further, it is predicted that those with more hyperactive symptoms will report engaging in more risky sexual behavior than those with just inattentive symptoms. In contrast, it is hypothesized those with more inattentive symptoms will report more fear of intimacy than those with just hyperactive symptoms. Lastly, our final predictions are that those with ADHD will not score differently than controls on the Relationship Belief Scale and those with higher levels of ADHD will score lower on the Relationship Self-Concept Questionnaire than their non ADHD counterparts. Data are being collected and results will be presented at the SRCC.

**Presentation Type and Session**: Poster III

## African American Churches: Why Not At the Frontlines of the Same-Sex Marriage Battle?

**Henry Zomerfeld**, Political Science
Faculty Mentor: Professor Kyeonghi Baek, Political Science

Same-sex marriage has been a hot button issue in the United States, since the California Supreme Court struck down a law defining marriage as limited only to a man and woman. Since then, religious organizations have worked rigorously to overturn the court and revert back to the traditional heterosexual marriage. In doing so, the Catholic and Mormon Churches mobilized over one hundred thousand volunteers, raised millions of dollars and utilized the media to voice their opinions against same-sex marriage. We have even seen such influence in other states, such as Massachusetts, where same-sex marriage also became a matter for the state's high court. Most peculiar is that African American Christians did not join these religious efforts. Through our literature review and data, it has been demonstrated that African Americans tend to be less supportive of same-sex marriage and homosexuality in comparison to other ethnic groups, as they often practice conservative Christian doctrines. They frequently citing scripture as evidence that same-sex marriage and homosexuality are sinful and unnatural. Yet, they remain relatively silent on the issue. African Americans have always voiced their opinions in the public eye about issues that were important; desegregation, civil rights and affirmative action just to name a few. Yet African American Christians are sitting on the sidelines of this issue. In this paper, we attempt to understand the silence of African American churches on the issue of same-sex marriage.

**Presentation Type and Session**: Oral – Social Sciences

## Attitudes Towards Statistics

**Melissa Young**, Psychology and **Morgan Morningstar**, Psychology
Faculty Mentor: Professor Howard Reid, Psychology

Many undergraduate social science majors are anxious taking the statistics course that is often required in their majors. Of course, most of these students successfully complete statistics and some come to enjoy the course. The goal of the present study is to compare psychology students' attitudes about statistics early and later in the semester. Eighty two students who are currently enrolled in PSY 306 are participating in the study. They completed a 66-item questionnaire that includes demographic questions, personality measures and questions designed to ascertain their attitude toward statistics. Each student will be retaking the questionnaire soon after the mid-term break in order to determine the extent to which student attitudes to taking statistics change during a semester. It is anticipated that student attitudes will have become much more positive. The results should, therefore, be of interest to students who will soon be taking such courses.

**Presentation Type and Session**: Poster II

## The Behavior of Captive Western Lowland Gorillas In Comparison To Behavior In the Wild

**Anthony Hartman**, ANT 495: Primate Research
Faculty Mentor: Professor Julie Wieczkowski, Anthropology

Zoos house a variety of non-human primates including gorillas. Despite the best efforts of zoo personnel, the captive environment is not the same as the wild. These differences may be the source of stereotypic behavior (zoochosis). In this study, the behavior of Western Lowland Gorillas (Gorilla gorilla gorilla) at the Buffalo Zoo was recorded using 30-minute focals with behavior recorded at 1-minute intervals. Forty-three hours of observations were recorded from June 14 to July 14, 2010. The results were compared to published behavior of wild gorillas from two studies at Bai Hokou, Central African Republic and one study at Maya Nord, Republic of Congo. A Kruskal-Wallis test was also used to determine individual

differences in the frequency of stress-related behavior, regurgitation and reingestion (R/R), resting, foraging, traveling and social/other behavior. Zoo gorillas were shown to spend more time resting and engaging in social/other behavior than wild gorillas and less time foraging and traveling. Captive gorillas engaged in behavior not recorded in the wild such as R/R, and allogrooming of non-infants. Among individual zoo gorillas, significant differences were found in resting ($p = 0.009$), travel ($p = 0.041$) and in social/other behavior ($p = 0.004$).

**Presentation Type and Session**: Oral – Social Sciences

## Beyond Teenage Pregnancy and Drug Addiction: Rethinking Social Problems

**Kenneth Njorog**, Sociology
Faculty Mentor: Professor Amitra Wall, Sociology

Sociologists recognize that social problems continue to exist in society at the local and global levels. However, media images and reports typically focus on local (within the United States) issues such as the rising teenage pregnancy rate and the impact of drug addiction. Thus, most citizens are unaware of global issues such as human trafficking and modern day slavery. The purpose of this study is to examine Buffalo State College students' perceptions about social problems. During spring 2011 a five item survey, designed by this researcher, was distributed to a sample of students. After identifying how they receive current events (news), students described the first thing that comes to mind when thinking about a societal issue. Further, students identified possible solutions to alleviate social issues. This research seeks to answer whether a significant difference exists between males and females regarding their perceptions concerning social problems. And, this research seeks to answer whether an association exists between how one receives the news and their perceptions about social problems.

**Presentation Type and Session**: Poster I

## China Leapfrogs Over Western Dominance: An In-depth Observation Into China's Development

**Alicia Frank**, Political Science and **Jessica Keough**, Individualized Studies
Faculty Mentor: Professor Zhang Jie, Sociology

China's rapid development has attracted widespread attention throughout the last century. Consequently the question many are asking is, what paths has China taken to establish themselves as the global power we see them as today? Since the reform era in 1978, Deng Xiaoping has implemented the policy of the Four Modernizations, a pragmatic policy that was designed to open its doors to the world, which later on led to China becoming a member of the World Trade Organization. Consider China's large size, military establishment, development of a middle class, successful export system, and its massive population, these indicators point towards a potential economic spike. Additionally, the implementation of Special Economic Zones (S.E.Z) on the eastern coast has allowed China to attract business from overseas. It is said, that China will surpass United States in terms of gross domestic product in the next decade. An implication affecting the United States from the rise of China's global dominance is high unemployment, companies outsourcing to china, and United States slow recovery from the financial debt crisis. To understand this phenomenon of the emergence of China, this paper establishes what it takes to be regarded as a powerful nation in the modern world. Furthermore, it contains an in depth look in to the developments which has led to the rapid economic growth within China and the impact China has on the United States economy.

**Presentation Type and Session**: Poster I

## Cluster B Personality Disorders and Their Dimensional Fit With the Five-Factor Model

**Morgan Morningstar**, PSY 499: Independent Study
Faculty Mentor: Professor Jill Norvilitis, Psychology

There is a great deal of overlap in the characteristics of Cluster B personality disorders as described in the DSM-IV-TR. Personality disorders are pervasive, maladaptive, rigid ways of thinking and behaving in response to the environment. Cluster B contains antisocial, borderline, histrionic, and narcissistic personality disorders, all of which are characterized by dramatic, emotional, or erratic features. This study will examine the relation between these characteristics and the Five-Factor Model to determine if the four Cluster B personality disorders are distinct conditions or are variations of one or two personality dimensions. College students will be recruited to fill out a questionnaire containing 6 measures of personality characteristics: the NEO-Five-Factor Inventory, the Narcissism Inventory-20, the Borderline Evaluation of Severity over Time, the Morningstar/Norvilitis Histrionic Inventory, the Levenson Self-Report Psychopathy Scale, and the Psychological Vulnerability Scale. A Principal Components Factor Analysis with Varimax Rotation will be used to identify significant factor loadings of the personality characteristics examined. Correlational testing will then be run on these significant factor loadings with the NEO-FFI to determine where they are located on the NEO dimensions of neuroticism, extroversion, agreeableness, conscientiousness, and openness to experience.

**Presentation Type and Session**: Poster III

## Dating and Mating: Sex and Relationships Among College Women

**Divine Sebuharara**, Health and Wellness
Faculty Mentors: Professor Staci Newmahr, Sociology and Professor Kristina Garcia, Health and Wellness

The purpose of this study is to provide insight on the effects of mate selection, specifically the differences among dating, mating, and marriage with regards to the intersection of race, age, and residential area among heterosexual women at Buffalo State College. It has been found that white women and black men are more likely than black women and white men to marry outside their race, yet

interracial marriage among blacks and whites remains the lowest. Dating, mating, and marriage are the three stages of relationships that determine the intimacy level between the two people as well as their willingness to be socialized with the person they have chosen. For the reason that the different levels indicate different levels of intimacy and values, the men women are willing to engage in these different stages with may also change. I hope to gain insight through group interviews and observation. The participants have been selected through a process known as the cast broadly approach. The group interviews will be conducted in the Human Control Lab in the Classroom Building the Sociology Department and will be tape recorded with the consent of the participants. I suspect there will be the greatest difference in values among races, closely followed by residential area. In my presentation, I will give a brief overview of how I came about this project, what I have found in my research, as well as what I plan to accomplish and gain insight to upon completion of the project.

**Presentation Type and Session**: Oral – Social Sciences

## Democracy In the Middle East

**George Washington**, PSC 389: International Conflict and Resolution
Faculty Mentor: Professor Kyeonghi Baek, Political Science

Peace in the Middle East how it can be achieved and the roadmap to solving the Israeli Palestinian issue. Because history shows democratic countries do not attack or have war between each other if democracy takes hold in former countries that are historical adversaries of Israel future war between them become less likely. Of course there are many roadblocks before democracy is the predominent political ideology in the region. There are signs though that are very encouraging. The most important country that signed the first peace accord with Israel and the largest country in the Middle East has ousted the authoritarian Hosni Mubarak after 30 years of dictatorship. Now the allies with partners from the Arab Emirates have joined in military attacks to propel Libya's madman Muammar Qaddafi to either resign or face the deadly consequences. The writing is on the wall.Soft power as well as hard power is being played like chess in the quagmire of Middle East turmoil. The terrorists who attacked us on 9/11 and those who sponsor them came from Saudi Arabia. Our main supplier of oil did nothing to stop the terrorists attacks on our soil. It is now our turn to turn the tables. The Kingdom of Saud and the other monarchies in the Middle East that support the world wide terrorist network are running out of room to hide. Once democracy and freedom is opened to the people the balance of power and the security dilemma that has engulfed this region will change dramatically in the United States favor and a new security alliance can be formed guaranteeing Israel's right to exist with her Arab neighbors and the Palestianian issue can finally be negotiated. Peace in our time unlike the false imagery Hitler gave Chamberlain this time it's for real.

**Presentation Type and Session**: Oral – Social Sciences

## The Differences In Tailgating Between Men and Women

**Carla Kuhl**, Psychology and **Rebekah Guetti**, Psychology
Faculty Mentor: Professor Dwight Hennessy, Psychology

Tailgating is a serious safety concern in the driving environment that has been linked to increased collisions and injuries. This study investigates the differences in tailgating patterns between men and women in combination with personal factors, such as personality and space preference. It has been hypothesized that men, those who desire control, and those with a greater preference for space will show a greater tendency to tailgate in a simulated driving context. After providing self reports of personality and driving space preference, participants are allowed to drive in a traffic simulator, which has been set up so they will approach another vehicle from behind. Their driving behavior is later reviewed (it is recorded by the simulator) and their typical "following behavior" is measured. Tailgating is identified as the distance of less than tow car lengths between the front of the driver's car and the rear of the proceeding car. Those within this distance are considered to be tailgating. Preliminary evidence suggests some confirmation of the hypotheses.

**Presentation Type and Session**: Poster I

## Driver Attributions: The Primacy Recency Effect In the Driving Environment

**Grant Tepper**, Philosophy and Psychology
Faculty Mentor: Professor Dwight Hennessy, Psychology

Attributions or judgments play a vital role in guiding individuals to make sound decisions regarding their environment every day. In our modern age an extremely influential but hardly looked at (from this perspective) aspect concerning attribution theory is the driving environment. To gain a better understanding of the driving environment I would like to present our findings concerning primacy/recency theories in this relatively new environment in order to share conclusions concerning the changes in judgments made by the observer when presented with adverse situations (in this case a near collision). In the current phase of research, participants view a taped near collision either earlier (primacy) or later (recency) in the video. We then compare attributions made about the driver of the vehicle in the near collision. By further understanding how drivers perceive threats (or safety in the case of good drivers) we can hopefully better facilitate driver education and safety on our roadways.

**Presentation Type and Session**: Poster II

## Effect of Caffeine Consumption On College Academic Performance and Individual Study Habits

**Laura Thomas**, PSY 499: Independent Study
Faculty Mentor: Professor Pamela Schuetze, Psychology

Caffeine is a stimulant that has an effect on both our physiological behaviors and cognitive abilities. Some studies

suggest that caffeine is widely used by students as an aid for maintaining focus while studying. It is unclear, however, if the use of caffeine impacts academic performance. The purpose of this study is designed to examine the association between levels of reported nonalcoholic caffeine consumption (independent variable) and college academic performance in terms of study habits (dependent variable). Approximately fifty (50) participants, recruited from undergraduate psychology classes at Buffalo State College, will complete questionnaires and computerized tasks to assess reaction time in a laboratory setting. Information about participants' caffeine consumption and their study habits will be collected. It is hypothesized that a correlation will be found between reported caffeine use (general use; prior to the intake of the study) and reported study habits; students who report higher caffeine consumption will show worse academic performance.

**Presentation Type and Session**: Poster II

## The Effects of Caffeine Consumption On Observed Jitteriness

**Michelle Switzer**, PSY 499: Independent Study
Faculty Mentor: Professor Pamela Schuetze, Psychology

The purpose of this study is to examine the relationship between caffeine consumption and jitteriness among adults. Participants will be approximately 50 psychology students from Buffalo State College. Each student will be asked to consume a caffeinated or non-caffeinated drink. They will be asked to complete a questionnaire collecting data on studying habits, mood and academic performance. This will be followed by a Mental Rotations Task that is a timed assessment of spatial skills. During the duration of the study a video camera will record the student. A research assistant will code each videotape for any sign of jitteriness such as atypical body movements, startled eye blinks and change of temperature on the skin (sweating) using an Abnormal Involuntary Movement Scale (A.I.M.S.). It is hypothesized that students who drink a caffeinated beverage will show increased signs of jitteriness.

**Presentation Type and Session**: Poster II

## The Effects of Caffeine Consumption On Reaction Time

**Sopheeah DeTine**, PSY 499: Independent Study
Faculty Mentor: Professor Pamela Schuetze, Psychology

The purpose of ongoing this study is to examine the effect of caffeine consumption on reaction time (RT) among adults. Approximately 50 Buffalo State College students will be participants in this caffeine administration study. All participants will be recruited through undergraduate Psychology classes. Participants will by randomly assigned to consume either eight ounces of a caffeinated beverage or eight ounces of a placebo beverage. After a thirty minute waiting period, the Continuous Performance Test (CPT), a standardized measure of reaction time, will be administered. Based on the findings of previous studies, it is hypothesized that participants who consume the caffeine beverage will have a faster reaction time then those who consume the placebo beverage.

**Presentation Type and Session**: Poster III

## Evaluation of Px2010 Initiative: Underage Drinking: It's Everybody's Problem

**Joelle Delmonte**, Psychology, **Patrick Roberts**, Student Personnel Administration, **Kayla Carter**, Sociology, **Linnay Harmer**, Sociology, **Christine Vasquez**, Psychology, **Brittany Hastings**, Psychology, **Tatianna Pessoa**, Sociology, and **Sametra Toe**, Sociology

Mentors: Kelly Marczynski, Assistant Director, Center for Health and Social Research and Leah Feroleto, Center for Health and Social Research

The Px2010 initiative ("Underage Drinking: It's Everybody's Problem!") is the result of a coordinated planning effort between the Center for Health and Social Research (CHSR) the Erie County Department of Mental Health, and local prevention providers to increase the impact of substance abuse prevention services in Erie County, New York. This project targets adolescents 14-20 years of age because reducing underage drinking is the focus of the initiative. Additionally, substance abuse prevention and mental health programs primarily target persons of this age group. Adolescents are the target for these programs because the initiation of alcohol and drug use occurs most frequently in this age group. Purpose of the study: The primary purpose of this study is to gather information from approximately 1000 adolescents aged 14 through 20 throughout Erie County regarding their opinions and behaviors related to drug and alcohol use. The survey topics include key measures of mental health and substance abuse, including alcohol/drug use initiation, current use, perception of harm, rating of mental health, and demographics (age, ethnicity, gender, zip code). The adolescents respond anonymously over the telephone using an audio computer-assisted-self-interviewing system at CHSR. Results: The poster will describe the data collected thus far, which is approximately 500 surveys, half of our recruitment goal. Frequencies presented will include demographics, knowledge and opinions pertaining to alcohol/drugs, alcohol use, marijuana use, perceived risk of harm from use, and mental health awareness. Conclusions: This data is baseline data against which future data collection efforts will be compared. The data collected is also appropriate for assessing impact on the entire population, rather than only students in specific schools. This inclusion of the entire population is critically important because of the increased utilization of environmental prevention approaches (e.g., enforcement, norm changes), which target the entire population rather than just a specific school.

**Presentation Type and Session**: Poster I

## An Examination of the Effects of Caffeine Consumption On Stress Levels

**Caitlin Glinski**, PSY 499: Independent Study
Faculty Mentor: Professor Pamela Schuetze, Psychology

The purpose of the current study is to examine the association between stress and caffeine. The ongoing study involves approximately fifty participants drinking 8 ounces of either a caffeinated or control drink. During a thirty minute waiting period after consuming the beverage the participants will complete a number of surveys to obtain information about typical caffeine consumption, study habits, academic performance, typical mood and frustration level before and after a stressful task. The stressful task will consist of a timed task to assess spatial skills. Most participants find this task difficult and are unable to finish this task in the allotted time. Upon completion of this task, students will be asked to indicate their level of frustration using a 5-point likert type rating scale ranging from 1=not at all frustrated to 5=very frustrated. It is hypothesized that subjects who consume the caffeinated beverage will report feeling more frustrated after the stressful task than subjects who consume the non-caffeinated beverage.

**Presentation Type and Session**: Poster III

## Exploring a Possible College Drinking Motive: Rebellion

**James Harter**, Psychology and **Jennifer Barszcz**, Psychology
Faculty Mentor: Professor Michael MacLean, Psychology

There are four motives that are typically studied when it comes to college drinking: negative affect coping, positive affect enhancement, social enhancement, and conformity (Cooper 1994). In this study, an additional drinking motive, rebellious drinking, is proposed. Rebellious drinking is drinking because it is forbidden and one wishes to defy societal restrictions perhaps as a way of demonstrating autonomy and independence. The goals underlying the current study include developing a measure of rebellious drinking motives, exploring how prevalent such motives are among college students, and testing how closely they predict alcohol-related problems. If there is indeed a rebellious drinking motive found among college students, a follow-up question is whether certain personality traits predict having such motives. Deviance-proneness is a personality trait characterized by how often a person tends to break the rules. It is hypothesized that the rebellious drinking motive will be found in college students and that it will be related to drinking outcomes. Data for the current study was collected with a survey, offered in an online version or paper version, of Buffalo State College students. Data analysis has begun and the results and discussion will be presented.

**Presentation Type and Session**: Poster I

## Exposure To Predator Scent Increases Defensive Responding In Rats In the Shock-prod Burying Test

**Melissa Young**, Psychology
Faculty Mentor: Professor Jean DiPirro, Psychology

This research was designed to investigate the anxiogenic effects of predator scent (i.e., cat scent) in rats. The goal was to add to existing knowledge of predator-scent exposure as an effective animal model of "anxiety". In this study, a standard procedure for the assessment of "anxiety" in rats was used: defensive responding during a shock-prod burying test, after exposure to a cat-scented or rat-scented (control) cloth. We used this behavioral assay to test the hypothesis that exposure to cat scent induces an increase in defensive behavior in rats. The time the rat spent engaged in defensive behaviors (e.g., freezing or burying) was used as a measure of "anxiety". Twenty-four Long-Evans (hooded) male rats were used as subjects. All rats were habituated to testing procedures (except exposure to the cloth or to the shock in the shock-prod test) for several days prior to testing. During testing, each rat was placed into the shock-prod apparatus until the rat's nose contacted the shock prod (10-min ceiling). Thirty minutes after experiencing the shock, the rat was placed into an open field apparatus in which a cat-scented or control cloth was present. Two hours after exposure to cat scent or its control, each rat was again placed into the shock-prod apparatus (with a deactivated shock prod) to measure defensive responding. The results showed that cat-scent exposure increased defensive responding during the shock-prod burying test. These results lend support to predator-scent exposure as an effective rat model of "anxiety".

**Presentation Type and Session**: Poster IV

## Faunal Analysis and Foodways At Old Fort Niagara

**Chelsie Whitman**, Anthropology
Faculty Mentor: Professor Susan Maguire, Anthropology

Faunal analysis, or zooarchaeology, is the study of animal remains from archaeological sites. This step is important because it can shed light on the subsistence methods and the dietary habits of the people from the site. This analysis was performed on the faunal material excavated from Old Fort Niagara during the 2009 Buffalo State Field School. The process was broken down into the three steps: a preliminary sort to separate the mammal, bird, and fish bones, weighing and measuring the bones, and finally identification of the major mammal bones. Of the 2,319 bones recovered 963 are mammal, 651 are fish, 459 are bird, and 256 are unidentifiable fragments. The most abundant elements in the mammal category are ribs, with 23 elements, and the most abundant taxa are cow and deer with 10 bone fragments each. A significant amount of pig (8 pieces) was also found. The bird and fish bones have yet to be identified to taxa but some promising patterns are arising. The

majority of the bones could not be identified to specific taxon other than mammal, bird, or fish. The data from the faunal analysis can be linked with the other artifacts from the site once the field report has been completed. This step will allow for a better understanding of the people at Old Fort Niagara.

**Presentation Type and Session**: Poster III

## From Mushrooms To Flowers

**Jonathan Keenan**, History
Faculty Mentor: Professor Martin Ederer, History

The atomic bomb is one of the most destructive devices that man has created for warfare, able to wipe out entire city blocks and dissolve a person's body leaving only a shadow behind. How can any good be found in such a weapon? The paper will evaluate the process that the Americans went through to create this weapon and then use it. It will convey how different key players felt about the Bomb, such as Harry S. Truman, Joseph Stalin, Winston Churchill, Emperor Hirohito, scientists, and those that were in the planes that dropped them. Both sides of the argument will be looked at whether the Bombs should have been dropped or if there was a way around it. Finally, what was the impact of the bomb once it was created? How was this new weapon going to be used in the future? This new tool of war will affect the world for years to come and is still being discussed today concerning the 'what if's of the Bomb.

**Presentation Type and Session**: Poster II

## From Quarry To Projectile Point: Sourcing Lithic Materials From the Orry B. Heath Collection

**Joshua Mauro**, Anthropology Honors Research
Faculty Mentor: Professor Lisa Marie Anselmi, Anthropology

The Orry B. Heath Collection consists of 2,500 stone tools from Chautauqua County and surrounding areas of New York State. In 2010 Dr. Lisa Marie Anselmi and a team of students began sorting, identifying, and cataloging the collection as part of a community partnership with the McClurg Museum, home of the Chautauqua County Historical Society, in Westfield, NY. The current research being presented here is an attempt to identify and locate the sources of materials used to manufacture projectile points in the collection. A sample of the first 1,000 points that have previously been identified and cataloged by group members Dr. Lisa Marie Anselmi, Lindsey Higgins, Joe Dudek, Jessica Stabell, Dianne Maerz, and myself will be used for the purpose of this study. Based on the general colors, patterns, and typology of these points I will attempt to identify the various sources throughout New York State in which the lithic materials used were gathered. The majority of results from this research project will be presented in maps, charts, and graphs in order to represent, as accurately as possible, the strategies used by Indigenous New York State groups to obtain materials used for manufacturing stone tools.

**Presentation Type and Session**: Poster II

## Gender Differences In Coping Styles, Drinking To Cope, and Alcohol-Related Problems

**Jennifer Barszcz**, Psychology and **James Harter**, Psychology
Faculty Mentor: Professor Michael MacLean, Psychology

Alcohol use continues to be a significant problem among college students. One factor that has proven useful in predicting drinking outcomes has been college students' reasons for drinking, with some reasons being more closely related to alcohol-related problems than others. In particular, people who use drinking as a means to cope with negative affect have been found to drink more and have more alcohol-related problems. A next step is place drinking to cope within the larger context of people's general coping style and to test for gender differences in these areas. Although there is currently no consensus, most existing research points to at least two primary coping styles: avoidant coping and active coping. In the current study, it was predicted that males will be more likely to use avoidant coping which will in turn lead to higher rates of drinking to cope. Also males' higher rates of drinking to cope were predicted to be related to having more alcohol-related problems. The 373 participants were college students who filled out a self-report questionnaire (paper or online) in exchange for extra credit. Final analyses are currently being run. The results and their implications will be presented at the poster session.

**Presentation Type and Session**: Poster II

## Gender, Letters of Recommendation and Hiring Judgments: What's the Deal?

**Leticia Tellez**, Psychology
Faculty Mentor: Professor Jennifer Hunt, Psychology

The goal of this study is to investigate whether terms used in letters of recommendation affect the likelihood of women and men being hired for either a leadership position or a non-leadership position. Previous research has found the language used in letters of recommendation can affect the odds of someone getting the job. Other research has shown men tend to be described with agentic terms, like goal oriented, and women tend to be described with communal terms, like friendly. As a result, men tend to be hired more often because agentic words are valued more than communal words. However, when people are described with terms stereotypically associated with the other gender, for example, men who are described as communal or women who are described as agentic, people often react negatively. To test the effects of gender and recommendation language on hiring judgments, we will be giving participants six letters, two agentic, two communal and two neutral, about job candidates. Each language condition will include a male and female job candidate. Participants will be asked to pick the candidate they believe most deserves the job. We expect to find that people described with agentic terms will be offered the job more often in both leadership and non-leadership conditions, especially if the candidates are men.

**Presentation Type and Session**: Poster II

## Gender-Priming Effects On Gender Stereotype Bias

**Louis Dangelo Jr.**, **Adam Wolpink**, **Erin McGrath**, **Christina Jasek**, **Amanda Bahr**, **Sara Brothwell**, **Sumit Shukla**, **Jessie Segal**, and **Michael Bertozzi**, PSY 430: Psycholinguistics

Faculty Mentor: Professor Stephani Foraker, Psychology

Many past studies show semantic priming, which is the idea that activation spreads from one concept in the mind/brain to a related concept (Tulving, Schacter, and Stark, 1982). A closely related word will prime faster (cat-dog) than a less related word (collar-dog), and both will have faster effects than an unrelated, neutral word (plant-dog). Another kind of priming comes from stereotypes. Statements made by a male or a female are more accurately attributed to the correct gender when the speaker of that statement is the same gender as the content of that statement (Marsh, Cook, & Hicks, 2006). Based on these two kinds of priming, we believed that gender biases would be activated when understanding sentences and should prime gender stereotypes. Our hypothesis states that when given a gender-specific prime sentence (first sentence), participants will be more likely to believe that the same gender produced the target sentence (second sentence). We created 12 combinations of sentences for each of the six conditions. One example is "The ribs were on the grill all day. (MASCULINE PRIME) / All they do is gossip. (FEMININE PRIME) / The tree was green. (NEUTRAL PRIME) // I paid for it. (MASC TARGET)" Combinations for Feminine Targets were also made. Sixty participants were given the pairs of sentences and asked to judge whether the second sentence was produced by a male or a female. Our results support our hypothesis. We found that when given a male prime sentence, participants were more likely to decide that a male had produced the target sentence, and were less likely to decide that a female had produced the target sentence. The same priming pattern was true for the female primes, although it was not entirely clear because the baseline condition was not between the other two conditions. From our results, we were able to conclude that gender priming does affect decisions about sentences.

**Presentation Type and Session**: Poster III

## Habituation and Accumulation of Bodily Capital: An Autoethnographic Inquiry Into the Culture of Boxing and the Formation of Muscle Memory

**Watoii Rabii**, Sociology

Faculty Mentors: Professor Allen Shelton, Sociology and Professor Staci Newmahr, Sociology

This paper is an ethnographic account of experiences at a boxing gym in the basement of Buffalo's First Presbyterian Church located on the West side of Buffalo, N.Y. Information was obtained using participant observation I conducted for nine months. The sources of data are field notes and personal experience as a novice boxer. Like 'Habituation of the worker" in Harry Braverman's discussion in Labor and Monopoly Capital, the "Habituation of the Boxer "requires an "apparent acclimatization of the worker to the new modes of production". Essential to this acclimatization is the formation of bodily and muscle memory. This is dependent on a discipline implemented by what Loic Wacquant refers to as the "Quasi panoptical apparatus" consisting of trainers, managers, friends, gym mates and wives, who provide constant surveillance to "permit the maximal accumulation of bodily capital for the bout"(Wacquan, 1995). A direct consequence of Wacquant's apparatus is the formation of a body-weapon, body-tool, body-machine complex of the docile soldier Focualt discusses in Discipline and Punish. Using the works of Harry Braverman, Michel Focault and Loic Wacquant this paper addresses the habituation and accumulation of bodily capital through bodily memory and its retention of newly acquired information.

**Presentation Type and Session**: Oral – Social Sciences

## Harm Reduction Drug Policies In the United States, Europe, and Canada

**Thomas Vrabel**, Political Science and Philosophy

Faculty Mentor: Professor Laurie Buonanno, Political Science

Since the mid-1980s, advanced industrialized democracies have pursued harm reduction policies such as drug consumption rooms, needle-exchange programs, and opioid maintenance programs. Some countries have been more hesitant to explore and enact harm reduction policies than others. This is puzzling given that program outcome studies generally reveal that these policies reduce the harmful consequences of drug abuse. This study explores the link between political culture, interest group behavior, and foreign policy and a country's tendency to focus on either supply reduction or demand reduction policies. Furthermore, this paper examines the relationship between supply and demand reduction policies (independent variable) and the development of harm reduction policies (dependent variable). The sample set includes advanced industrialized democracies with different levels of harm reduction policies; specifically, Canada, the United States, and select European

countries. For example, consumption rooms are far more prevalent in European countries than anywhere in the world, Canada recently introduced its first facility in 2003, and they do not exist in the United States. Data collection includes interviews with experts in this field and examination of relevant studies. Keywords: harm reduction, drug policy, War on Drugs, drug consumption

**Presentation Type and Session**: Poster IV

## I Get a Kick Out of E.U.: Soccer Hooliganism and European Politics

**Kyle Mang**, Political Science
Faculty Mentor: Professor Patrick McGovern, Political Science

Spectator violence at European football matches, also known as "hooliganism", has long been a key public policy thorn in the side of European countries. The research presented here suggests that the European Union take the initiative and help create a soccer "super-league." Such a league would aid in the reduction of fan violence by providing a consistent anti-violence policy implemented across all member clubs with coordinated law enforcement action from member states; it would be able to "bleed off" intrastate rivalries with the introduction of new and varied interstate team schedules; it would provide a uniform alcohol sales policy; and it would provide electronic system of tracking fans with a centralized ticket database. This research is based upon a comparison of fan violence in the US's National Football League and Major League Baseball, National Hockey League cities in Canada, and various European countries. It has important implications for the study of E.U. politics, sporting policy, and political identity and violence.

**Presentation Type and Session**: Poster IV

## The Influence of Sexual Education On Later Sexual Behaviors

**Caitlyn Gorham**, PSY 499: Independent Study and HON 400: All College Honors Colloquium
Faculty Mentors: Professor Jill Norvilitis, Psychology and Professor Andrea Guiati, Director, All College Honors Program

Research shows that sexual education is more likely to reduce risky behaviors when safe sexual behaviors are taught to the students, which allows for abstinence as an option, but aims to educate as well (Wilson & Wiley, 2009). Although research has been done on the effectiveness of sexual education on risky behaviors, little research has been done on students' perception of their own behaviors, particularly at the college level. Furthermore, little research has been done on how many students perceive their level of sexual education as sufficient, and the correlation among those students and their actual level of risky behaviors. This study will explore the effects of different types of sexual education on later college sexual behaviors. A sample of approximately 200 Buffalo State College students will be surveyed to find out what type of sexual education they received as well as what type of high school they attended. Students will also be asked about the risky behaviors they partake in as well as their own personal perception of how risky those behaviors are. This study hopes to find a relationship among the type of sexual education students have had and their level of risky behaviors. It is anticipated that students who perceived their sexual education to be comprehensive will also be the students who partake in less risky sexual behaviors. Data collection and analysis are ongoing.

**Presentation Type and Session**: Poster IV

## Intragroup Dominance Among Male Black Howler Monkeys, Alouatta caraya

**Aimee Willett**, ANT 495: Special Project
Faculty Mentor: Professor Julie Wieczkowski, Anthropology

Research among Alouatta species suggests some variation among intragroup competition in resident males. As a consequence to limiting resources, the alpha male will display an aggressive behavior toward males approaching sexual maturity in an effort to push them out of the group. Among subordinates, an inverse relationship to dominance is indicated by hostile behavior of younger male siblings towards older male siblings. I hypothesize that dominant behavior to be most strongly established in the alpha male and the youngest male offspring. As a result of inverse dominance among siblings, I hypothesize that the younger male offspring will continue to antagonize the older male offspring in order to establish a higher rank in dominance once sexual maturity is reached. Dominant-specific behaviors and the frequency of these behaviors among a related group of black howler males (*Alouatta caraya*) will be analyzed at the Buffalo Zoo. I will use 30-minute focal animal samples with behavioral data collected at 1-minute intervals. The spatial relationships and the frequency of the males' interactions with one another will also be recorded. The research study will take 45 hours to accomplish and will be finalized on April 25, 2011.

**Presentation Type and Session**: Poster III

## Is Anger Related To a Sense of Control?

**Phyllis Ernst**, **Deleon Hughes**, **Carla Kuhl**, and **Moje Omoruan**, PSY 450: Research Methods
Faculty Mentor: Professor Stephani Foraker, Psychology

Who is more prone to feeling anger along with the feeling of no control over the situation: the white, male student lashing out at his classmates, or the African-American female principal stepping in to break up a fight? Based on previous research supporting the link between anger and sense of control, we hypothesized that one's level of anger and sense of control would be negatively correlated. We also wanted to find out if gender, age, and race affected that relationship. The sample consisted of 229 participants, with 36% males and 63% females. The age range was from 18-74. We also compared minorities as a group (40% Black/African-American, Asian, Native peoples, and mixed races) to White/Caucasians (58%). A short questionnaire asked about a time when something valuable to the participant was damaged or stolen, measuring the two dependent variables and the modulators. A significant negative correlation

was found between level of anger and sense of control. For gender, females showed a stronger negative association than males, and both were significant. Ages 18-39 showed the negative correlation, but people 40 and older did not. Minorities also showed the negative correlation, while Whites did not. In conclusion, it seems that adults over 40, Whites/Caucasians, and perhaps males may be more able to manage their levels of anger or their sense of control over negative situations. A future step is to find out why some groups feel such anger along with a loss of sense of control while others seem not to.

**Presentation Type and Session**: Poster IV

## Is Waterfront Redevelopment Right For Buffalo?

**Kevin Ward**, PLN 430W: Senior Thesis
Faculty Mentors: Professor James Bensley, Geography and Planning and Professor Kelly Frothingham, Geography and Planning

Throughout history, downtown waterfronts have transformed themselves as a means to keep up with the times. Uses have changed from functional to leisurely, industrial to commercial, military bases to recreational, and all combinations thereof. Buffalo, NY is currently devising a waterfront redevelopment plan for the downtown area. The goal of this paper is to look at similar cities to Buffalo (geographically and economically), study the process they underwent, and assess the results. Those plans will then be compared to the current plans Buffalo has for its waterfront to see if there is any expectation for success or failure.

**Presentation Type and Session**: Poster IV

## The New People: Effects of Immigration On the U.S. Economy

**Joanna Guzma**, HON 400: All College Honors Colloquium
Faculty Mentors: Professor Ted P. Schmidt, Economics and Finance and Professor Andrea Guiati, Director, All College Honors Program

Historically, immigrants have come to the United States for a variety of reasons. Most are drawn in by the economic opportunity that this country offers, in pursuit of the American dream. In recent years, immigration and its impact on the economy has become one of the most debated subjects. Does immigation, authorized and unauthorized, help or hurt the economy? Some people have suggested that the answer to this question depends on a person's perspective. A business owner would likely say immigration helps the economy due to the fact that immigrants provide a source of relatively cheap labor that keeps the business running. From a native-born, American high-school dropout's perspective, immigration might be considered hurtful for the economy. Immigrants have increased competition for low-waged jobs against low-skilled American workers. How does immigration affect taxpayers? Overall, I believe immigration has had a positive impact on the economy as a whole through its effects on the labor market, including an increase in employment. Research also suggests that, in the long run, immigration boosts productivity, which is a measurement of output per unit of input. In addition, I will discuss the effects immigration has had on taxpayers through the nation's health care and education systems.

**Presentation Type and Session**: Oral – Social Sciences

## New Philadelphia Archaeological Field School

**Keishaia Griffith**, Anthropology
Faculty Mentor: Professor Susan Maguire, Anthropology

Free Frank, an African-American and former slave, founded New Philadelphia in Pike County, Illinois in 1836. This town is significant to our American history because it is one of the earliest towns founded and settled by free African-Americans. In August 2009, New Philadelphia was named a National Historical Landmark and the New Philadelphia Association is currently working to have the town designated as a National Historical Park. The New Philadelphia archaeology project is comprised of archaeologists, historians, and students and is funded by the National Science Foundation. Over the past 7 years, these research teams have worked hard to identify the legacy of Free Frank and to enhance our understanding of this abandoned town. The information gathered helps scholars and community members understand how the town developed, worked, and sustained itself as a multi-racial town in the time of heavy barriers. My research project will focus on the historical documents and the archaeological excavation conducted in 2010 on Louisa McWorter's house as well as describe the overall archaeological project.

**Presentation Type and Session**: Poster IV

## New START, For Better Or For Worse?

**Jesse Montes**, PSC 389: International Conflict Resolution
Faculty Mentor: Professor Kyeonghi Baek, Political Science

START or the Strategic Arms Reduction Treaty was originally signed by The United States and the Union of Soviet Socialist Republics (USSR) on July 31, 1991. The Treaty was designed to reduce and limit the nuclear arsenal of each country as well as influence other countries across the globe to do the same. The idea to promote a world free of nuclear weapons, originally proposed by former President Ronald Reagan in SALT, was stalled multiple times by the Soviet Union due to security worries but was eventually agreed upon by US President Bush and Soviet General Secretary Gorbachev 5 months later in the new treaty called START or START I. With the eventual expiration of the START I on December 5, 2009, current US President Obama and Russian President Medvedev agreed to pursue continuation of the treaty. After years of proposals and negotiations, as well as ratification by the US Senate and the Federal Assembly of Russia, START II or "New START" was finally agreed upon and signed on April 8, 2010. "New START" went into full affect as of

January 26, 2011. For my research, I will analyze both the START I and New START treaty as well as compare and contrast the two to determine whether or not significant improvements have been made. Within this research I will also look at other benefits of "New START" and its impact on decreasing nuclear arms and materials.

**Presentation Type and Session**: Poster IV

## The New Traditional Student: How School, Work and Family Contribute To Academic Success

**Jeff Rich**, Psychology
Faculty Mentor: Professor Robert Delprino, Psychology

The purpose of my study was to explore factors that influence students' ability to succeed in and gain a meaningful higher educational experience while balancing the demands of employment and family life. The research is limited that examines the interrelatedness of students' academic, work and family lives (Hammer, Grigsby & Woods, 1998). My research examined how the demands and perceived level of support received from the workplace, family members and school support programs contributed or diminished students' academic success and experiences. Using the nominal group technique, I was able to identify how supportive or not each factor was, as well as obtain information how the school could better assist students to provide an enhanced college experience. Because only 45 people were involved with the current study, it is difficult to generalize my results. However, results showed that students viewed their families as most supportive towards academic success, followed by their workplace, then the school, in this case Buffalo State College. Furthermore, data was collected on why they felt support from each group, how each group could increase their support, and the implications of each.

**Presentation Type and Session**: Poster I

## Nothing But the Bare Bones: Sexual Dimorphism In the Human Skeleton

**Katelyn Steiner**, Anthropology and **Eryn Macleod**, Anthropology
Faculty Mentor: Professor Julie Wieczkowski, Anthropology

Humans, like many other species, exhibit several differences to one another in relation to sex. The different sex chromosomes manifest themselves in the physical appearance of the individual, and these traits can also register in the skeletal anatomy. The dimorphism of the skeletal system is an important tool for accurate sex determination in unknown human skeletal remains, which could lead to identification of a victim. While the length of the long bones (femur, tibia, fibula, humerus, ulna, and radiua) can be used to determine sex, many times there is too much overlap in the lengths between the sexes to make an accurate determination. Using pelvic anthroposcopy, cranial anthroposcopy, and pelvic metrics (ischium-pubic index) we attempted to determine the sex of several skeletons in Buffalo State College's Department of Anthropology skeletal collection. Using decision tables, we studied the morphology of skulls and pelvises to determine the sex of the particular skeletal remains.

**Presentation Type and Session**: Poster III

## Parapsychological Beliefs Among Buffalo State College Students

**Sumit Shukla**, Psychology
Faculty Mentor: Professor Howard Reid, Psychology

Through widely accepted, controversy currently surrounds most parapsychological claims and psychological researchers, for the most part, remain skeptical. We are conducting a study examining the relationships between personality variables and parapsychological beliefs. Previous research has indicated that those individuals who are characterized by being open to experience or who are high in sensation seeking or who score 'thin' on the Boundary Personality Inventory are more likely to accept parapsychological claims. Participants in our study are currently completing a battery of questionnaires that examine Personality, Belief in Astrology, ADHD, Organization skills, Emotion-Based Decision-Making, Openness to Experience and Excitement Seeking. The current study is designed to identify which of these factors differentiates believers from non-believers. We have collected approximately 199 surveys from students so far and expect to collect a total of 400 surveys within a couple of weeks. The results from a preliminary regression analysis indicate that The Australian Sheep-Goat Scale, Astrology Inventory, and Boundary Questionnaire are good predictors for measuring parapsychological beliefs.

**Presentation Type and Session**: Poster II

## Parental Monitoring As a Protective Factor Against Risky Behaviors In College Students

**Samantha Belanger**, Psychology
Faculty Mentor: Professor Michael MacLean, Psychology

Parental monitoring refers to how much parents monitor their children's behaviors and whereabouts. Numerous studies have found that parental monitoring is a protective factor against risky behaviors in adolescents (Kerr and Stattin, 2000; Sampson and Laub, 1994). Unfortunately this concept has not been looked at in college students. The present study assessed if parental monitoring continues to be a protective factor against three risky behaviors; risky sex, drug use and alcohol related problems among college students. To operationalize this construct I used a newer measure of parental monitoring (Kerr and Stattin, 2010) that included parental knowledge, parental solicitation of information, parents' desired level of influence and child disclosure subscales. Results demonstrated support for Kerr and Stattin's (2000) reinterpretation of monitoring. Results also showed that parental knowledge is still a protective factor against alcohol related problems, but not the

other types of risky behaviors, in college students. There were strong correlations found between parental knowledge and the other aspects of monitoring, which may be evidence of a meditational model. This would mean that parental solicitation, child disclosure and desired level of influence all predict parental knowledge, which in turn predicts fewer alcohol related problems. A more advanced statistical analysis should be done to test this.

**Presentation Type and Session**: Poster III

## Personality and Its relationship To Success In Statistics Courses

**Amanda Ciminelli**, Psychology and **Meghan O'Connor,** Psychology
Faculty Mentor: Professor Howard Reid, Psychology

Though most students ultimately succeed, many find taking the statistics course that is commonly required for social science majors to be challenging. In the present study we examined a number of possible predictors of success in these courses, with particular emphasis upon personality traits. Surveys were completed by college students taking the psychological statistics (PSY 306) course during the fall semester of 2010. As expected, it was found that success in this course was positively correlated with feeling that statistics was important, $r(51) = .48$, $p < .05$. Also, the correlations between being a psychology major and wanting to attend graduate school was significant, $r(51) = .48$, $p < .05$. Locus of control was correlated with predicted grade, $r(50) = .35$, $p < .05$, as well as reported SAT scores, $r(51) = .30$, $p < .05$, and self-esteem was correlated with intellect, $r(50) = .45$, $p < .05$. It is anticipated that these and our other findings will be of interest to the students who take these courses as well as the faculty who teach them.

**Presentation Type and Session**: Poster III

## Predicting College Students' Life Satisfaction

**Carly Gruarin**, **Rebekah Guetti**, **James Harter**, **Pamela Morclick**, **Katherine Mosier**, **Hetal Patel**, **Kristina Pelletier**, and **Lonisa Sledg**, PSY 450: Research Methods
Faculty Mentor: Professor Michael MacLean, Psychology

College students' happiness or life satisfaction can be influenced by many factors. As part of a class project, we selected five variables we predict will be strongly related to life satisfaction in college students. The five variables are positive relationships, financial stress, coping skills, career motivation, and academic achievement (GPA). It is predicted that all five factors will be significantly related to levels of life satisfaction. Data collection is in progress. Participants in the study will be Buffalo State College students completing a self-report questionnaire online. Data analysis will involve computing correlations among the variables. In addition, multiple regression analysis will allow us to test the relationship of each variable with life satisfaction while controlling for the other variables. The results and their implications will be presented at the poster session.

**Presentation Type and Session**: Poster I

## The Princess and the Psyche: Effects of Identifying With Princesses and Princes

**Holly Nowak**, Psychology and **Amanda Ciminelli**, Psychology
Faculty Mentor: Professor Jennifer Hunt, Psychology

Princesses are becoming increasingly popular in today's society. Many young girls and women may admire princesses and imitate their behavior. Although princes seem to be less salient for boys, with characters such as superheroes being more influential, it is necessary to examine the effects that prince identification may have as well. In our study, we explored the social effects of identification with princesses and princes on psychological processes related to gender, including sexism, relationship expectations, and eating patterns. 257 participants completed a survey that contained measures of these constructs. We found that both men and women who identified with princesses and princes were more likely to hold benevolent sexist (i.e., subjectively positive, but paternalistic) attitudes toward women. Hostile sexism was not significantly correlated with prince/princess identification for either men or women. We examined how identification with princesses and princes relates to expectations in romantic relationships and found significant results in which individuals who identified with princes and princesses were attracted to partners that demonstrated traditional values and behaviors. We also found that women and men who identify with princesses and princes were more likely to experience body shame, perform dieting behavior and experience body objectification. Notably, these relationships were stronger among men and Latina women rather than Caucasian or African American women. We are currently looking at open-ended questions to assess participants' unprompted prince and princess schemas.

**Presentation Type and Session**: Poster II

## Pronoun Resolution Engages Direct Access To Antecedent Representations

**Jessie Segal**, Psychology and **Kevin Meindl**, Philosophy
Faculty Mentor: Professor Stephani Foraker, Psychology

To understand a pronoun (such as he), readers must access a previous representation, such as the person's name, in their mental model of text and link the pronoun with it. We tested whether a serial search or direct-access memory operation supports the first stage of accessing and binding this previous information. For backwards serial search readers would search from a pronoun, backward through a sentence through each possible referent until the correct one is found which means reading time would increase as sentences become longer. In contrast, a direct-access retrieval operation would mean that readers access the pronoun information without mentally reiterating the sentence and therefore reading times would remain the same as sentence length increased. We compared short,

medium, and long distances between the antecedent (name) and pronoun. Thirty sentences were used which had minimal conflict with the pronoun (for example objects, location, and opposite gender were used instead). Sixty participants read these sentences in counter-balanced lists, and read each sentence phrase by phrase using a moving window. Reading times for the pronouns did not differ between conditions. Since distance effects are not shown, this indicates a direct-access memory mechanism was being used.

**Presentation Type and Session**: Poster III

## Putting the Pedal To the Metal: A Bicycle Survey of Buffalo's West Side

**Bernice Radle**, Urban Planning Senior Thesis
Faculty Mentor: Professor James Bensley, Geography and Urban Planning

Many things can influence the use of bicycles such as recreation, transportation to work/school, healthy lifestyles and affordability. In many parts of Buffalo's West Side, over 50% of the population does not have access to a car and live below the poverty line. Using a bicycle can help to address transportation gaps because of its reliability and low maintenance costs as well as promote healthy living and additional recreation options for the residents. The questions of this study are: What types of transportation do the residents of Buffalo's West Side use to travel to and from work, school, shopping, etc? Would the residents travel more using a bicycle if additional bicycling services were provided? This study uses the survey method to establish what the current bicycling conditions are in the West Side and aims to use the survey results to determine what can be done to increase bicycle use.

**Presentation Type and Session**: Poster IV

## Reinforcement Sensitivity In Schizophrenia: Two Mediating Factors

**Brian Kline**, Psychology
Faculty Mentor: Professor Jill Norvilitis, Psychology

The revised version of the Reinforcement Sensitization Theory (Gray & McNaughton, 2001; RST) provides neurological and learning-theory explanations for a variety of behavioral and psychological dispositions. This theory suggests three neural systems are active in processing different types of external stimuli: the behavior inhibition system (BIS), the behavioral activation system (BAS), and the fight/flight/freeze system (FFFS). The degree of sensitivity of each system has been correlated with different types of psychopathology and personality. Little research has been conducted to examine the relationship between the RST and Schizophrenia. Furthermore, mediating factors of this relationship have been suggested (Bijttebier, Beck, Claes, and Vandereycken, 2009). An understanding of this relationship would provide a better understanding of the etiology of schizophrenia, as well as adding to the body of literature attempting to generalize neurological findings in research with rodents to humans. A 285-item questionnaire was administered to individuals with schizophrenia recruited from a local mental health service provider to examine relationship between the RST and schizophrenia, as well as two mediating factors (emotional regulation and traumatic life-events). It is hypothesized that individuals who demonstrate a greater degree of Schizophrenia will display an increased level of activation of the BIS, BAS, and FFFS. Furthermore, it is hypothesized that greater levels of emotional regulation will be correlated with decreased expression of Schizophrenia for all constellations of BIS/BAS/FFFS, and greater levels of traumatic life events will be correlated with increased expression of Schizophrenia for all constellations of BIS/BAS/FFFS. Data are currently being analyzed.

**Presentation Type and Session**: Poster IV

## The Relationship of Diffuse-Avoidant Identity Style and Stress To Binge Eating Among College Students

**Amy Crowley**, Psychology
Faculty Mentor: Professor Michael MacLean, Psychology

A person's identity style refers to how her or she tends to deal with issues related to identity or sense of self. Individuals with a diffuse-avoidant identity style tend to avoid and delay addressing identity conflicts as long as possible, and their decision-making is often emotion-based and impulsive. Previous research has found a relationship between identity confusion and binge eating as a way to cope. In the present study, we predicted there would be an interaction between diffuse-avoidant identity style and academic stress level when predicting binge eating. That is, we expect those with this identity style are especially likely to binge eat if they experience high levels of stress. Data are being collected from Buffalo State College undergraduates using a self-report questionnaire in exchange for extra credit. The results of our analyses as well as their implications will be presented.

**Presentation Type and Session**: Poster II

## Renaissance Faires: Gender and Power Relations At the Medieval Festival

**Chantale Onesi-Gonzalez**, Sociology
Faculty Mentor: Professor Staci Newmahr, Sociology

Renaissance Faires attract myriad individuals, ranging from those in full garb (historical dress) to families in modern day street clothes. The most committed Faire-goers perform role-playing activities by attempting to maintain a Faire persona that is historically accurate to the timeframe of each Faire. Faire workers interact with attendees through performance on stage, passing conversation, and the selling of products. In order to better understand the Faire-goers experience and analyze several questions about Faire, I undertook a participant observation study over the course of the summer of 2010. During the study I immersed myself fully into the Faire-goers experience by dressing in garb and

maintaining a Faire persona. I observed Faire workers using jokes and limericks, often of a hyper-masculine nature, to draw attention to the products (tangible or ethereal) they were selling. Historical conceptions of chivalry and bawdiness, demonstrated through the interplay of attendees and workers, colored the overall experience. The conception of insider and outsider roles at Faire was palpable and although these roles were not necessarily related to any level of commitment to historical accuracy or role-playing, they were noticeably distinct. After completing my visits, I compiled extensive field notes from my observations and jottings from which emerged the concepts of hyper-masculinity, the self as commodity and insider vs. outsider status. In my paper I will explore these concepts as they relate within the setting of Faire, lending new observations to the limited literature dealing with this leisure activity.

**Presentation Type and Session**: Oral – Social Sciences

## The Role of Gestures In Visual-Spatial Working Memory

**Jessie Segal**, PSY 498: Honors Thesis
Faculty Mentor: Professor Stephani Foraker, Psychology

Gestures are an important and common part of communication, occurring when people are in conversation as well as when they are in solitary thought. Past research indicates that gestures appear to work within the structures of working memory, facilitating tasks in the verbal memory sub-structures and hindering visual-spatial tasks. This suggests that gestures rely on the visual-spatial memory cache, competing for resources when tasks being performed are visual-spatial. In addition, the use of gestures could decrease load on verbal working memory and therefore help improve memory for verbal tasks. This experiment was designed to test this by giving participants either verbal stimuli (letters) or visual-spatial stimuli (dots in space) to remember while describing pictures. During some trials of the description task participants were allowed to gesture and during others gestures were restricted. The prediction is that gestures should increase verbal memory recall, but decrease visual-spatial recall. At the time of submission, data is still being collected. Preliminary results at this time are inconclusive.

**Presentation Type and Session**: Oral – Social Sciences

## Sexual Education and Risky Sexual Behavior In College Students

**Kathryn Larson**, Psychology
Faculty Mentor: Professor Jill Norvilitis, Psychology

Research has shown that too much or too little sexual education can negatively influence the promiscuity of adolescents. This study will analyze the impact of sexual education on the behavior of adolescents. Different types of sexual education programs can have different effects on the sexual behavior of an adolescent (Kohler, 2008; Wilson and Wiley, 2009). These types of sexual education programs include: abstinence-only, abstinence-based, and a comprehensive program. The controversy surrounding these methods of sexual education is centered on the belief that teaching students how to use birth-control methods will only encourage adolescents to be sexually active. Arguments have raged over how explicit educational material should be, how much of it there should be, how often it should be given and at what age to initiate instruction (Sherr and Dyer, 2010). However, although considerable research has examined the efficacy of sexual education in high school students, fewer studies have examined the impact of high school sexual education on college student behavior. This study will examine sexual education and sexual behavior through a questionnaire administered to approximately 200 college students. It is anticipated that more sexual education will result in lower pregnancy rates and fewer sexually transmitted diseases and fewer risky sexual behaviors, such as multiple partners. It is also predicted that the comprehensive sexual education program will help reduce the level of promiscuity more than other types of sexual education due to the fact the program presents and teaches all aspects of sexuality. Data collection is ongoing.

**Presentation Type and Session**: Poster III

## Social Movements Against Austerity In Europe

**Clifford Cawthon**, PSC 470: Senior Seminar
Faculty Mentor: Professor Laurie Buonanno, Political Science

This paper examines the relationship between unconventional political behavior and a state's imposition of financial austerity measures. Austerity programs involve deep cuts to social programs, public sector layoffs, and privatization of activities previously managed by the public sector. Unconventional participation is defined as forms of participation that are not channelled through existing institutional structures. Interestingly, citizens in EU member states have responded differently to those austerity plans imposed in the aftermath of the 2008 financial crisis; specifically, Greeks have called and participated in mass strikes, marches, and other unconventional political activity, while the Irish have been less likely to take to the streets. While a number of conventional variables might account for this disparity (such as statism/pluralism continuum and political culture), my research reveals only minor differences between Greece and Ireland on these traditional measures. On the other hand, an increasing number of scholars are exploring the extent to which globalization influences and conditions domestic politics, with some scholars speculating that the less globalized an economy, financial austerity measures will lead to higher unconventional political participation. I will test this notion with the cases of Ireland and Greece. I hypothesize that lower levels of unconventional participation in Ireland can be explained by a more highly globalized economy than found in Greece. My data collection consists of reductions in public expenditures; foreign direct investment; wage policy; public vs. private sector investment;

diversification of the economies; and magnitude of unconventional political participation.

**Presentation Type and Session**: Poster III

## Stimulant Use Among College Students: Its Relationship To Academic- and Work-Related Variables

**Theresa Kruczynski**, Psychology
Faculty Mentor: Professor Michael MacLean, Psychology

Stimulant use, particularly energy drinks and non-prescription ADHD medications, among college students has been receiving increased attention by the media and college administrators. However, there is little research evaluating actual rates of use and negative consequences associated with use. The few studies that looked at motives for stimulant use focused primarily on academic-related motives and none examined employment-related motives. The purpose of this study is to evaluate prevalence rates, motivations, and consequences of stimulant use, along with its relationship to employment and academic related factors. Traditional caffeinated beverages were the most commonly used stimulants. About 42% of coffee drinkers reported tolerance and withdrawal as a consequence of use and 22% of soda drinkers reported impaired control over their use. About 31% of the sample reported consuming energy drinks in the past two months, primarily to cope with demands (71%). About one-third of energy drink users reported tolerance and loss of control over their use. Combining energy drinks with alcohol seems to be driven by recreational motives and results in the most serious consequences, with over half of users reporting social regrets and tolerance/loss of control. It was the traditional caffeinated beverages that were significantly related to work and academic stress. Energy drink consumption was significantly related to work stress and hours worked, but not to any of the academic variables. ADHD medication use, both prescribed and not prescribed, was not significantly related to academic or work variables. The present study provides a step toward a broader picture of stimulant use among college students.

**Presentation Type and Session**: Poster III

## Strange Brew: Coffee, Oil, Diamonds and Women's Rights In Africa

**Raymond Ranaletta**, PSC 470: Senior Seminar
Faculty Mentor: Professor Patrick McGovern, Political Science

Women have made less progress toward gender equality in the Near East and Africa when compared to other world regions. Some have argued that this is often due to Islamic tradition. In his work "Oil, Islam, and Women" Michael Ross (UCLA) refutes this claim and argues that it is a country's reliance upon oil production that is at fault for a nation's gender inequalities. Ross's argument is rooted in the "Dutch Disease" theory that asserts that as the production of oil increases, the level of female participation in the workforce decreases thus minimizing female political power. The research presented here examines the impact of oil production on women's political participation and rights in Sub-Saharan Africa. Four single-commodity African economies are reviewed. Two of these rely on oil production and two do not. This research expects that when oil production is present, gender inequality will be higher than the inequality rates in those single-commodity economies without oil. This argument is supported with global data on oil production, female labor and political patterns, and U.N. survey data on women's rights. This research has clear implications for the study of Africa, the Near East, as well as single-commodity economies.

**Presentation Type and Session**: Poster III

## Student Attitudes On Prescription and Non-prescription Stimulant Use

**Kelly Custode**, Psychology
Faculty Mentor: Professor Jill Norvilitis, Psychology

This study is designed to examine the perceptions that students have in regards to both prescription and non-prescription stimulant use. While there is no research supporting enhanced academic performance by non-ADHD stimulant users, it will be interesting to see whether or not stimulant users believe there is. In addition, studies have shown academic strain to be one cause for illicit stimulant use. With that in mind, it will be interesting to find out if students see the use of these medications as cheating. It is also important to study the perceived risks involved in non-prescription stimulant use. The research has shown that people abuse stimulants for a number of reasons, but there is no mention of whether or not these medications are seen as potentially harmful. All data will be collected through a questionnaire distributed among Buffalo State College students, and the results will be presented at the SRCC.

**Presentation Type and Session**: Poster IV

## Student Perceptions of Safety On Campus

**Kristina Atwell**, **Carla Kuhl**, **John Meyers**, **Kristen Young**, **Sarah Ackerman**, **Lindsay Cosenza**, **Louis Dangelo**, **Lisa Fears**, **Amanda Grenier**, **Vendi Hodge**, **Perry Kent**, **Hannah Klie**, **Lauren Lamb**, **Kevin Meindl**, **Colleen Montreuil**, **Morgan Morningstar**, **Katie Mosier**, **Amanda Reed**, **Angelicia Rouse**, **Leticia Téllez**, **Salome Tsige**, **Shayla Washington**, and **Caley Wekenmann**, Psychology Club
Faculty Mentor: Professor Stephani Foraker, Psychology

The purpose of the study is to investigate student perceptions of their own safety on campus (Buffalo State College). We will examine several factors that may increase or decrease students' feelings of safety, consisting of the campus environment, knowledge of safety resources, personal experiences and perceptions of safety, and demographic variables. Our prediction is that students will report lower perceived risk of personal or property victimization with greater knowledge of and education about safety services, during daytime hours, in the presence of police, and by being in a group or inside a campus building. Overall personal anxiety may also

modulate these correlations, such that knowledge and education may lower perceived risk/lack of safety to a greater extent for high anxiety individuals.

**Presentation Type and Session**: Poster III

## Talk To the Hand: Do Gestures Help Comprehension?

**Sumit Shukla**, Psychology, **Megan Delo**, Psychology, **Jon Summers**, Psychology, and **Katelyn Klipfel**, Psychology
Faculty Mentor: Professor Stephani Foraker, Psychology

The goal of the study is to see if certain kinds of hand gestures will help understanding of "who" did something in an event. For example, here's one scenario: "Amanda and Julie both have birthdays in August. I bought Amanda a necklace, and for Julie I bought a new cell phone. I don't think she liked the gift very much." Last semester our testing confirmed that in the last sentence of the scenario, readers interpret "she" as ambiguous between Amanda and Julie, that either one could be "she." Participants will be shown a series of video clips of four different conditions that manipulate the gestures people see along with the spoken scenario. In the first part of the scenario, the actor will make gestures (using the previous example) where "Amanda" will be to his right and "Julie" will be to his left. For the last sentence, which is ambiguous in speech, the first condition will show a gesture made while saying "she" that matches Amanda's previous location, and the second condition will match Julie's location. The third and fourth conditions will be two different control conditions where participants should be at 50/50 for interpreting "she"; they should choose Amanda as often as Julie. One will have no gestures at all, and the other will have gestures that have no information about location. We predict the gesture in Amanda's location will increase the likelihood that participants will say that "she" means "Amanda" (more than baseline) and the same idea for a gesture in Julie's location. Data collection is beginning and we will present our results to date.

**Presentation Type and Session**: Poster III

## The Thunderous Silence: Gay Marriage, Proposition 8, and African American Churches

**Henry Zomerfeld**, PSC 470W: Senior Seminar
Faculty Mentors: Professor Patrick McGovern, Political Science and Professor Kyeonghi Baek, Political Science

Same-sex marriage has been a controversial political issue in the United States. This has recently been highlighted in California, where the State Supreme Court struck down a law defining marriage between a man and woman only. The state court's ruling was followed in 2008 by Proposition 8, a ballot measure that sought to define marriage as strictly a heterosexual union. Several major religious organizations worked diligently to see that Proposition 8 passed. However, African American churches on the whole were not visible during the Prop 8 campaign. The research presented here examines the silence of African American churches on this issue. It is generally the case that when surveyed, African American voters identifying themselves as Christian are overwhelmingly opposed to gay marriage. Why then were the churches a missing factor in this election? We posit that African American churches either had their attention on other issues important to their communities, or because of the possible civil rights implications, church leaders were inclined not to enter into this highly contentious debate. This argument has important implications for African American studies, gay rights, and voter behavior.

**Presentation Type and Session**: Poster III

## Using the First Rib To Determine Age-at-Death In Humans

**Bryan Fleck**, Anthropology
Faculty Mentor: Professor Julie Wieczkowski, Anthropology

The identification of human remains is one of the most important responsibilities of the forensic anthropologist. My research project tests a newly proposed first rib aging methodology constructed by Charles A. Kunos, Scott W. Simpson, Katherine F. Russell, and Israel Hershkovitz in 1999. The first rib experiences a statistically predictable metamorphosis as the human body ages. The sternal rib end, the head, and the tubercle can be used in conjunction with three decision tables crafted by Kunos et al. (1999) to establish an age range for the human remains. For my research I will use this method to determine age-at-death for thirteen skeletons from the Buffalo State College skeletal collection. Once I have established a probable age range for each of the skeletons I will temporarily seal my notes and begin the process again using more accepted methodologies. These will include an analysis of the pubic symphyses, an analysis of the sternal rib ends, and an analysis of the auricular surface of the os coxae. A comparison of these results will determine whether the rib aging method developed by Kunos et al. (1999) is comparable to established methodologies.

**Presentation Type and Session**: Oral – Social Sciences

## When Speech Goes Wrong

**Zuri Appleby**, **Shere'e Bates**, **Nicole Bonsell**, **Ariel Briguglio**, **Darren Lisicki**, **Kevin Meindl, Laken Pogorzelski**, **Tiffany Ransom**, and **Brian Woods**, PSY 430: Psycholinguistics
Faculty Mentor: Professor Stephani Foraker, Psychology

In an observational study based on one of our class lab assignments, we investigated different kinds of speech errors and how often they occur. Speech errors are interesting because they can reveal how the process of language production occurs in the mind and what its steps are. Speech errors come in many types, such as substitution, addition, deletion, exchange, perseveration, anticipation, and blend. An example of a classic speech error is a "spoonerism"

like "the queer old dean" instead of "the dear old queen," where the beginning phoneme speech sounds are exchanged between the words "dear" and "queen." Speech errors can affect the phoneme, morpheme, or syntax level of linguistic units. We hypothesized that the most common type of speech error would be exchange errors, and that they would happen on the phoneme level. We analyzed 166 speech errors collected from naturalistic observations of people in conversation. Two people coded each speech error for its type and linguistic unit affected and then we calculated proportions from our database. We found that the most common type of error was actually substitutions, although the most common unit affected was the phoneme level like we predicted.

**Presentation Type and Session**: Poster IV

## Working During College, Stress Levels and Academic Achievement

**Theresa Kruczynski**, Psychology
Faculty Mentor: Professor Michael MacLean, Psychology

Despite over fifty percent of college students in the U.S. working jobs during the academic year, very little research has been done on how working affects stress levels and academic achievement. Research on high school students suggests that working long hours can decrease academic commitment and hurt students' grades. In addition to testing whether these findings extend to college students, the present study examined how work factors, such as number of hours worked, amount of control over work schedule, and demandingness of work tasks, predict perceived work-school conflict, academic stress, and academic achievement (GPA). The large of majority of students, 70% of the sample, reported working, which is larger than the estimated national average. Number of hours worked, job demandingness, and number of classes taken were all risk factors for work-school conflict, while having greater control over your work schedule was a protective factor. Work-school conflict, in turn, was a major predictor of how much academic stress students reported. Our findings suggest that work-school conflict is an important variable to consider when looking at academic stress. In the present study the work variables did not significantly predict lower levels of academic commitment or lower grades. This suggests that findings in this area on high school students may not generalize to college students.

**Presentation Type and Session**: Poster II

***Notes:***