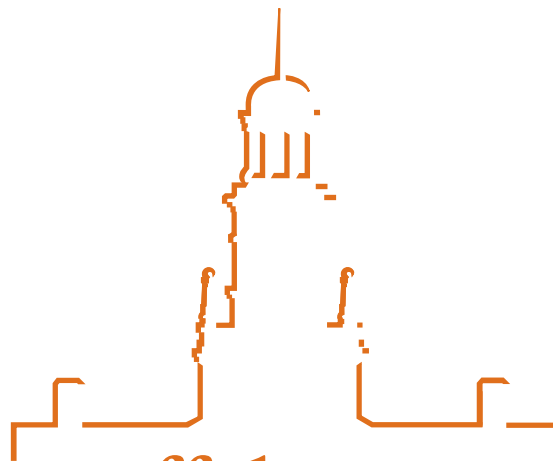


Twelfth  
Annual

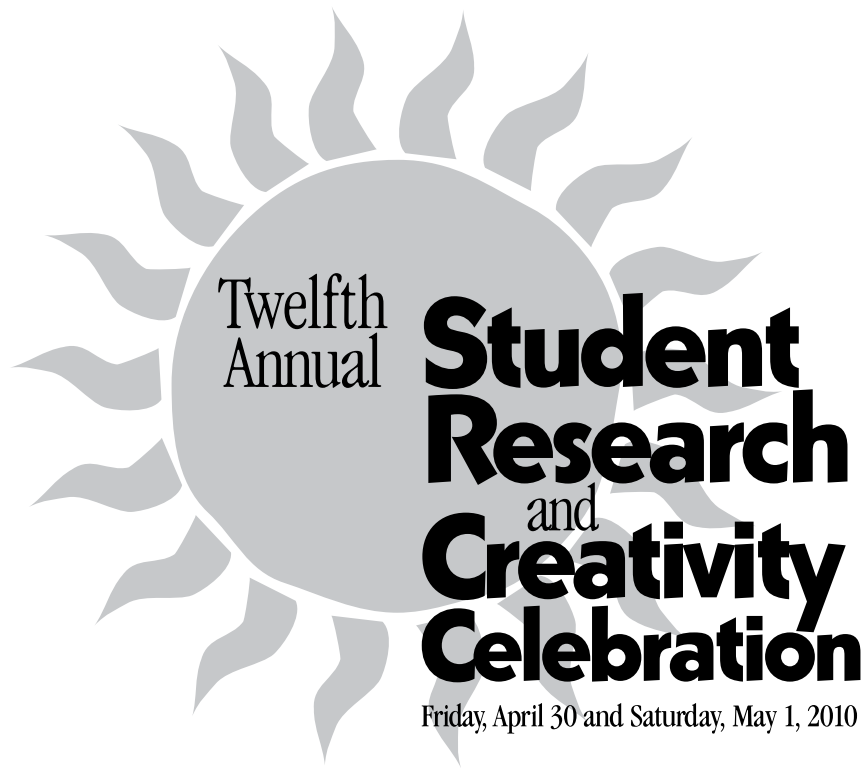
Program  
& Abstracts

**Student  
Research  
and  
Creativity  
Celebration**

Friday, April 30 and Saturday, May 1, 2010



**Buffalo State**  
*State University of New York*



# Program & Abstracts

## **Editor**

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

## **Sponsored by**

Office of Undergraduate Research  
Office of Academic Affairs  
The Research Foundation of SUNY College at Buffalo

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

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Robert Wood, Design

Mary Wyrick, Art Education

Jeffrey Zacko-Smith, Center for Studies in Creativity

# Table of Contents

<b>Welcome Statements</b>	<b>1</b>
---------------------------	----------

## **Program at-a-Glance**

Thursday, April 29	5
Friday, April 30	5
Saturday, May 1	5

## **Program**

### **Oral Papers**

Humanities	6
Technology	6
Fashion & Textile Technology	7
Sciences and Mathematics	7
Humanities and Social Sciences	7
Education and Health	8

### **Poster Sessions**

Session I	8
Session II	9
Session III	10
Session IV	10
Session V	11
Session VI	12
Session VII	13
Session VIII	14

<b>Recipients of Undergraduate Summer Fellowships in 2009</b>	<b>15</b>
---	-----------

## **Abstracts**

Arts	23
Business, Fashion & Textile Technology, and Hospitality and Tourism	30
Computer Information Systems and Technology	37
Education	45
Health, Social Work, and Speech-Language Pathology	54
Humanities	59
Physical Geography, Sciences, and Mathematics	64
Social Sciences	80

Since its inception twelve years ago, the Student Research and Creativity Celebration has become one of the landmark events on the Buffalo State College calendar. As a showcase for the wonderfully varied intellectual pursuits of our undergraduate and graduate students, it is always a stunning demonstration of the curiosity, creativity, and sheer brainpower of Buffalo State's students.

By integrating research into its undergraduate as well as its graduate programs, Buffalo State gives all its students opportunities for meaningful inquiry and discovery, exploration and enrichment. Hands-on research experiences strengthen students' understanding of their fields and open their eyes to the many professional possibilities that can grow out of their academic work. Research projects also allow students to work in closer collaboration with Buffalo State's exceptional faculty and staff.



The student participants in this year's Student Research and Creativity Celebration are to be commended for their terrific work. I am grateful to the faculty who have mentored these students, the staff who have made this event possible, and all the members of the Buffalo State community who have turned out to celebrate student research on our campus.

Congratulations to all.

A handwritten signature in black ink, reading "Dennis K. Ponton". The signature is fluid and cursive.

Dennis K. Ponton, Ph.D.

*Interim President*

Only a small number of activities represent the heart and soul of a campus. The Student Research and Creativity Celebration, in its twelfth year, is one of those activities here at Buffalo State. Now an annual tradition, this event occurs due to the outstanding leadership of our director of undergraduate research and the ongoing commitment to excellence epitomized by the partnerships between our faculty members and our students.

The celebration originated, under the guidance of Dr. Jill Singer, as part of Buffalo State's emphasis on undergraduate research. The importance of undergraduate research became evident in the college's 2003-2008 Strategic Plan that called for the college to "expand student creativity and research initiatives." This was accomplished with creation of the Office of Undergraduate Research in 2003, appointment of a director, dedication of resources to support summer fellowships, student travel, small grants programs, and the continuation of the annual Student Research and Creativity Celebration. As revealed by the growth in participation and attendance at the annual event, the college commitment to these enterprises remains as strong as ever.



The celebration is a time for the campus community to celebrate faculty mentorship and to recognize student achievement as it manifests in a wide variety of research, artistic, and creative efforts. We are reminded during the two days of the celebration of the extent to which Buffalo State students participate in inquiry-based learning, and we applaud the ways in which these students articulate their research findings and creative imagination to the wider community. Student participants and faculty and staff mentors are to be congratulated for embracing the Buffalo State's commitment to "the rigors, joys and fulfillment of intellectual discovery"—one of our core values. Many from our campus community are involved in the celebration. Thanks to all for their contributions.

Congratulations to all participants as we celebrate this wonderful example of excellence within the Buffalo State community.

A handwritten signature in black ink, reading "Kevin Railey". The signature is cursive and somewhat stylized.

Kevin Railey, Ph.D.

*Interim Provost*

Welcome to the 12<sup>th</sup> annual Student Research and Creativity Celebration! This event spans all areas of the Buffalo State community and the student presenters represent all four of the Schools (Arts & Humanities, Education, Natural & Social Sciences, and Professions). The wide range of research and creative endeavors undertaken by Buffalo State students are reflected in the more than 275 posters, papers, visual and performing arts presentations, displays, and demonstrations. 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 creative 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.

Campuses across the country place a high value on engaging students in quality learning experiences and students at Buffalo State are afforded many opportunities to engage in research, scholarly, and creative activities. Support and encouragement for student involvement in research, scholarship and creative activities is singled out in Buffalo State's 2009-13 Strategic Plan. Even in the midst of challenging fiscal times, the College remains steadfast in its commitment to support research, scholarly and creative activities for students in all academic disciplines.



This weekend we celebrate our students' discoveries as they have explored their discipline in search of answers to open-ended questions and applied novel ways to create works of art. 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, every student presenter has benefitted from the commitment of a dedicated mentor (or mentors) that provided the right mix of encouragement, feedback, and guidance throughout each step of the research, scholarly, and creative process.

I hope you enjoy listening to and meeting the student presenters. I am certain you will be impressed by the diversity and quality of their presentations. Thank you for attending this event and supporting our student presenters and their faculty mentors.

Enjoy the program!

A handwritten signature in cursive script that reads "Jill Singer".

Jill K. Singer, Ph.D.

*Professor of Earth Sciences*

*Director, Office of Undergraduate Research*

*Welcome to the 12<sup>th</sup> Annual Student Research and Creativity Celebration, which shares the exceptional scholarly and creative accomplishments of our talented students. The faculty of the School of Arts and Humanities, national and international leaders in a myriad of forms of creative expression, mentor and inspire students to explore the diversity of scholarly pursuits available in the arts and humanities. We are honored to showcase the achievements of our students through this Buffalo State hallmark event. On behalf of the School of Arts and Humanities, I am delighted to congratulate all participants.*

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



*Congratulations to all students and faculty involved in the 12<sup>th</sup> Annual Undergraduate Research and Creativity Celebration. Today shows Buffalo State living the highest of its ideals. Intellectual discovery and creative expression are at the heart of an excellent liberal arts education. To see our students making original contributions to the body of knowledge or the body of art is a source of great pride for Buffalo State. It shows our faculty and students as a vibrant community of learners. Thank you for the good work that brings us together for this celebration.*

Scott L. Johnson, Ph.D., Dean, University College

*Congratulations to all the student presenters participating in the 12<sup>th</sup> annual Student Research and Creativity Celebration. We applaud you on achieving this significant academic accomplishment. Thanks also to the faculty mentors that encouraged and supported student efforts. This event is so important because it embodies the essence of our institutional mission and core values.*

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



*The traditions surrounding university-based research—presentation before peers, respectful attribution for prior work, blind peer review, among others—are centuries old. It is gratifying to see so many Buffalo State students going the extra mile in their studies and claiming their own space within the academy.*

Paul G. Theobald, Ph.D., Interim Dean, Graduate School

*Congratulations, student researchers, for your amazing academic exploration and scholarship. Today we celebrate your persistence, vision, and brilliance! Each of you serves as an example of excellence for your peers. It is an honor to participate in this event acknowledging your distinguished contributions.*

Ronald S. Rochon, Ph.D., Dean, School of Education



*I am very pleased to welcome and congratulate the students and their faculty mentors contributing to the 12<sup>th</sup> annual Student Research and Creativity Celebration. The participation by undergraduate and graduate students in research is one of the highest priorities in the School of Natural and Social Sciences, because it is an extremely valuable and rewarding educational experience for students and faculty alike. This showcase of the outstanding research and creative work of Buffalo State students is very impressive in its size and variety, and proves the importance of this work to the College.*

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

*Congratulations to the undergraduate and graduate students whose extraordinary achievements are evidenced at this celebration. The Research Foundation is a proud supporter of the Student Research and Creativity Celebration that continues to highlight the diverse talents and intellectual accomplishments of the students at Buffalo State. What began twelve years ago as an idea has developed expansively to promote students' enthusiasm for research, cultivate curiosity and encourage active participation in creative research. Thank you to the faculty mentors who have so generously shared their time and provided inspiration to their students.*

Edgar (Ted) Turkle, M.A., Operations Manager, The Research Foundation of SUNY, Buffalo State





**Thursday, April 29, 2010**

**The Czurlis-Nelson Gallery**

**Upton Hall**

9:00 a.m. – 4:30 p.m.

**Fine Arts Student Show**

Note: Gallery Hours Same for Friday, April 30<sup>th</sup>

**Performing Arts Center at**

**Rockwell Hall**

7:30 p.m.

**Jazz Ensemble Concert**

Ryan Awayda, Melissa Bender, Vincent Brown, Russell Carere, Joseph Cheslak, David Cox Jr., Joshua Ekiert, Peter Evans, Matthew Harris, Alexander Hury, Teresa Leone, Paul Loweecey, Seamus McDonell, Joshua Pacino, Matt Rutschmann, John Ryndak, Matthew Seeman, Melinda Smith, Kimberly Spagnola, Peter Vogel, Joshua Wagner, Robert Webster, and Richard Yager

Faculty Mentor: Professor Rick Fleming, Music

**Friday, April 30, 2010**

**Dance Studio, Rockwell Hall B22**

2:00 p.m. – 4:30 p.m.

2:00 p.m. – 3:00 p.m.

**“Classical and Contemporary Jazz”**

Eriketa Cirulli

Faculty Mentor: Professor Janet Reed, Theater

3:15 p.m. – 3:45 p.m.

**“Pho Malpica: Shark Finned Coup”**

Angela Lopez

Faculty Mentor: Professor Janet Reed, Theater

4:00 p.m. – 4:30 p.m.

**“Dance and Anatomy”**

Chelsea Prophet

Faculty Mentors: Professors Joy Guardino and Carlos Jones, Theater

**E.H. Butler Library**

5:00 p.m. – 6:30 p.m.

**President’s and Provost’s Opening Reception**

Rachael Waite and James Bosco, Student Coordinators, HTR 400: Catering Management

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

**Preview of Posters and Artwork**

**Flexible Theater, Donald Savage Building**

6:30 p.m. – 9:30 p.m.

6:30 p.m. – 7:30 p.m.

**“From the Farm To the Stage”**

Candace Morrison

Faculty Mentor: Cristina Pippa, Theater

8:00 p.m. – 9:30 p.m.

**Short Plays By Christopher Durang**

Erin Clarke, Laura Mooney, Mike Delaney, London Lee, Lee Becker, and Maggie Wirth

Faculty Mentor: Professor Joe Price, Theater

**Warren Enters Theater, Upton Hall**

8:00 p.m.

**Spring Dance Concert: “The Myth of Miles”**

A faculty choreographed dance concert featuring:

**Dancers:** Lindsey Bessman, Anna Bundschuh, Eriketa Cirulli, Emily Frack, Jessica Hall, James Huggins, Lauren Kirchmyer, Jarron Mortimer, Samantha Overend, Joelle Palermo, Adalisse Perdomo, Danica Riddick, Syidah Sabir, Lewis Sepulveda, Katelin Shaffer, Derick Sherrier, James Steiner, Jacqueline Thomas, Kelley Thompson, Lancia Woods, Krystal Wurster, and Michael Zito

**Student Designers:** Ashley Bobbett, Fred Pascolini, Benjamin Streeter, Tamara Strowger, and Leigha Weeks

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

(Performances: 8:00 p.m. April 28 - May 1 and 2 p.m. May 1)

**Saturday, May 1, 2010**

**E.H. Butler Library**

8:15 a.m. – 5:00 p.m.

**Registration**

**Concurrent Sessions**

**Oral Papers**, Rooms 133B, 210, and 210B

Humanities – Room 210B

8:20 a.m. – 12:50 p.m.

Technology – Room 210

8:30 a.m. – 12:00 noon

Fashion & Textile Technology – Room 133B

9:30 a.m. – 11:15 a.m.

Sciences and Mathematics – Room 210

12:15 p.m. – 2:15 p.m.

Humanities and Social Sciences – Room 210B

1:00 p.m. – 5:00 p.m.

Education and Health – Room 210

2:30 p.m. – 4:45 p.m.

**Posters and Displays** – Library Atrium and Mezzanine

8:30 – 4:30

Sessions I to VIII, each session one hour in length

**Student Union Quad**

11:00 a.m. – 1:00 p.m.

**Demonstrations and Displays**

**Ceramics Throwing**

Stephanie Dukat, Seth Rowitsch, and Angela McCormack

Faculty Mentor: Professor Robert Wood, Design

**Mini Baja Vehicle: 2010’s Model**

Anthony Dimascio, Anthony Ubal, and Kristofer Wiktorowski

Faculty Mentor: Professor David Kukulka,

Mechanical Engineering Technology

**Solar Tracking Foundation**

Vanessa Rodriguez, Kristopher Schleiermacher,

Erik Walter, and Mike Brennan

Faculty Mentor: Professor D. Steven Barker, Electrical

Engineering Technology

**The Answer Is Blowin’ In the Wind**

Luke Gill, Steve Clement, and Joe Bella

Faculty Mentors: Professors Barry Yavener,

Interior Design and Andrea Guiati, Director, All College Honors Program

**Program at-a-Glance**



**Saturday, May 1, 2010**

**E.H. Butler Library**

**Oral Papers**

**Rooms 133B, 210, and 210B**

**Humanities**

**Room 210B**

**8:20 a.m. – 12:50 p.m.**

*Presenting:*

**8:20 a.m. – 9:20 a.m. (each paper 20 minutes)**

What's Love Got To Do With It? Analysis of College Relationships  
Jenelle Jones

The Language of Oppression  
Angela Lambrix

Twentieth Century Transcendentalists: Kerouac and McCandless  
Tyler Johnson

**9:20 a.m. – 10:20 a.m. (each paper 20 minutes)**

Horace Benbow and an Outdated Sense of Morality In Faulkner's  
"Sanctuary"  
Jeremy Williams

Forgery of Oscar Wilde's Letters: Reprehensible Deception Or  
Criminal Aestheticism?  
Kelsey Till

Coverdale Uncovered: "De-veiling" the Mystery of the Blithedale  
Romance  
Philip Bowman

**10:20 a.m. – 10:30 a.m. - Break**

**10:30 a.m. – 11:30 a.m. (each paper 20 minutes)**

Unveiling Coverdale's True Intentions In the Blithedale Romance  
Carly Wacker

Making a Case: Philosophical Discourse In Applied Ethics  
Michael Cardus, Marguerite Golia, Matthew Guminiak,  
Ryan Harvey, and Alicia Whittman

It's Not a Small World After All  
James Richards

**11:30 a.m. – 12:50 p.m. (each paper 20 minutes)**

If You Can't Speak the Language... The Location of Identity In  
Native Speaker  
Tom Poehnelt

Columbus and Me: Exploring a Persistent Myth  
Josh Sherman

Death In the Alps: A History of the Italian Theater In World War I  
Thomas Golombek

American Xenophobia: An Immigrant's Experience  
Carlos Cisneros Vilchis

**Technology**

**Room 210**

**8:30 a.m. – 12:00 noon**

*Presenting:*

**8:30 a.m. – 9:30 a.m. (each talk 15 minutes)**

The Growing Problem of Digital Piracy On the Internet  
Luke Dookhan

Five Ways To Improve Electrical Efficiencies In Manufacturing  
Facilities: A Case Study Approach  
Nick Gilewski

Developing In-house Capabilities For the Testing of Food-Safe  
Plastics: A Cost Comparison Analysis  
Shaun Carl

Assessing Customer Service Effectiveness At Ingram Micro –  
Buffalo  
Katie Gregory

**9:30 a.m. – 10:30 a.m. (each talk 15 minutes)**

A Comparison of Career and Technical Education Student  
Competencies To Employer Expectations  
Jonathan Dewart

How Can We Encourage Students To Enroll In Tech Education  
Classes In Grades 9 - 12?  
Robert Uldrich

Mainstreaming In the Technology Education Classroom  
Evan TeCulver

Technology Education: Including Students With Special Needs In  
the Laboratory  
George Amann

**10:30 a.m. – 10:45 a.m. - Break**

**10:45 a.m. – 12:00 noon (each talk 15 minutes)**

Assessment of Lesson Plans For the NYSTEA Lesson Plan  
Database  
Bahadir Baykal

Development of a Curriculum For a Middle School Technology  
Education Course In Biotechnology  
Edward Williams

Effectiveness of a Technology Education/Engineering Program At  
the Elementary Level  
Aaron Mednick

Follow Up Study Assessing the Impact of 'Engineers of the Future'  
Summer Program 2007 On Participating School Districts  
Shawn Sweet

How Can Total Quality Management Be Integrated Into Customer  
Service Efforts Within the Graduate School At Buffalo State  
College?

Esteban Brown



## Fashion & Textile Technology

### Room 133B

9:30 a.m. – 11:15 a.m.

*Presenting:*

9:30 a.m. – 10:30 a.m. (*each talk 15 minutes*)

Corporations Take a Hardline Approach To Social Responsibility and Improve Their Bottom Line

Kristin Antis

The Dark Side: Counterfeiting and the Consumer

Jenelle Jones and Kadeem Johnson

The Innovation of Technology

Mariah Lester

Social Status: Are They Defined By Fashion?

Jenelle Jones, Michael Frazer, Victoria King, Allyson Mack, and Sarafina Hooper

10:30 a.m. – 11:15 a.m. (*each talk 15 minutes*)

Current Problems In Apparel Logistics and the Solution

Jenny Kim and Kelley Thompson

Negative Effects of Advertising In the Textile Industry

Meghan Gleason and Ashley Toth

Green Fashion Trend: Zero Waste Garments

Tara O'Reilly and Stephanie Ortolani

## Sciences and Mathematics

### Room 210

12:15 p.m. – 2:15 p.m.

*Presenting:*

12:15 p.m. – 1:15 p.m. (*each talk 15 minutes*)

Development of Polymorphic Microsatellite DNA Markers For Genetic Diversity Estimation In Hellbender Salamanders (*Cryptobranchus alleganiensis*)

Andrea Cifonelli

Is Being Plasmid-less More Advantageous For *Escherichia coli* In Surviving Stressful Environments?

Shannon Nangano

Levels of Chlorine Residuals In Determinating Tetracycline Resistance of *Aeromonas caviae* Isolated From Wastewater

Lynn Hesse

When Is a One-To-One Function Equivalent To Being Strictly Monotone?

Steven Leuthe

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

A Theorem of Linear Algebra On Similar Matrices

Andrew Havey

A Deeper Look Into Real Analysis Concepts

Donald Turner III

Spatial Analysis On Relationships Among Air Particle Pollution, Residential Income, and Environmental Perceptions

Lei Cai

The Application of Case Studies In the Teaching of General Chemistry Laboratory Courses

Brittany Peoples

## Humanities and Social Sciences

### Room 210B

1:00 p.m. – 5:00 p.m.

*Presenting:*

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

Discovering China 2009-2010

Joel Mensah, Esther Ariyibi, Sandra M. Parker, and Hugh Burnam

African American Christians: Not At the Frontline For the Same-Sex Marriage Battle?

Henry Zomerfeld

Perceived Homophobia On Campus: The Impact of Attitudes Toward Violence, Discrimination, Community Engagement, and Demographic Characteristics

Chantale Onesi-Gonzalez

Rediscovering "Entry Level Status"

Candace Morrison

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

The European Union Charter of Fundamental Rights: A Question of Distinction?

Yolanda Rondon

The Death Penalty As Applied To Corporate Crime

Morris Suttles

Individuating Information and Its Effect On Stereotype Activation and Use When Meeting New People

Rhudwan Nihlawi

Of Mice and Men: The Evolutionary Progression of Humans As Illustrated By Mickey Mouse

Dianne Maerz

3:00 p.m. – 3:15 p.m. - Break

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

How To Plan a Backpacking Trip of Your Own

Cassandra Andrusz

Dancers and Spirituality

Marissa Gibbons

Oh God, Where Are You Now? Chicago? Iowa City? Memphis? Buffalo?

Kevin Kaminski

The Development of the Relationship Between the United States and the 14th Dalai Lama

Chen Li and Oscar O'Neill

# Program



4:15 p.m. – 5:00 p.m. (*each talk 15 minutes*)  
The Importance of Historical Restoration and Preservation  
Amanda Arki

Influenced? Effects of the Media On Youth  
Melissa Kania

From Humble Origins  
Nicholas Weigand

## Education and Health Room 210

2:30 p.m. – 4:45 p.m.

*Presenting:*

2:30 p.m. – 3:30 p.m. (*each talk 15 minutes*)  
Energy Drink Safety: Get the Facts  
Christine DeVoe

Evaluative Research of Youth Placed In Residential Care  
2008-2009  
Shaquita Shepard

Kendra's Law: The Controversy Surrounding Court-Mandated  
Treatment  
Alyssa McCutcheon

You Can Learn No Matter Where You Come From  
Nicole Irizarry, Alexandra Drozd, Melissa Cotton, Jillian  
Honan, and Kahla Ciepiela

3:30 p.m. – 4:45 p.m. (*each talk 15 minutes*)  
Engaging Students Through Technology: A Detailed PowerPoint  
Depicting the Events That Transpired During the Student  
Movement of the 1960s and 1970s  
Kimberly Moore and Jellema Stewart

Cognitive Comics: A Constructivist Approach To Sequential Art  
Donald Jackson

Let's Get Back To the Seven Generations Philosophy  
Sonia Penaranda

Teaching Climate Change To a "Not-So-Green" Generation:  
Climate Literacy In the High School Classroom  
Shannon Foster

Historical Western New York  
David Benko and Marissa Fabrizi

## Poster Sessions and Displays

**Butler Library Lobby**

8:30 a.m. – 4:30 p.m.

**Session I: 8:30 a.m. – 9:30 a.m.**

*Presenting:*

The Brain Is a Terrible Thing To Waste: Alzheimer's Disease  
Caitlin Burke

Brand Loyalty of Female Students When Purchasing Jeans  
Stacy Helinger, Nicole Williams, Rina Nowell, and  
Laura Gorgen

Communication Disorders: Stuttering  
Christina Jasek

Comparing and Contrasting Women's Formal Wear In the 1920's  
To 1960's, and Their Influences on 20th Century Formal Wear  
Kelly DiNicolantonio, Elece Gardner, and Melissa Mclasky

Conscientiousness and Its Connection To Drinking-Related  
Consequences In College Students  
Samantha Belanger, Nicole Danzi, William Webber,  
Amy Crowley, and Sierra Johnston

Cosmetics In the Life of Twentieth Century Women  
Megan Aiello, Asia Davis, and Stephanie Ortolani

Does Your Finger Length Predict Your Longevity?  
Vincenzo Piraino

Drawing's Effect On Semantics and Spoken Language For People  
With Severe Aphasia  
Nicollette Brown

Eating Healthy Without Putting Your Wallet On a Diet!  
Betty Douglass

Evaluation of the Px2010 Initiative "Underage Drinking: It's  
Everybody's Problem!"  
Leah Feroletto

Freshmen: The Good, the Bad and the Influenced  
Allison Convissar

Gift Giving Among College Students  
Rasheeda Phillips, Lindsey Mease, Fatimah Muhammad,  
Stephanie Minchin, and Sara Orsolits

Health Care Reforms  
Mike Pizetoski

Hear Between the Signs: Social Acceptance of the Cochlear  
Implant  
Jonathan Nadeau

Impulsive Buying Habits In Consumers' Apparel Purchases  
Ashley Diamond, Ashley Stablewski, Corinne Carroll,  
Christina Ambrosio, and Calli Thompson

Impulsivity, Sensation Seeking and Cognitive Irrationalities Among  
College Student Gamblers  
Brittany Smetanka

Internet Shopping Behavior In Women's Apparel  
Rachel Masters, Mellissa Callahan, and Mariah Lester

Love: What Is It To You?  
Elizabeth Delano

Making Connections: Indigenous Peoples, the Earth, and Holistic  
Resource Management  
Christine Krolewicz

The Many Faces of Asthma  
Sagr Ahmed





Money Well Spent? Are U.S. Subsidies For Apparel/Textile Companies Really Worth the Money?

**Alisha Shantz and Anthony Scaparo**

MyPyramid For Kids

**Megan Braun and Chelsey Becker**

Set Design

**Alanna Stecura, Tamara Strowger, Mouminatou Diallo, and Victoria Palmiotto**

Sexuality and Race: Prejudice In Fashion

**Jaida Van Putten and CaSandra Reid**

Weight Loss Without Leaving Your Home?

**Michael Rinde**

Working During College: Its Effects On Stress Level, Academic Achievement and Stimulant Use

**Theresa Kruczynski**

You Are the Eyes of the World: Biophilia - Feel It Change Your Life

**Chelsea Coyne**

## **Session II: 9:30 a.m. – 10:30 a.m.**

*Presenting:*

Analysis of a Watershed: Cayuga Creek, Niagara County, New York

**Marilyn Kush**

Assessing Ichthyoplankton Drift Densities of Round Gobies (*Neogobius melanostomus*) In a Great Lakes Tributary

**Shana Chapman**

Assessing Potential Threats: Parasitological Surveys of Great Lakes and Finger Lakes Non-Native Species

**Marissa Hajduk**

Bioinformatic Analysis of Common Loon, *Gavia immer*, Genetic Sequence

**Michael Ando**

Brownfield To Valuable Asset: A Waterfront Development Plan For Cherry Farm Site, Tonawanda, New York

**Benjamin Bissell, Scott Petrus, and Marilyn Kush**

Buffering Capacity of Freshwater Wetlands Bordering Lake Ontario

**Monique Wilson**

Effects of Changing Calcium Levels In the Canadian Shield Lakes On Zooplankton and Their Ecosystems

**Jennifer Kishbaugh**

Effects of Different Diets and Ration On Energy Content and Condition Indices In Laboratory-Reared Alewives

**Todd Duval**

The Effects of N and P On Photosynthetic Light Response In a Restored Grassland On the Lake Erie Shore

**Kristall Waldron**

Emerging Educators Expanding Their Expertise: The Buffalo State College Chapter of the Association of Childhood Education International

**Liza Acanfora, John McGowan, Krystal Bellanti, and Anna DeBalski**

Expression of Stress Resistance Genes Thought To Be Involved In Huntington Disease In *Drosophila* Stressed By Deletion of Stress Resistance Genes Or Heat Shocks

**Sandra Seep, Nicaury Baez, and Lesly Retamozo**

Fashion and Textile Industry and the Environment

**Angela DiFrancesco**

The First Transmembrane Domain of a *Drosophila* Innexin Is Loosely Packed

**Adam DePriest**

Geographical Spatial Analysis of Northern Diamondback Terrapin (*Malaclemys terrapin*) Movements In Response To Boat Traffic and Being Displaced In Barnegat Bay, NJ

**Andrew Harrison and Nicole Wood**

GIS Spatial Analysis of Motor Vehicle Accidents: A Case Study For the Town of Cheektowaga, Erie County, New York

**Joseph Skowronski**

Green Living: Lessons From a Tree House

**Kyla Christie**

Indoor Air Quality: Can Plants Help?

**Tameka Dampier**

New Internet Technologies Used To Promote Retail Stores

**Stephanie Minchin**

Seasonally Dynamic Patterns of Resource Limitation In a Restored Temperate Grassland

**Lynn Socha**

Set Design

**Alanna Stecura, Tamara Strowger, Mouminatou Diallo, and Victoria Palmiotto**

Smart Design Using Low Impact Development In South Buffalo, New York

**William Dobson and Justine David**

Tryptophan Scanning Study of the Second Transmembrane Domain of Cx32

**Matthew Brennan**

Virtual and Real-World Fashion Collections

**Brittany Chonka and Melissa Marchand**

Water Cycle Misconceptions

**Amanda Cavarella**

What's the Skinny?

**Sara Tremaine and Emily Tolnay**

When Cheap Labor Costs Too Much

**Kelly Orme**



### **Session III: 10:30 a.m. – 11:30 a.m.**

#### *Presenting:*

Childhood Experiences and Social Adjustment of College Students  
**Kelly Reuter**

Cultural Anthropology, Meet Filigree  
**Vincent Pontillo**

Fly Me To the Moon: 2nd Graders Blast Off For an Out of This World Experience  
**Kristina Zaleski**

Get Ready To Soar Out of This World: Solar System Webquest  
**Jason LeGrett**

The House of Blue Leaves: Theater Design and Technology  
**Lee Becker, London Lee, Amanda Michael, Christopher Stowell, Benjamin Streeter, Jennifer Williams, and Margaret Wirth**

Influence of Race, Gender, and Conduct On College Students' Perception and Expectations  
**Nicole Davis**

Introduction To Mapping: Geologic History of Mars  
**Annabelle Wardzala**

It's More Than Note Taking: Science Journals In the Elementary Classroom  
**Ashley Agnello**

Kids, Germs, and the H1N1 Pandemic: Are Today's Students Connecting To This Health Issue?  
**Dawn Zasada Murphy**

Magnetism: What Attracts and Repels?  
**Anthony LoGrasso**

A Manuscript About Erosion  
**Anna Cosgrove**

Measurements of Fluid In Solid Body Rotation  
**Melissa Chudyk, Steven Dutter, and William Forth**

Mineralogical and Textural Analysis of Granitic Rocks From the Eastern Sabago Pluton, Southern Maine: Beginning Stages of Research  
**Krista Ventura**

Mineralogical and Textural Variations In the Migmatite-Granite Complex Near the Western Contact of the Sebago Pluton, SW Maine  
**Ernest Thalhamer**

Redesign of Fabric Cutting Tables For Eastman Machine Company  
**Matt Geil and Kenny Stafford**

Redesign of R.P. Adams Backwash System  
**Caleb Hamlin**

Risperidone and Morphine Together Produce Analgesia and Dyskinesia In Rats  
**Justin Kraft, Matthew Evrard, Brian Kline, and Melissa Young**

The Role of ADHD Symptomatology, Parenting, and Peer Functioning In Social Adjustment of College Students  
**Watoii Rabii**

Role of Environment Familiarity In Rat Defensive Response To a Cat Scent  
**Vincenzo Piraino**

Set Design  
**Alanna Stecura, Tamara Strowger, Mouminatou Diallo, and Victoria Palmiotto**

Solar System Misconceptions In Elementary Students  
**Robert Warmus**

A Storm Water Reduction Plan For Buffalo State College  
**Kevin Ward, Bernice Radle, and Eric Prentiss**

Thin Film Studies of Spinel Ferrite  $MFe_2O_4$  ( $M = Ni, Co, \text{ and } Zn$ )  
**Steven Wilser and Matthew Guminiak**

Unraveling the Geologic History of Margaritifer Terra, Mars  
**Eric Betzold**

### **Session IV: 11:30 p.m. – 12:30 p.m.**

#### *Presenting:*

ADHD and Sex  
**Lyndsey Marsh**

ALAS-R: A Revised Appreciation of the Liberal Arts Scale Developed At Buffalo State College  
**Brian Kline**

The Answer Is Blowin' In the Wind  
**Luke Gill, Steve Clement, and Joe Bella**  
Note: Model windmill set up outside library

The Art of Costume Design  
**Brittany Chonka, Mouminatou Diallo, Laura LaValley, Julie Nguyen, Chelsea Prophet, Danica Riddick, and Jennifer Toy**

Attraction Or Repulsion? The Road of Magnet Misconceptions  
**Kelly Laskowski**

Building For Understanding: A Community Project-Based Learning Opportunity  
**Crystal Sailor and Jason Robinson**

Construction of a Rotating Tank For Visualization of Geophysical Flows  
**William Forth, Melissa Chudyk, and Steven Dutter**

Continued Microanalysis of Rocks That Have Record of Continental Collision In Western Connecticut: The Famous "Log-Jam" Schist  
**Kerri Spuller**

Design of the Braking System For Buffalo State's Mini Baja Vehicle  
**Anthony Ubal**

A Discovery of Stable Glaze Calculation In Ceramics  
**Chad Pentoney**

Distinguishing Among Personality Characteristics Associated With Belief In Parapsychology

**Sumit Shukla**

The Effects of Repeated Reading On Three and Four Year Old Children

**Jennifer Marchese**

Extreme Tea and Extremities: Artworks On Display At the 2010 SNAG Conference

**Rachel Timmins**

Fire-Fighting Robot Prototype

**David Schmidt, John Ryndak, Zach Zunic, and Kevin Anderson**

Furnace Design

**Zachary Pritchard**

Geology Research Internship: Pathway To Becoming an Independent Researcher

**Annabelle Wardzala**

Human Power Project

**Mark McLaughlin, David Dulanski, Donald Anstett, and Ram Jayaram**

Investigating Student Subcultures In Higher Education

**Jamie Jueckstock**

Low Cost Demonstration For Optics

**Jessie Segal and Alyssa Cederman**

Mapping of a Granite Pluton Contact In Southern Maine

**Thomas Bohlen**

Mini Baja Off Road Flotation and Propulsion System

**Kristofer Wiktorowski**

The Relationship Between Recognition and Comprehension of Idioms In Urban 5th Graders

**Jennifer Samuel**

Simulating the General Circulation of Earth's Atmosphere In a Rotating Tank

**Steven Dutter, Melissa Chudyk, and William Forth**

A Study of Water Level Changes In the Buffalo River To Understand the Behavior of the Lake Erie Seiche

**Alice Mayer**

Taming the Seiche: A Study of Current Flow and Sedimentary Transport In the Buffalo River

**William Hughes**

Tear Repairs In Paintings: An Evaluation of Tensile Strength of Canvas Reweaving Techniques

**Laura Lang**

The Use of Ground Penetrating Radar As a Geophysical Mapping Tool On Glacial Deposits

**Jason Bartoszek**

## **Session V: 12:30 p.m. – 1:30 p.m.**

*Presenting:*

Abstract Circles and Triangles

**Charlene Edwards**

The Art of Costume Design

**Brittany Chonka, Mouminatou Diallo, Laura LaValley, Julie Nguyen, Chelsea Prophet, Danica Riddick, and Jennifer Toy**

Biodiesel Research For a Greener Tomorrow

**Alex Hubert, Tyler Oehman, and Margaret Nash**

Burn, Baby, Burn: Finding Alternative Solutions For Traditional Ceramic Glazes

**Sarah McNutt**

Calculation of Contact Angles On the Basis of Density Functional Theory

**Joseph Crawford, Mark Lojacono, and Derrek Greene**

Ceramic Glaze Formulation and Surface Techniques

**Matthew Herrington**

Children's Perceptions of Scientists and How To Change Their Stereotypes

**Sara Knapp and Anna DeBalski**

Data Collection To Measure the Impact of Professional Development School

**John McGowan**

Do Students Reflect Their Level of Understanding Through Non-Verbal Behaviors?

**Mary V. Rivers**

Educating the Public About Seismology and Earthquakes

**Jennifer Voelker and Michael Ludwick**

The Effects of Sheltered Instruction and Cooperative Learning On English Language Learners

**Ginger DeMita, Rachel Barnard, Michele Beers, and Jennifer Shane**

Feedback From Teacher Candidates Regarding the Impact of Their Professional Development School Experiences

**Lauren Waldroff**

An Introduction To Programming Through Alice

**Marisa Gaiser**

Invent, Imagine, and Incorporate: An Integrated Science and Mathematics-Based Learning Opportunity

**Maria Emiliani, Ashley Simnson, Lindsey Martin, Katie Soares, Suzanne Koons, Jolie Pilsbury, Crystal Marquis, Rachel Francis, Kathryn Martin, Kelly Cleary, Jennifer Grant, Christopher Guidarelli, Mary Hager, Lisa Henning, Farrah Hepburn, Melissa Illingworth, Michelle Joseph, Kristen Loconti, Jessica Louttit, Cori Micheletti, Alyssa Perry, Naomi Snyder, Ilana Spector and Alicia Trippi**

Kinetics and Animatronics In Art

**Zachary Pritchard**

Mini Baja Vehicle Transmission Design

Anthony DiMascio

Misconceptions of Sinking and Floating In the Elementary Classroom

Mary Kate Hojsan

Overall SAE Mini Baja Design

Anthony DiMascio, Anthony Ubal, and Kris Wiktorowski

Preliminary Paintings For the Buffalo State Dining Facility

Natalie Woysner

PUFM: Does Buffalo State Know How and Why?

Katelyn Casey

Seizing the Teachable Moment: Connecting With At-Risk Sixth Graders On Socio-Cultural Issues Through Pen Paling

Reed Schall, Lori Potteiger, Olga Shpakovsky, Alesia Johnson, and Bethany Jones

Solar Panel Fabrication For Maximum Energy Potential

Brad Wargula and Sara Ward

Solar Tracking Foundation

Vanessa Rodriguez, Kristopher Schleiermacher, Erik Walter, and Mike Brennan

Supervised Play For Parents In the Child Welfare System

Jodi Sussman and Cyelynn Carr

Turning Theory Into Practice: Implementing Theories Learned In a Methods Course Into the Elementary Classroom

Katelyn Racine, Gloria Lassitter, and Laura Jost

Undergraduate Teaching Assistants In Course Redesign of Economics 101

Micha Owens, Kyle Kunkle, Ashley Hurd, Katie Brown, Erin McKenna, Amber Buchholz, Anna Cummings, Grace Higgenbottom, Heather Lucas, and Alysia Howells

Urban Geology Rocks!

Justin Simet

Using Real World Experiences To Develop Science Understanding

Amanda Caffarelli

Using Technology To Understand the Students of Yesterday and Today

Justin Wojcik and Emily Tennant-Koller

## Session VI: 1:30 p.m. – 2:30 p.m.

*Presenting:*

Breaking For Beauty: Foot Binding and Corsetry – Body Modification On Women

Sarah Karan

Changing Students' Misconceptions of Viewing Stars and Constellations In the Night Sky

Jessica Kurdziel

Condensation Rates of Vapor Molecules On the Surface of a Liquid Drop As a Function of Drop Dimension and Temperature

Mark Lojaco, Derrek Greene, and Joseph Crawford

Conservation of Angular Momentum In the Martian Atmosphere

Matthew Hensley

A Cut of Culture

Vincent Pontillo

The Effect of Men's Height On Women's Perceptions of Attractiveness

Caitlin Brady, Kristy Breukelman, Nicole Davis, Lyndsey Marsh, Colleen Montreuil, and Brittney Stokes

Emotion Appraisal and Peer Nominations In Children With Attention Deficit-Hyperactivity Disorder

Novella Curtis

Eyewitness Memory For Same-Sex Versus Different-Sex People Arguing

Kristy Breukelman, Amanda Bahr, Morgan Morningstar, Nicole Pezone, Carnita Hill, Joshua Lons, Amy Crowley, Sierra Johnston, Jeffrey Melvin, Sami Belanger, Sarah Ackerman, Brittany Smetanka, Watoii Rabii, Nicole Davis, Moje Omoruan, Novella Curtis, Amanda Ciminelli, Angela Griffith, Jennifer Gans, Ashley Mabry, Hetal Patel, and Geraldine Erokwu

Facial Landscapes: Mapping the Geography of Individuals

Brittany Thrun

Fuzzy Logic Controller For a Thermal System

Gediminas Razmus, Franco Bruna, Luis Matos, and Eric Achille

Gender and Recall of Stereotypically Masculine and Feminine Images Among Adults

Brittney Stokes, Colleen Montreuil, Lyndsey Marsh, Nicole Davis, Kristy Breukelman, and Caitlin Brady

The Integration of Carved Stone With Metal

John Harris II

An International Drug Committee: Collaborative Drug Policy Making Proposed

Jodie Justice and Dayana Castillo

Intrusive Parenting Effects On Self-Efficacy In College Students

Kayli Knapp

Journal Bearing Analysis For Rigidized Metals Texturing Machine

Jason Zaepfel and Miles Williamson

Location, Capacity, and Convenience: Obstacles Event Planners Face When Choosing a Venue

Joey Gansworth, Katie Helbig, Mary Henseler, Kurtis Kowalezyk, and Phillip Weiss

Monte Carlo Simulation of Consumer Loans

Frederick Meyer

Non-Traditional Metal Forming Technique (Metal Foam)

Rachel Timmins

Onboard Vehicle Compression Storage System

Brad Wargula, Sara Ward, Matt Geil, Kenny Stafford, and Miles Williamson



Playing With Blocks: Using Scratch-2D To Learn Programming  
**Ernesto Miranda**

The Positive Impact of Professional Development School On  
Teacher Candidates  
**Rachel Barnard**

Preservice Teachers' Understandings of the Effect of Parenting  
Styles On Child Development  
**Lydia Zappala and Kayla Williams**

Questioning Cinderella: Factors Related To the Idealization  
of Princesses  
**Amanda Ciminelli and Holly Nowak**

Stuck On You: A Profile of Pins  
**Veronica Keymel**

Transition Between Alice and Media Computation Programming  
**Chayan Gonzaque**

When Words Fall Short: A Comparison of Mental Repetition,  
Visualization, and Gesturing In Memory Retention  
**Max Ostrov**

## **Session VII: 2:30 p.m. – 3:30 p.m.**

### *Presenting:*

Anthropogenic Contaminants In the Soil and Air of Delaware  
Park, Buffalo  
**Rachael Taylor and Suzanne Shapiro**

Chemical Analysis of Regular and Decaffeinated Coffee Samples  
From Vendors In Western New York  
**Lindsay Brignon and Brittany Gipple**

A Contemporary Facial Reconstruction Method Regarding  
Individual Identification  
**Lori Cerny**

Contextual Perception: Differences Between United States and  
Chinese College Students  
**Ethan Spann, Chen Li, Adam Smithson, and Fang Ruan**

Dirty Sewers: A Look Into What Is Being Released Into Our Local  
Waters  
**Tim Wood and Chris Bova**

Environmental Survey of Devil's Hole Cave: Lewiston, New York  
**Chris Keroack**

The Five Wars of Globalization and International Crime: A Lack  
of Uniform Laws and Uncooperative Agencies  
**Henry Zomerfeld**

Forensic Investigation of Perfume Residues On Fabric Samples By  
Gas Chromatography  
**Alicia Maneen and Mike Munella**

Green Arts and Living  
**Garrett Fallin**

Investigation Into the Source of Barium In Erie County  
Groundwater  
**Nicole Bennett**

Like a Hole In the Head: The Creation of a Projectile Trauma  
Collection For Forensic Anthropology  
**Raymond Wilson**

Modeling Random Birefringence and Its Impact On Fiber Optic  
Communication Systems  
**Lucas Bunt and Benjamin Kanouse**

No Longer Only a Man's Career: Women In Instrumental  
Conducting  
**Keilah Bradley**

Nuclear Terrorism: Any Effective Way To Prevent It?  
**Jesse Montes**

Numerical Analysis of Fluid Dynamics Within a Mammalian  
Nephron  
**Steven Leuthe**

The Orry B. Heath Collection: A Community Partnership  
**Jessica Stabell, Joshua Mauro, Joseph Dudek, and  
Lindsey Higgins**

Population Control In China  
**Tedouesz Kordela and Alvin Kemp**

Pulley Chair With Custom Designed Suede  
**Adam Kessler**

Renting vs. Owning Audio Visual Equipment for Events  
**Jeffrey Osterer**

Snow Spotting On Campus 2009 – 2010  
**Alyssa Russell**

Soil Analysis of Selected Urban Gardens In Buffalo, New York  
**Joseph Petre and Keith Prine**

The Times They Are a' Changing; Examining Millennial Foreign  
Relations Between the United States and Russia  
**William Delaney**

Volunteer Recruitment and Participation In Special Events: A  
Comparative Study  
**Kevin Kilmurray, Jaclyn Evans, and Alissa Keller**

Wasting Away the Suite Life: Pollution Prevention and the Buffalo  
Niagara Lodging Industry Hospitality and Tourism  
**James Bernsdorf, Corinne Brogan, Adam Goodman,  
Dayquan Mitchell, Monique Sayles, and Erika Severino**

Wavelengths: Sculptural Use of Light  
**Eligh Hanning**

What the UK: A Comparative Analysis of British and US Public  
Administration  
**Thomas Morris-Davies, Sophie Fish, and Craig Foster**

Work and Family Issues of Correctional Officers  
**Jennifer Molfese**

## **Session VIII: 3:30 p.m. – 4:30 p.m.**

### *Presenting:*

Affects of the European Union's Peace Building Process In Somalia

**Timothy Walters**

Artificial Bowl, Artificial Lights

**Lisa Allocco**

Arts of China

**Cheria Anderson and Tennia Webb**

Brewing Ancient Egyptian-Style Beer

**Joseph Dudek**

Come Sail Away: A Look Into the Exciting World of Sailboats

**Christina Recchio**

Deciphering the True Beauty of Eye Shadow

**Brittany Gipple, Todd Isbrandt, and Jongseok Lee**

Diggin' In the Dirt: Field School At Old Fort Niagara – Where History and Archaeology Meet

**Megan Myrie**

Even In Death a Person Can Be Toxic

**Sarya Randolph**

I Met a Lot of People In Australia – I Even Encountered Myself

**Stacey Jones**

The Importance of Measuring Up: Osteometric Methods of Sorting Commingled Human Skeletal Remains

**Dana Arnold**

Levels of Iron In Erie County Soil Compared To Erie County Ground Water

**Stephanie Mohr, Thomas Ristich, and Nicole Bennett**

The Misconceptions of Oxidation At Its Finest

**Sarah Courtney**

On the Brink of the Falls: Governor David A. Patterson's Budgetary Cuts To State Parks

**Kristine Shumway**

Pond Water Samples

**Joe Odrobina and Todd Collier**

Premier Events: Education and Fundraising Inc.

**Tessa Maldonado and Raheem Webb**

The Reality of a Modern Tibet

**Mario Burks, Adam Holley, and Jinfang Chen**

Sports Tourism: The Impact On Buffalo

**Jeanelle Canelo**

Stress, Self-Esteem, and Sports Participation

**Brandon Kawa and Amanda Barker**

Study of Laterization In Several Primate Species

**Katie Rozek**

Teatro Italiano

**Shelby Baldwin**

Text All Day? Use Those Skills In Music Class!

**Melissa Bender and Teresa Leone**

Tourism Management Group Report

**Tahisha Brown, Calla Rudolph, Tiona Petty, Maria Mangine, Evan Cross, and Kristine Shumway**

Upstate New York's Cool Pool Project

**Lindsey Higgins**

Youth and Sports: A Positive Combination

**Emily Vantine**

# Undergraduate Summer Research Fellowship Program

**Cassandra Andrusz**, Spanish Education 7-12

Faculty Mentor: Professor William Raffel, Communication

Abstract Title: **How to Plan a Backpacking Trip of Your Own**

Cassandra Andrusz is double majoring in Spanish Education 7-12 and Elementary Education, with a minor in International Studies. She plans to graduate in January 2011, earn her Master's Degree, and possibly teach in South America.

Cassandra traveled across Europe for two months documenting her experiences through video images and still pictures. These were used to produce a video about how to plan a backpacking trip and how to handle unexpected problems. Educational supplements to accompany the video include a trip planner and budget sheet to guide viewers through the process. The video is being used in IST 200, Introduction to International Studies.



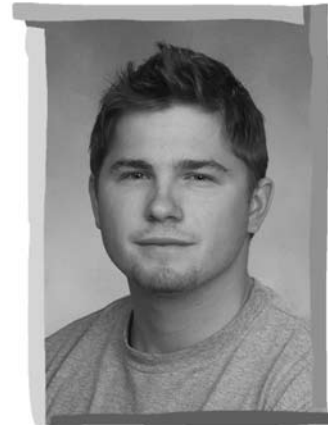
**Jason Bartoszek**, Earth Sciences (Geology)

Faculty Mentor: Professor Kevin Williams, Earth Sciences and Science Education

Abstract Title: **The Use of Ground Penetrating Radar As a Geophysical Mapping Tool On Glacial Deposits**

Jason Bartoszek is an Earth Sciences major with a concentration in Geology. He will graduate in December 2011 and is considering a career in exploration geology.

Jason was trained on how to acquire, process, and interpret ground penetrating radar (GPR) data. He conducted field work in Western New York to determine the extent to which GPR can be used to study glacial deposits including drumlins, eskers, and kames. His results suggest that GPR works best when studying eskers and might have worked better for studying drumlins and kames if ground conditions had favored better transmission of the radar signal. Jason represented Buffalo State at the "SUNY Undergraduates Shaping New York's Future: A Showcase of Scholarly Posters at the Capitol".



Recipients of Undergraduate  
Summer Research Fellowships in 2009

### **Thomas Bohlen**, Geology and Earth Science Education

Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

Abstract Title: **Mapping of a Granite Pluton Contact In Southern Maine**

Thomas Bohlen is a dual major in Geology and Earth Science Education. He will graduate with a dual B.S. degree in May 2010. Tom plans to attend graduate school in Geology for “hard rock” geology.

Tom’s research consisted of both field work on rocks in southwestern Maine, and subsequent laboratory work on his collected specimens. The field work was spent mapping the edge of a large body of granite, and the lab work was spent detailing the microscopic aspects of rocks along that boundary. His work provided necessary detail within an ongoing project on these rocks. Tom co-authored a manuscript submitted to a geology journal and presented his research findings at the NE/SE sectional meeting of the Geological Society of America held in Baltimore, MD in March, 2010.



### **Lei Cai**, Economics

Faculty Mentor: Professor Tao Tang, Geography and Planning

Abstract Title: **Spatial Analysis On Relationships Among Air Particle Pollution, Residential Income, and Environmental Perceptions**

Lei Cai is an Economics major with a minor in Planning and will be graduating in December 2010. He is especially interested in understanding the relationships between economic development and environmental pollution, in particular air pollution issues in developing countries. Lei plans to continue his education at the graduate level and pursue an MBA.

Lei participated in three weeks of field research in Beijing, China along with his mentor and graduate students from Capital Normal University. The objective of his research was to test the hypothesis if the local residents were more concerned about economic gains than environmental pollution. Lei completed a spatial analysis of relationships among economic incomes, perceptions of local residents to air pollution, and air pollution distributions.



### **Eriketa Cirulli**, Arts and Letters (Dance)

Faculty Mentor: Professor Janet Reed, Theater

Abstract Title: **Compare and Contrast Classical and Contemporary Jazz Dance**

Eriketa Cirulli is an Arts and Letters major in Dance and will graduate in December 2010. After graduation, she plans to become involved with dance companies, choreography, and teaching.

As part of her project, Eriketa participated in two jazz dance intensives in Chicago – the Hubbard Street Dance (Contemporary) and Giordano Jazz Dance (classical). These jazz classes helped her compare and contrast classical and contemporary jazz styles. Eriketa documented her experiences in a journal and by video documentation. Eriketa auditioned for the Hubbard Street Dance Company because the contemporary style was a better match for her aesthetically.



**Marissa Gibbons**, Communication Studies

Faculty Mentor: Professor Tim O'Shei, Communication

Abstract Title: **The Effect of Spirituality On Dancers and Choreographers**

Marissa Gibbons is majoring in Communication Studies and will graduate in May, 2011.

For her research, Marissa combined her interest in dance with her interest in spirituality. She focused on Wade Robson, a dancer and choreographer that disappeared for a period of time and found his spirituality. Marissa interviewed Robson and his wife, among others, and combined those conversations with her own studies of spiritual teachings to create an extensive narrative.



**Donald Jackson**, Art Education

Faculty Mentor: Professor Michael Parks, Art Education

Abstract Title: **Cognitive Comics: A Constructivist Approach To Sequential Art**

Donald Jackson earned a Post Baccalaureate Certification in Art in December 2009. His goals include obtaining a teaching position in art.

Donald's project centered on the development of a book that combines several short comics (sequential art) with lesson plans that facilitate the cognitive development of higher order thinking skills in high school and college level students. He tested the research during one of his student teaching placement with very positive results. Currently, he is exploring an opportunity to create educational comics for the classroom.



**Jennifer Kishbaugh**, Biology

Faculty Mentor: Professor Alicia Perez-Fuentetaja, Biology

Abstract Title: **Effects of Changing Calcium Levels In the Canadian Shield Lakes On Zooplankton and Their Ecosystems**

Jennifer Kishbaugh is majoring in Biology and is in the All-College Honors Program. After graduating in May 2010 Jennifer plans to attend graduate school.

Jennifer designed and conducted an experiment intended to test the tolerance to low calcium levels for two species of small water fleas dominant in most North American lakes. Her research addresses the calcium decline from human activities that is affecting northern lakes and that will change the structure of the aquatic communities. Her work is a contribution to an emerging area of research that is now gaining increased public attention.





**Laura Lang**, Physics Education

Faculty Mentor: Professor Gregory Smith, Art Conservation

Abstract Title: **Tear Repairs In Paintings: An Evaluation of Tensile Strength of Canvas Reweaving Techniques**

Laura Lang is graduating with a degree in Physics Education in May 2010. After graduation she plans to attend graduate school to prepare for a middle school teaching career.

Laura's research involved the determination of the mechanical properties of various adhesive mending techniques used to repair torn canvas paintings. The research contributed to the identification of a bonding agent with sufficient strength to hold torn fibers together while still being weak enough to fail in the event of future stress being applied to the painting's support. The results of this work will help guide future conservation practice and will be disseminated through presentations at professional conferences.



**Jennifer Marchese**, Speech-Language Pathology

Faculty Mentor: Professor Christine M. Scott, Speech-Language Pathology

Abstract Title: **The Effects of Repeated Reading On Three and Four Year Old Children**

Jennifer Marchese will graduate in May 2010 with a bachelor's in Speech-Language Pathology. Following graduation, she plans to attend graduate school to obtain a master's in Communication Disorders. After working several years as a clinician, Jennifer plans to enter a Ph.D. program in the same profession.

Jennifer's study involved a five-trial reading task to assess sight-word ability of 12 preschoolers. The children were pre-tested for their sight-word ability of eight target words from a story. During the experimental portion, the preschoolers were read the same story containing eight enlarged words from the text, while the experimenter would point to each word and its item. Although the preschoolers produced a slight increase in the number of sight words in their repertoire following the readings, the limited results of the post-test suggest that many three to four year old preschoolers are not developmentally ready for printed material.



**Jennifer Molfese**, Psychology

Faculty Mentor: Professor Robert Delprino, Psychology

Abstract Title: **Comparative Study of Work /Family Issues For Correctional Officers and University Police**

Jennifer Molfese is a December 2009 graduate of the Psychology Department. Jennifer plans to pursue her graduate studies in clinical psychology with a focus on family issues.

A goal of the study was to utilize both qualitative and quantitative data and demonstrate how both forms of data can enrich and supplement each other. The findings suggest that family can play an important role in addressing work and family conflict and officer stress for both correctional officers and university police officers. In addition, environmental, cultural, and organizational factors that are unique to the work setting must be considered to successfully address these issues. Jennifer's work has been accepted for presentation at the 2010 Annual Meeting of the Eastern Psychological Association.



## **Candace Morrison**, Theater

Faculty Mentor: Professor Cristina Pippa, Theater  
Abstract Title: **From the Farm To the Stage**

Candace Morrison is a senior Theater major, graduating in May 2010. She plans to pursue a career as a theater artist in performance and playwriting.

“World Wide Opportunities on Organic Farms” provided Candace the opportunity to work and live on organic farms in Michigan, Wisconsin, Minnesota and Oregon. Through extensive interviews with farmers and first hand experience, Candace learned about food production and land use in America. Her discoveries are recounted in her original solo performance “From The Farm To The Stage.”



## **Chad Pentoney**, Design (Ceramics)

Faculty Mentor: Professor Robert Wood, Design  
Abstract Title: **A Discovery of Stable Glaze Calculation In Ceramics**

Chad Pentoney will graduate with a B.S. degree in Ceramics in May 2010. After graduation he plans on furthering his education by pursuing a Master of Fine Arts degree in Ceramics and then opening up his own production studio where he will make and sell functional ceramic objects.

For his project, Chad researched functional ceramic glazes to find out what combination of materials resulted in food safe glazes and conversely, what materials not to use in food safe glazes. All of the glazes tested were at the high fire range (2345<sup>0</sup> F). His research and testing provided a basis for establishing the functionality of a glaze and dispelled misconceptions about certain materials used in functional glazes. Chad plans to submit his finding to Ceramics Monthly magazine.



## **Tom Poehnelt**, English

Faculty Mentor: Professor Lorna Perez, English  
Abstract Title: **If You Can't Speak the Language: The Location of Identity In Native Speaker**

Tom Poehnelt received his B.A. in English in December 2009. He plans to pursue graduate study in literature. His research interests focus on ethnic literatures in the United States, particularly in relation to critical theorizations of identity and power.

For his project, Tom focused on what it means to theorize a hybrid Asian identity within the context of dominant American culture. By critically examining Chang-rae Lee's *Native Speaker*, Tom concluded that it is only through the acceptance of a borderland and hybrid identity that the protagonist of the text is finally able to come to terms with both the beauty and contradiction of being Asian-American and moreover, Asian in America.



## **Vincent Pontillo**, Design (Metal/Jewelry)

Faculty Mentor: Professor Tara Nahabetian, Design

Abstract Title: **A Cut of Culture**

Vincent Pontillo is a Metal/Jewelry major and will graduate in the spring of 2012. In addition to pursuing a MFA in Metalsmithing, he plans to apply for a Fulbright to travel abroad to continue his research on culture, traditional artifacts and ornamentation.

Vincent researched the history and cultures that surround the art of traditional paper cutting. This research included the exploration of contemporary industrial processes that parallel paper cutting techniques traditionally done by hand. He translated his discoveries into an installation of laser and waterjet cut panels of rubber and steel reflecting the influence of historical paper cutting with its ornamentation and narratives creating a contemporary twist into the abstraction of positive and negative spaces that seem almost cellular. Vincent's work has been shown in numerous international exhibitions including one that traveled between New York City and Seoul, Korea. Vincent represented Buffalo State at the "SUNY Undergraduates Shaping New York's Future: A Showcase of Scholarly Posters at the Capitol".



## **Zachary Pritchard**, Fine Arts (Sculpture and Painting)

Faculty Mentor: Professor Elena Lourenco, Fine Arts

Abstract Title: **Kinetics and Animatronics In Art**

Zachary Pritchard holds a dual major within the Fine Arts Department in both Sculpture and Painting, and plans to graduate in May 2012. Zachary plans to continue his artistic interests in graduate school with a focus on animatronics in sculpture.

Zachary investigated kinetic motion in sculpture including how to utilize motors, safely route wires and switches, and incorporate gears for controlled movements. He also investigated methods for taking castings from living subjects and reproducing. His experimentation led to the discovery of specific material formulas of silicone and pigment that allow for less viscosity in pouring, while yielding durability in combination with kinetic movements. Zachary is representing the Art Department at the 2010 SUNY Student Exhibition in Albany.



## **Kelsey Till**, English Education

Faculty Mentor: Professor Lisa Berglund, English

Abstract Title: **Forgery of Oscar Wilde's Letters: Reprehensible Deception Or Criminal Aestheticism?**

Kelsey Till is majoring in English Education and minoring in Psychology. She plans to graduate in May 2011 and to attend graduate school.

Kelsey studied the collection of Oscar Wilde material housed at the University at Buffalo. She focused on letters to and from Wilde that included four known forgeries. After studying the faked letters in the context of nineteenth-century British notions of forgery, Kelsey concluded that three of the forgeries may have been crafted by Arthur Cravan, a known forger of Wilde documents. Her research explains why Cravan might have forged the letters, and concludes that forgery is more of a "criminal aesthetic" than a "reprehensible deception." Kelsey plans to submit her research to Book History, an annual refereed journal.





## **Rachel Timmins**, Design (Metal/Jewelry)

Faculty Mentor: Professor Stephen Saracino, Design

Abstract Title: **Non-Traditional Metal Forming Technique (Metal Foam)**

Rachel Timmins is a Metal/Jewelry Designer. After graduating in December 2009, Rachel entered Towson University's Studio Art (concentration in metals) Master of Fine Arts program.

Rachel's research was based on non-traditional metal forming techniques. She focused on the process of making metal foam primarily out of tin and aluminum. This process used titanium hydride that was mixed in specific amounts with the metal powder, compressed and then heated to expand into foam. She hopes to use this technique as a design component in aspects of her future work.



## **Steven Wilser**, Physics and Physics Education

Faculty Mentor: Professor Ram Rai, Physics

Abstract Title: **Thin Film Studies of Spinel Ferrite  $MFe_2O_4$  ( $M = Ni, Co, \text{ and } Zn$ )**

Steven Wilser is graduating in May 2011 with a double major in Physics and Physics Education. After graduation, he plans to pursue a high school teaching career. He also is considering attending graduate school in physics.

Steven's research focused on the growth and investigation of thin films of a class of magnetic materials with a chemical formula,  $MFe_2O_4$  ( $M = Ni, Co, \text{ and } Zn$ ), also referred to as spinel ferrites. Thin films were successfully deposited on single crystal sapphire, strontium titanate, and silica substrates using a 3 kW electron-beam evaporation system. The films were characterized by light scattering method using a spectrophotometer to understand their optical and electronic properties. Steven found that this class of magnetic materials displays insulating characters consistent with theoretical predictions.



## **Natalie Woyshner**, Fine Arts

Faculty Mentor: Professor Lin Xia Jiang, Fine Arts

Abstract Title: **Preliminary Paintings For Buffalo State Dining Facility**

Natalie Woyshner is a B.A major in fine arts. After graduating in December 2009 she plans to move to the west coast and enroll in a graduate program for painting.

Natalie's research focused on research of the diversity of ethnic cuisine. Her findings were represented in eight paintings reflecting the cultural backgrounds of major ethnic group's cuisine. The cultures represented in the series of paintings include Japanese, Chinese, Indian, Greek, Italian, French, Mexican, and Arabian. These images also reflect and represent the diversity of the Buffalo State student body.





## Arts

### Abstract Circles and Triangles

**Charlene Edwards**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

The subject matter entails an abstract painting using geometric shapes such as circles and triangles. The idea was to create a pattern using geometric shapes that is non-representational and thus abstract. I was inspired to create this painting after taking Art Education 100. My inspiration came from various abstract pieces I was introduced to. I used harmonious visual combinations with the geometric shapes and the hues. I used the principle of size variation. I also incorporated the principle of radial balance, in which all the geometric shapes revolves around the center. I used the principles of repetition and used the visual effect of depth. There is also contrast between the geometric shapes. The circle is curved and the triangle has straight lines. There is also contrast of size variation; the big white circle next to the small purple circles. I also had implied triangles in the negative space outside the two triangles coming together. I have an implied circle, it's not really there but the edges of the triangles create the illusion the white circle is overlapping another circle. When people view my work, I want them to see how creatively manipulating the elements and principles of design can be.

**Presentation Type and Session:** Poster V

### Arts of China

**Cheria Anderson and Tennia Webb**, SOC 208: Sociology of Contemporary China

Faculty Mentor: Professor Zhang Jie, Sociology

There are countries that enjoy the many different aspects of art. Many countries are known for their arts. In this presentation we will talk about the many different forms of art in the Chinese culture. The four types of arts that we will focus on is the art of music, the art of dance, the arts of paintings and sculptures and the art of film productions. Our research focuses on the difference between Chinese art and American art.

**Presentation Type and Session:** Poster VIII

### The Art of Costume Design

**Brittany Chonka, Mouminatou Diallo, Laura LaValley, Julie Nguyen, Chelsea Prophet, Danica Riddick, and Jennifer Toy**, THA 335: Costume Design for Theater

Faculty Mentor: Professor Ann Emo, Theater

Our Costume Design Class will present the results of a semester's hard work as we focused on reading, analyzing and designing costumes for La Ronde by Arthur Schnitzler. This play is written in three acts and were we charged with

designing each act in a different period and genre. Participants will display visual research of various time periods, Character analysis and costume renderings. This presentation will illustrate the creative and critical thinking skills involved in the process of taking a play from page to stage. Viewers will enjoy a variety of detailed drawings, presentation styles and research packages. In addition to costumes designed for La Ronde, the Costume Design Class will be showing story boards and costume research for Music Videos. Because this is a very different challenge, we will be demonstrating the numerous skill sets required for effective design in the costume field.

**Presentation Type and Session:** Display IV and V

### Burn, Baby, Burn: Finding Alternative Solutions For Traditional Ceramic Glazes

**Sarah McNutt**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Andrea Guiati, Director, All College Honors Program and Professor Robert Wood, Design

Many ceramic artists, who have home studios, are unable to afford the safety equipment necessary to create their own glazes or are simply uncomfortable handling the hazardous ingredients found in most popular glazes. My research will be primarily focused on exploring alternative surface treatments for ceramics that can be created from substances found in the average household. In this study I will be looking for unique glaze solutions by coating ceramic test pieces with common household products and then applying heat. I hope ultimately to discover treatments and identify ingredients that emphasize the texture of the clay with a minimal loss of detail. This research is relevant to my own body of work because I often feel that traditional glazes don't give me the desired results for my figurative ceramic pieces; I am looking for ways of continuing my work outside of school without the high cost of commercial glazes.

**Presentation Type and Session:** Poster V

### Ceramic Glaze Formulation and Surface Techniques

**Matthew Herrington**, Design (Ceramics)

Faculty Mentor: Professor Robert Wood, Design

My research focused on formulating a variety of ceramic glazes that could be used to enhance and activate the linear geometric and organic forms in my ceramic and mixed media sculptures. Surface glaze activation on clay form is a stunning component of the medium and I am interested in how it manipulates the ceramic surface through various firing processes. With this grant, I sought to research glazes to further my understanding of glaze composition and expand my knowledge of the tools and resources available, including a glaze calculating software program. I will share my data, including photographs of finished glazes and their formulas

with the Ceramics program so others can benefit in their work as well. These glaze research results are essential to help develop my work for my final B.S senior exhibition this May. The glaze test results will be presented along with ceramic sculptures using the most effective glaze surface results.

**Presentation Type and Session:** Poster V

## Compare and Contrast Classical/ Contemporary Jazz Dance

**Eriketa Cirulli**, Arts and Letters (Dance)

Faculty Mentor: Professor Janet Reed, Theater

For my creative activity, I went to Chicago to participate in dance intensives at Giordano Jazz Dance and Hubbard Street Dance. I researched the dance companies that included the history of the companies, and reviews, performances and other artists who choreographed for the companies. I also kept journal entries and video-documentation. While assessing video-documentation, Hubbard Streets' repertoire I was more relaxed, and elongated movements unlike Giordano's which the movement was fast, stiffened, and out of control. The company I auditioned for is Hubbard Street because I was most confident about the choreography and was able to maintain the contemporary style. I hoped to better understand how style affects the aesthetics, and whether the discipline differences between the pure and contemporary form influence this style.

**Presentation Type and Session:**

Performance Friday, April 30, 2:00 – 3:00 p.m.

Location – Dance Studio, Rockwell Hall B22

## Cultural Anthropology, Meet Filigree

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

Faculty Mentor: Professor Tara Nahabetian, Design

Historical and religious symbols have shaped the foundation of culture and design. My work draws upon cultural symbols and motifs. These provide underlying catalysts for object creation as my work is inspired from the convergence of multiple sources. In metal object making, I am especially interested in applying cultural motifs both figuratively and abstractly within a piece. "Matryoshka", a piece composed of copper, includes intricate patterning created using traditional metalsmithing techniques. This piece expresses my interpretation of several Russian design objects created during the early 1600's to the Czarist era of Alexander III, including filigree and the Matryoshka doll. "Pysanki", a piece composed of sterling silver, explores the early Ukrainian traditional craft using precise historical patterning, while "Pomegranate Seed" abstractly portrays motifs used within a variety of Armenian lacemaking and metalsmithing techniques. Together, my work reflects culturally relevant, contextual designs.

**Presentation Type and Session:** Poster III

## A Cut of Culture

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

Faculty Mentor: Professor Tara Nahabetian, Design

I am attracted to utilizing cultural symbols, and traditional techniques as observation and inspiration for the artwork I create today. Historical techniques used to produce object and ornament vary between cultures, yet one fascinating example of multicultural adoption to a single form of craft is papercutting. Papercutting found its origin in China during the Eastern Han Dynasty (202 BC - 220 AD), with the earliest known papercut (6th century) found in Xinjiang. Papercutting soon became the most popular decoration during Chinese holiday festivals, portraying zodiac animals and narratives carved using only a sharpened knife or scissors. Several cultures adopted this form of intricate ornamentation; Japanese "Kirie", German "Scherenschnitte", Polish "Wycinanki" amongst others. Contemporary artists have modernized this traditional technique to create stencils for graffiti; urban printmaking we encounter on a daily basis. Using EPDM rubber and the industrial manufacturing process of waterjet/laser cutting to create artwork, I present a parallel between the contemporary/industrial use of traditional techniques and modernized material. During this presentation, I will show a slide show on the developmental stages of this piece, documentation of the installation as well as the piece itself.

**Presentation Type and Session:** Poster VI

## Dance and Anatomy

**Chelsea Prophet**, Arts and Letters (Dance)

Faculty Mentors: Professor Joy Guarino, Theater and Professor Carlos Jones, Theater

After becoming interested in teaching, I became aware of the poor alignment children possess at a young age. I have noticed hyperextension in both the lower back and legs. I have also observed slouching shoulders and supination of the foot among children. This improper use of the body will lead to problems in the future that could have been corrected early on. My hypothesis is proper dance training, including a primary focus on alignment, will improve posture. I will teach a series of corrective exercises to create self-awareness and improve physical alignment. In this research forum, I will lead and demonstrate the corrective exercises along with movement exercises that must be accompanied by physical participation. I will also display examples of poor alignment and the cause and effects for the future.

**Presentation Type and Session:**

Performance Friday, April 30, 4:00 – 4:30 p.m.

Location – Dance Studio, Rockwell Hall B22

## Dancers and Spirituality

**Marissa Gibbons**, Communications

Faculty Mentor: Professor Tim O'Shei, Communications

This study of dancers and spirituality focuses on the renowned contemporary choreographer Wade Robson, who was deeply

influenced by the late Michael Jackson. Robson and Jackson crossed paths at an early point in Robson's life, paving the way for his success as well as his almost obsessive work ethic. Robson danced for Jackson as a child, and befriended him too. As a teenager, Robson choreographed, directed and wrote music for some of the world's top pop acts. Jackson, meanwhile, was both celebrated for his artistic talents and condemned for his odd behavior. The pair took divergent paths. Robson, seeing the trapped life that Jackson led, took himself out of Hollywood for a few years and renewed himself spiritually. Jackson, meanwhile, crashed publicly, then attempted a comeback cut short by his death. This report examines who two friends, both highly creative and motivated people, traveled starkly divergent paths, yet remained connected the entire way.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **A Discovery of Stable Glaze Calculation In Ceramics**

**Chad Pentoney**, Design (Ceramics)

Faculty Mentor: Professor Robert Wood, Design

This research project involved finding out how to make a stable functional glaze that works in conjunction with the clay bodies that I am using and that won't leach potentially toxic glaze materials in normal everyday use. I first started by researching and contacting professors and professionals in the field, reading lots of books on the subject and then testing the functionality of our Ceramics studio glazes. Through the information learned, I worked on developing my own glazes using a glaze calculation software program. I will be showing examples of my glaze testing, examples of what glaze faults can happen, and examples of my own glazes that I have developed and applied to my own functional pieces.

**Presentation Type and Session:** Poster IV

### **Extreme Tea and Extremities: Artworks On Display At the 2010 SNAG Conference**

**Rachel Timmins**, Design (Metal/Jewelry)

Faculty Mentor: Professor Tara Nahabetian, Design

While attending this year's Society of North American Goldsmith's (SNAG) conference in Houston, Texas, I was able to view three of my artworks on display at two professional exhibitions. The first show was "Extreme Tea" curated by Tom Muir. This exhibition pushed the boundaries of ideas surrounding tea and tea ceremony. The second show, "Extremities" curated by Andy Cooperman explored the concepts of adornment on the bodies' extremities. Attending these exhibitions during the SNAG conference allowed me to network with professionals in the field and see my work coherently fit into thematic exhibitions. Traveling to the conference gave me the opportunity to see numerous professional speakers within the field such as Lauren Kaulman, Kathleen Browne, Christine Beeler and others. This opportunity and experience has helped me to further my education in jewelry/metalsmithing. I will display a poster

presentation during the Research and Creativity Celebration with photographs and information from my trip to the 2010 Houston SNAG conference so others can see the benefit of this experience.

**Presentation Type and Session:** Poster IV

### **Facial Landscapes: Mapping the Geography of Individuals**

**Brittany Thrun**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Andrea Guiati, Director, All College Honors Program and Professor Nathan Naetzer, Fine Arts

The concept of 'facial landscapes' is to treat the human face as exactly that: a landscape. Each person has a unique visage composed of mountains, curves and canyons. These landmarks can tell stories; a wrinkle by the eyes can tell of hardships survived or laughter that has been voiced. They can give clues to where that person is from, what they have been through. I photograph my subjects as if you photograph a panorama with only a usual camera lens. This technique causes parts of the face to be zoomed in more than others, some parts in focus and others blurred; the light also changes slightly as my own shadow is cast on the person. The viewer not only sees the face as a whole, but when closer, is forced to look carefully on the details of the landscape. These landmarks of the face are what make each person unique; each part adds character to this visage that we don't often truly see in all its exceptional beauty. This idea entered fruition in a drawing class a few semesters ago, since then I have desired to continue and develop this idea through experimentation of size, and composition.

**Presentation Type and Session:** Poster VI

### **From the Farm To the Stage**

**Candace Morrison**, Theater

Faculty Mentor: Professor Cristina Pippa, Theater

"From The Farm To The Stage" is the wrap-up of my summer spent farming and traveling across the country. Through World Wide Opportunities on Organic Farms, I worked along side organic farmers in Michigan, Wisconsin, Minnesota and Oregon learning about food production and land use. At each farm I completed a variety of chores, from weeding to haying, and was rewarded every night with delicious meals provided by the farmer. The farmer became essential to my project. At each farm I was able to interview my host. Through formal interviews and candid conversation I garnered a wealth of information and character traits to pull from for my on-woman show. As a theater artist, I best process what I see and hear from the context of a stage performance. Whether writing or acting, I get joy out of sharing what I've discovered with my audience. I want my audience to grow with me as I recount my adventure across the country.

**Presentation Type and Session:**

Performance Friday, April 30, 6:30 – 7:30 p.m.

Location – Flexible Theater, Donald Savage Building



## **Furnace Design**

**Zachary Pritchard**, Fine Arts

Faculty Mentor: Professor Kenneth Payne, Fine Arts

My planned activity is to research existing historic texts on cupola then design and fabricate a cupola that is capable of producing 150 lbs of iron per tap. I will engineer the outer shell and fabricate it from steel. I will line the shell with 3000 degree refractory. Cupolas were first used in England in the late 1700's. Originally designed by John Wilkinson as portable iron melters they helped to fuel the industrial revolution. Sculptors have adapted the original designs to help produce their sculptural work. I plan to present working drawings, notes on my research and design, pictures of me working on the cupola, and photos of iron being poured from the furnace.

**Presentation Type and Session:** Poster IV

## **Green Arts and Living**

**Garrett Fallin**, Art Education

Faculty Mentor: Professor Shirley Hayes, Art Education

Have you ever gone to sleep in a California redwood tree two hundred feet above the ground? Well I have, and my project explores that very trip I took to California and the environmental artist I lived with, Brent Sumner. Brent is a New Zealand native, who currently lives in Los Gatos, California working on his "green-living" architectural projects. What makes him so unique is the material he uses to build with – Darjit –which is a 95% recycled, non-toxic, and natural compound he created and patented himself. Camcorder in hand, I explore his seemingly bizarre ways of living, working, and interacting with nature in attempts to create a much more habitable and sustainable world. My project will cover topics such as "Green Housing," "Organic Art," and "Environmental Expenses."

**Presentation Type and Session:** Poster VII

## **The House of Blue Leaves: Theater Design and Technology**

**Lee Becker, London Lee, Amanda Michael, Christopher Stowell, Benjamin Streeter, Jennifer Williams,** and **Margaret Wirth**, THA 234: Introduction to Theater Design and Technology

Faculty Mentor: Professor Carol Beckley, Theater

Have you ever seen a theatrical production on stage and found yourself in awe of how realistic everything felt? Or found yourself in a completely different world? Well, we are here to introduce you to how that world is created. We took a step back in time, to Queens NY, 1965, the time and place of the Pope's first visit to America and the setting for the play "The House of Blue Leaves". We researched and investigated the time period including the fashions of the day, current events, architecture and decor. All the designs are original and reveal each student's point of view and artistic choices. The design process and product will be explored through research boards, costume

sketches and scenery sketches. Each design solution has unique qualities and originality that reflect and reveal the play and the vision of the designer. We welcome you into our world of "The House of Blue Leaves".

**Presentation Type and Session:** Poster III

## **The Integration of Carved Stone With Metal**

**John Harris II**, Jewelry Design/Anthropology

Faculty Mentor: Professor Stephen Saracino, Design

Can metal be fully integrated with stone through design and technique? The two materials are quite different. Since stone is brittle, and metal is malleable, it seems that the difficulty of working both materials together would far surpass the possible aesthetic outcome. Through the experience gained over the years that I have spent studying stone and metal, I plan to show that two very different materials, such as stone and metal, can be worked into one successful piece through the use of the primary qualities of the differing materials. In my presentation, I plan to have an entirely complete stone and metal mask on display with photographs of the work in progress. Images of the tools used to carve the stone, as well as images of the slow evolution of the piece, will be the major components of the poster.

**Presentation Type and Session:** Poster VI

## **Kinetics and Animatronics In Art**

**Zachary Pritchard**, Fine Arts (Sculpture/Painting)

Faculty Mentor: Professor Elena Lourenco, Fine Arts

The desire to incorporate movement with life-like castings of figurative representations is inspired by my interactions with the individuals around me. This summer I set out to research various ways of constructing mechanical systems to apply subtle movements to my artwork. Through my research, I became familiar with motors, cams and switches with which to create these movements. I then focused my attention on the exterior material that would be controlled by the mechanical infrastructure, which led me to further research mold-making and casting materials. This field is so diverse and specific to each application that I spent more time than anticipated in research and experimentation, with great success. I learned of a silicone-based material perfect for these types of animatonic movements. This material can render life-like accuracy while also enduring the movements of these mechanized systems. As I hone my skills in the areas of mechanical fabrication and life-casting, I am working towards combining these processes in the production of fragmented figurative sculptures with slight gestural movements intended to imply subtle communication with the viewer. I plan to present the work that I create with these new processes in a gallery exhibition. I will have several sculpture pieces, as well as my sketchbook, notes, and any related maquettes on display.

**Presentation Type and Session:** Display V

## No Longer Only a Man's Career: Women In Instrumental Conducting

**Keilah Bradley**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Ricky Fleming, Music and Professor Andrea Guiati, Director, All College Honors Program

Historically, when it came time that the rehearsal and performance of music required a conductor, it was considered a male's career. Quite recently, female instrumental conductors have begun to flourish. The numbers of females in this field, especially those obtaining doctorate degrees, are beginning to increase. So, what social, financial, and or educational influences may have caused this change to take place? Research on the historical background of instrumental conducting and the development of women conductors as well as survey results from current, doctorate holding females in this field will provide the answers to these questions. What will the increase in females mean for instrumental ensembles and conductors in the future? One outlook is that there will be more females with doctorates added to the number of role models in the field in which student musicians can look up to. Adding to this, I expect that we will see the number of female instrumental conductors increase even more dramatically in the near future.

**Presentation Type and Session:** Poster VII

## Non-Traditional Metal Forming Technique (Metal Foam)

**Rachel Timmins**, Design (Metal/Jewelry)

Faculty Mentor: Professor Stephen Saracino, Design

For my research, I wanted to take a technique that is used on an industrial level and bring it down to a smaller scale that could be used in metalsmithing or jewelry. Many industrial techniques are done with large, dangerous machinery and can come off as being intimidating; especially to someone like me or you. The idea of taking a technique that is potentially hazardous to the people making it on a large scale and shrinking it down to a level that I might be able to comprehend interests me greatly. Certain companies have decided that producing large quantities of Metal Foam is worth the risks that making the material entails. As humans, we do things that put our lives and others' lives at risk. For example, we drive cars, which are potentially lethal weapons that are terrible for our environment and might possibly be the reason that our society is generally and generously overweight. But we continue to make cars, bigger, faster and they guzzle more fuel. Metal foam is made out of very fine metal powder (which if inhaled in abundance can cause major issues in the lungs), titanium hydride (which is potentially explosive if it comes in contact with water or any liquid before it is heated) and the process used to make the chemical and the metal react, 925 degree Fahrenheit heat (which can potentially cause severe burns to our skin), makes the process somewhat risky even when brought down to a very small scale. I took this on like

a game of 'Truth or Dare'. I discovered many truths about this material and I took the dare to make it without scientists, engineers or fancy equipment. On an industrial level, metal foam is used for impact protection. It is very lightweight (as it is usually made from aluminum) and extremely strong and durable. I think that the conceptual implications of wearing something that is used for protection (ie: garlic or crosses protect from vampires) and the idea of superstition are intriguing. I also believe that the visual and tactile textural qualities of the foam are quite beautiful and random.

**Presentation Type and Session:** Poster VI

## Pho Malpica: Shark Finned Coup

**Angela Lopez**, Arts and Letters

Faculty Mentor: Professor Janet Reed, Theater

Pho Malpica: Shark Finned Coup is a performance/installation that incorporates live sound manipulation, dance, projection, kinetic sculpture and installation. Each vignette of the performance incorporates different perspectives on the same basic themes. . . shark finning, long-line fishing and the effects of sonar on aquatic ecosystems. The performance is relatively static due to the environment the installation inhabits. A room/nook/open floor space may be required in order to produce the event. The piece includes a 10 ft. fabric sculpture of a thousand finned kinetic shark that is suspended within the performance space. In the foreground are two red apparatuses that resemble a  $\frac{3}{4}$  height set of parallel bars (used in a section of the performance.) There are several dance excerpts that are performed live in the center of the installation throughout the duration of the event. They are physicalized examples of the images, sculpture and sounds within the space. The projection elements are textural interpretations of the themes mentioned. Their light is thrown on the performers, viewers and sculptural objects; the light and shadows created by the viewers, performers and projections then interact directly with 4 light sensitive theremins. These theremins emit a cacophony of extended sonar ping samples. Depending on where bodies and objects lie in space, the theremins react to motion and light as if the devices were a form of sonar detection. This is a multi-media performance event that attempts to connect the viewer to the subject matter through multi-directional stimulation of the senses. I hope to entertain the audience while making new information both visual and contextual more accessible to the viewer.

**Presentation Type and Session:**

Performance Friday, April 30, 3:15 – 3:45 p.m.

Location – Dance Studio, Rockwell Hall B22

## Preliminary Paintings For the Buffalo State Dining Facility

**Natalie Woysner**, Fine Art

Faculty Mentor: Professor Lin Xia Jiang, Fine Arts

The paintings produced for this series of work depict cuisine from eight major cultural and geographic regions of the world.

Each country was chosen because of its presence as a major food category in the world as well as its prominence in the west as a largely represented food group. In these paintings I hope to convey a connection between the sensory impact of the food and the vibrant and sometimes lush quality of the paint. The evocation of cuisine as a sharing of common ground in culture was a focus while painting and composing this work. I feel the consistency of the square canvas shape as well as the gradient of value from the first painting to the last will give a sense of connectedness between the cultures while highlighting the uniqueness of their foods. I hope these images will compel the viewer to be appreciative of cultural diversity in the forms that are present even day to day, especially on the Buffalo State College campus.

**Presentation Type and Session:** Display V

### **Pulley Chair With Custom Designed Suede**

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

Faculty Mentor: Professor Sunhwa Kim, Design

My approach to design is a fusion between aesthetics and invention. In the beginning phases of my creative process, I drew ten unique chair ideas. I then searched the Internet for chairs similar to my drawings. I picked the drawing that was the least like any other on the Internet, ensuring originality. I go through these measures because I believe that a good designer creates objects that are completely fresh ideas, not just the same old things in new packaging. For this project I used a combination of purpleheart and poplar. Purpleheart is an exotic lumber from South America and poplar is a light weight domestic lumber with green hues. I designed the pattern on the suede using Adobe Illustrator, and had it printed with dispersion dyes. The pattern was based off the chair, and includes a color combination based off of the natural colors of the lumber. I created this chair to be comfortable for reading. The versatile design of this chair allows access from either side. When a person sits on one cushion, the pulley system raises the other cushion to become the backrest. I am also in the process of building a floor lamp that matches this chair.

**Presentation Type and Session:** Display VII

### **Rediscovering "Entry Level Status"**

**Candace Morrison**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Andrea Guiati, Director, All College Honors Program and Professor Cristina Pippa, Theater

Playwriting is a challenging, yet immensely rewarding undertaking. When crafting a script, one must be aware of the individuality of each character, the comprehensive story at work as well as any social connections; and of course, an interesting play must be socially charged! In the fall of 2008, I wrote Entry Level Status a story about a college-age man choosing to join the Army. In the fall of 2009, I submitted the script to an apprenticeship program through New Plays on Campus, which is part of the Playwright's

Center. Although I did not receive the apprenticeship, I did garner helpful feedback from the process. Also as, I am now a member of the PWC; I have an abundance of opportunity to submit my work. Through the grant, I have learned the business side of playwriting.

#### **Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **Set Design**

**Alanna Stecura, Tamara Strowger, Mouminatou Diallo,** and **Victoria Palmiotto**, THA 337: Set Design

Faculty Mentor: Professor Carol Beckley, Theater

The Set Design class has been working to translate the elements of design into aesthetically pleasing, unique, and practical theatrical sets. When designing a set, many factors must be taken into consideration including colors, textures, balance and composition. Combining these elements has a profound impact on the mood, theme and action of a performance. In our presentation, we will present all of the steps to a successful set design including script analysis, collages, research boards, and small scale models.

**Presentation Type and Session:** Display I – III

### **Short Plays By Christopher Durang**

**Erin Clarke, Laura Mooney, Mike Delaney, London Lee, Lee Becker,** and **Maggie Wirth**, THA 400: Voice and Movement

Faculty Mentor: Professor Joe Price, Theater

Theater Performance majors spend our first year taking Acting I our first semester followed by Voice and Movement the second semester. These classes serve as a foundation in acting technique, physicality and voice production and provide the means to creating characters and bringing them to life on stage. The six of us have worked hard in class this year and we'd like to deepen our understanding of the acting process by presenting these short plays by Christopher Durang as part of the Creativity Festival. We aim to present four short one-scene plays, so that we can explore techniques learned in class and examine Durang's nature as a playwright. We hope to connect to his dark and absurd style of comedy. We aim put the acting tools that we've explored in class into practice and develop our theoretical understanding of these tools into the living process of an actor. While three of us were in main-stage theater productions here at Buffalo State this year, this will be something completely different and would be both a fantastic learning opportunity and a chance to share what we've learned this year. These short plays are all comedies and have casting opportunities for all of us. They have characters that are ideal for a variety of acting styles and vocal and physical choices. We hope to bring enjoyment to the audience in addition to exploring our work as actors. It would be wonderful to be able to bring the audience along on the absurd and hilarious journeys of Christopher Durang.

#### **Presentation Type and Session:**

Performance Friday, April 30, 8:00 – 9:30 p.m.

Location – Flexible Theater, Donald Savage Building



## Stuck On You: A Profile of Pins

**Veronica Keymel**, HON 400: All College Honors Colloquium  
Faculty Mentors: Professor Stephen Saracino, Design and Professor Andrea Guiati, Director, All College Honors Program

Supposedly all lasting art is the creation of significant form, an idea originally put forth by Clive Bell in his book "Art." Intrigued by the idea I decided to pursue it further by creating a modest portfolio of pins. I have always enjoyed 3-D design, especially as it applies to jewelry, making it a natural choice for a body of artwork that seeks to answer what makes a piece have significant form; hence be aesthetically pleasing. Limiting myself to pins means specific focus on a certain set of design problems, and not having to worry about adapting forms to earrings, rings, or necklaces. Pins also have infinite compositional possibilities: allowing me to incorporate found objects, interesting techniques, design principles, and other mediums outside of metal in search of significant form. Success in this search for elegant, simple jewelry cannot entirely be self determined however, it must therefore be judged by an impartial audience of critics. Such essential judgment is the end goal of producing these pieces for display, as well as the benefit of gauging personal improvement of my jewelry design skills.

**Presentation Type and Session:** Poster VI

## Tear Repairs In Paintings: An Evaluation of Tensile Strength of Canvas Reweaving Techniques

**Laura Lang**, Physics Education  
Faculty Mentors: Professor Gregory Smith, Art Conservation and Professor James Hamm, Art Conservation

This research project involved testing the strength of different adhesives used to repair torn canvas fibers in simulated damaged paintings. The purpose of this testing was to determine objectively a suitable bonding agent to mend tears in canvas paintings. When repairing a torn canvas, an ideal bonding agent would be strong enough hold the broken fibers together through normal transport and display of a painting, but still weak enough to break if stress is applied to the area again. In addition, adhesive characteristics such as working properties and changes upon aging were also considered. The repairs were done with a variety of techniques as well as adhesives on single linen fibers and 1 inch tears in larger linen canvas samples. An Instron tensile tester was used to determine load at yield, modulus, and elongation for the adhesive/canvas composites under uniform strain rates. Jade 403, a polyvinyl acetate adhesive, was found to be easy to apply, to confer adequate strength, and to allow for modest strain in the tear before breaking.

**Presentation Type and Session:** Poster IV

## Wavelengths: Sculptural Use of Light

**Eligh Hanning**, HON 400: All College Honors Colloquium  
Faculty Mentors: Professor Andrea Guiati, Director, All College Honors Program and Professor Kenneth Payne, Fine Arts

Lights have a transformative quality on the environment and when lights are used in the realm of sculpture, they can be used to explore the relationship between light and environment while maintaining an aesthetic presence. Exploring works by minimalist artist Dan Flavin, it is evident that fluorescent lights can be used to impact the environment, however through further sculptural exploration lights can create an environment and impact the audience on a highly personal level beyond minimalism. Through conceptual sculpture and the use of fluorescent lights, it is possible to create an environment that alienates the audience while creating an accessible atmosphere. The minimalist aesthetic of fluorescent lights in an enclosed white room suggests a deeper meaning than visual appeal and thus sculpture can individualize the viewer's interpretation of light and environment. Artwork must be experienced therefore concluding light as conceptual art.

**Presentation Type and Session:** Display VII

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# ***Business, Fashion & Textile Technology, Hospitality and Tourism***

## **Brand Loyalty of Female Students When Purchasing Jeans**

**Stacy Helinger**, Fashion and Textile Technology, **Nicole Williams**, Fashion and Textile Technology, **Rina Nowell**, Fashion and Textile Technology, and **Laura Gorgen**, Fashion and Textile Technology

Faculty Mentor: Professor Liza Abraham, Technology

Brand loyalty is the extent of the faithfulness of consumers to a particular brand, expressed through their repeat purchases, irrespective of the marketing pressure generated by the competing brands. Consumers that are loyal to a particular brand are an asset to that company. They not only make repeat purchases, but they also market and bring in new customers through word of mouth. Phillip Kotler (1971) composed a spectrum of four characteristics that define the behavior of brand loyal consumers categorized as hardcore loyalty, soft core loyalty, shifting loyalty and switchers. Consumers often seek branded products as a point of reference when making purchasing decisions, and college females are often savvy shoppers who want the best value at the best price. The purpose of this study is to examine the apparel brand loyalty of college woman when purchasing jeans based on their fashion ability and external influences. The objective of this study is three fold: 1) Identify customer loyalty to a brand of jeans, based on peers, media and fashion ability. 2) Determine the extent of repeat purchases of a brand as it related to jeans. 3) Determine shopping habits and amount of money spent on jeans compared to other items of clothing.

**Presentation Type and Session:** Poster I

## **Comparing and Contrasting Women's Formal Wear In the 1920's To 1960's, and Their Influences on 20th Century Formal Wear**

**Kelly DiNicolartonio**, Fashion and Textile Technology, **Elece Gardner**, Fashion and Textile Technology, and **Melissa Mclasky**, Fashion and Textile Technology

Faculty Mentor: Professor Liza Abraham, Technology

We are exploring women's formal wear as it evolved through the 1920's to 1960's and the latter part of the 20th century. Our presentation covers elements that have changed and repeated themselves over the years. With reference to Survey of Historic Costume (Tortora Eubank) and studying formal wear at the Historical Society in Buffalo, the elements we are including are fit, patterns, colors, styles, embellishments, silhouettes, and fabric content. In the 1920's, women's formal wear was influenced by

the societies change after World War I. According to Survey of Historic Costume, women felt free from the restraints of the past. Women began to smoke, drink, dance, and changed their image with makeup, sequence, and cutting their hair. In the 1960's, some dominant silhouettes worn by women were a chemise-type of an A-line trapeze as well as the narrow-wasted full-skirted design. From our hands-on research we will examine the 1960's as a time of beading, long gloves, fur, silk, and opera jackets. We are researching women's role and their social life in order to see how these factors impacted their choice of formal wear.

**Presentation Type and Session:** Poster I

## **Corporations Take a Hardline Approach To Social Responsibility and Improve Their Bottom Line**

**Kristin Antis**, FTT 450: Issues in Fashion/Textile Industry

Faculty Mentor: Professor Keungyoung Oh, Technology

This research investigates how apparel companies' involvement in social responsibility efforts affects their business and marketing campaigns and financial success. It also looks at consumers' perception of apparel companies that are socially responsible. Corporate Social Responsibility (CSR) includes a range of issues, namely corporate ethics, community involvement, and environmental issues. According to the World Business Council for Sustainable Development, corporate social responsibility is "the ethical behavior of a company towards society. . . management acting responsible in its relations with other stakeholders who have a legitimate interest in the business". Preliminary research showed that CSR may play a positive role in the financial success of a company as well as consumer perception of the company. Extensive review of literature on apparel companies' CSR activities will be performed to understand the various forms of CSR and their relationship to business performance.

**Presentation Type and Session:**

Oral – Fashion & Textile Technology

## **Cosmetics In the Life of Twentieth Century Women**

**Megan Aiello**, **Asia Davis**, and **Stephanie Ortolani**, FTT 450: Issues in Fashion/Textile Industry

Faculty Mentor: Professor Liza Abraham, Technology

Cosmetics started being used since 3500BC. A cosmetic is a substance used to enhance the appearance or odor of the human body. Women over the centuries have shown a great interest in cosmetics, from skin care to hair to makeup to perfumes and lotions. Cosmetics have always played an important role in women's lives. Use of cosmetics has increased with the changing role of women in the work force. "Cosmetics used did significantly affect impressions of attractiveness, femininity, and morality" (Workman 1991). Our study is designed to identify the cosmetics manufactured in the

20th century and the role of women and their impact on the use of cosmetics. We also are determining the amount of money spent on these products in the 20th century. Our methods include examining company documents, magazines, historic text, and visits to museums to collect information.

**Presentation Type and Session:** Poster I

## **Current Problems In Apparel Logistics and the Solutions**

**Jenny Kim** and **Kelley Thompson**, FTT 450: Issues in Fashion/Textile Industry

Faculty Mentor: Professor Keungyoung Oh, Technology

Our research paper is focused on the future of logistics and what it means for the fashion industry. Logistics includes the flow of goods, information, resources, energy, and possibly people. Logistics started getting more important and advanced in the 1980s and since then it continued to grow mainly as a necessity as companies expanded. It was actually Federal Express (FedEx) that created the intelligent marketing scheme making people believe that they needed their packages immediately, as in next day delivery. As generations became more impatient due to the technological advancements, the demand for more faster and efficient logistics increased. Today, time and money couldn't be more closely connected than they already are. In this research, two logistic systems, food logistic and apparel logistic, are compared to find out how the apparel systems could be modified and improved. The purpose of the research is to define current problems in apparel logistics including fast fashion and to suggest solutions for the future of the logistic system in the apparel industry.

**Presentation Type and Session:**

Oral – Fashion & Textile Technology

## **The Dark Side: Counterfeiting and the Consumer**

**Jenelle Jones** and **Kadeem Johnson**, FTT 450: Issues in Fashion/Textile Industry

Faculty Mentor: Professor Keungyoung Oh, Technology

There are many illegal and unethical business practices in the world of fashion. In today's society, few people seem to value the workmanship and creativity of original garments or high-priced items. Counterfeit and knockoff goods have a home in big cities like, New York City where slews of warehouses have been shut down and the items have been confiscated. Fifteen to twenty percent of the goods available in China are known to be counterfeit products and that number continues to increase steadily. From Hong Kong to Beijing and from New York City to Los Angeles, counterfeiting is on the rise and fashion companies are teaming up with law officials to crack down on these contractors in an effort to cease the distribution of merchandise. But what about consumer ethics? This paper analyzes the characteristics of consumers who are prone to purchasing counterfeit goods. The comparison of consumers

purchasing counterfeit products in different countries is also of interest in this study.

**Presentation Type and Session:**

Oral – Fashion & Textile Technology

## **Discovering China 2009-2010**

**Joel Mensah**, Business Administration, **Esther Ariyibi**, Business Administration, **Sandra M. Parker**, Business Administration and Public Communication, and **Hugh Burnam**, Ethnic and Minority Studies

Faculty Mentor: Professor Christine Lai, Business

In December 2009, a group of 17 Buffalo State College students traveled to China for a three-credit course that provided students with the opportunity to observe first-hand China's dramatic development. The group spent two weeks traveling in two major cities in China. The itinerary included Beijing, the capital of the People's Republic, as well as Chengdu in Sichuan. Traveling to the latter enabled the group to remember solemnly the earthquake that initiated the SUNY-Sichuan exchange. While traveling in China, students observed both monuments of Chinese civilization from the past and evidence of China's recent dramatic economic development. The goal of this experience was to confront preconceptions by contemplating China's reality. In preparation for "Discovering China" students were assigned documentary videos. Written assignments including a reflective journal fostered this learning process.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

## **Fashion and Textile Industry and the Environment**

**Angela DiFrancesco**, Individualized Studies

Faculty Mentor: Professor Catherine Lange, Earth Sciences and Science Education

In today's society, we struggle to maintain a balance between material wants and environmental responsibility. As technology advances and our attention spans grow ever shorter, we create more waste than anyone that's come before us. The fashion and textile industry today is probably the most visible symbol of the frivolity, excess and waste that plagues our planet. My research explores this industry, from the sourcing and sustainability of textile fabrics themselves, to the millions of gallons of wastewater being discharged from the finishing of these fabrics, to the millions of miles traversed by garments as they are shipped around the world from textile factories to studios to warehouses to shopping malls, all spurred on by our insatiable hunger for more. There is an interesting relationship today between a desire to have the latest trends and a desire to 'go green', as in many industries, going 'green' has become a trend in itself. Is sustainable fashion something our society is willing to make a commitment to? Or is it just another passing trend?

**Presentation Type and Session:** Poster II

### **Gift Giving Among College Students**

**Rasheeda Phillips**, Fashion and Textile Technology, **Lindsey Mease**, Fashion and Textile Technology **Fatimah Muhammad**, Fashion and Textile Technology, **Stephanie Minchin**, Fashion and Textile Technology, and **Sara Orsolits**, Fashion and Textile Technology

Faculty Mentor: Professor Liza Abraham, Technology

In the United States about 300 billion dollars is spent giving gifts annually to friends, family members and significant others. The meanings behind gifts exchanged between men and women are important in our society. Every culture has their own interpretation of a gift, what it means and the value they have. At the same time each person has their own idea of gifts that are of value to them. In relationships these personal values may play an important role in sealing the connection between dating couples. The objection of this study is to examine how couples between the ages of 18- 30 give gifts to their significant others in a one year period. We are using a random sample of students in the age group from 18-30 who are in a committed relationship and have exchanged gifts in the last year.

**Presentation Type and Session:** Poster I

### **Green Fashion Trend: Zero Waste Garments**

**Tara O'Reilly** and **Stephanie Ortolani**, FTT 450: Issues in Fashion/Textile Industry

Faculty Mentor: Professor Keungyoung Oh, Technology

As the behaviors and needs of the consumer changes, so do the products that must be produced. As consumers become more eco-friendly, the need for green products has become much greater. This can be seen in the production of organic fabrics and the use of finishes and dyes made without harsh chemicals. The needs of consumers have been changing and retailers all over the world have had to find new ways out to accommodate them. Although going green is a huge trend, manufacturers are having a hard time going green 100% due to costs and resources. Consumers are accepting the products well but they are having a difficult time accepting the prices at retail. We are studying how a going green trend and sustainability affect the apparel manufacturing industry.

**Presentation Type and Session:**

Oral – Fashion & Textile Technology

### **Impulsive Buying Habits In Consumers' Apparel Purchases**

**Ashley Diamond**, Fashion and Textile Technology, **Ashley Stablewski**, Fashion and Textile Technology, **Corinne Carroll**, Fashion and Textile Technology, **Christina Ambrosio**, Fashion and Textile Technology, and **Calli Thompson**, Fashion and Textile Technology

Faculty Mentor: Professor Liza Abraham, Technology

Impulse buying is an urge to purchase an unintended item based on an immediate stimulus object and accompanied by a feeling of pleasure and excitement as well as satisfaction. Impulsive buying can have a positive or negative effect on a consumer.

Although acquiring new merchandise in reasonable amounts can be an innocent and enjoyable experience, it can also have a harmful long term affect. Buying large amounts of merchandise without the need can be dissatisfying and can affect a consumer personally as well as financially. It has been found that people who have low self esteem and or negative personality traits tend to be more likely to act impulsively than those with high self-esteem and positive personality traits. (Beatty & Ferrell, 1998) Our study is assessing the dimensions of impulsive shoppers and their impulsive spending habits. We also are investigating the self-esteem and personality traits of impulse shoppers.

**Presentation Type and Session:** Poster I

### **The Innovation of Technology**

**Mariah Lester**, FTT 450: Issues in Fashion/Textile Industry  
Faculty Mentor: Professor Keungyoung Oh, Technology

Over the past few years we as consumers have faced significant challenges and even unstable global political problems. Some problems arise due to the fact that there are many difficulties in technology services and products. The purpose of our study is to evaluate new technological innovations and associated products and services in apparel industry. The study will discuss several innovations in apparel manufacturing, products and services in retailing. It will also include the benefits and the drawbacks of technological innovation in apparel industry.

**Presentation Type and Session:**

Oral – Fashion & Textile Technology

### **Internet Shopping Behavior In Women's Apparel**

**Rachel Masters**, Fashion and Textile Technology, **Melissa Callahan**, Fashion and Textile Technology, and **Mariah Lester**, Fashion and Textile Technology

Faculty Mentor: Professor Liza Abraham, Technology

According to the Washington Post, in 2006 "Internet retailing has been adopted in the fashion industry as a complimentary channel for product distribution, resulting in annual sales of \$18.3 billion in 2006 and fashion products became the most frequently purchased product category online (Mui, Washington Post, 2007)." It is predicted that shopping through Internet is going to rise to \$25.9 billion this year. Although, figures show that apparel is frequently purchased over the Internet, 60% of online shoppers have not purchased apparel online. The finding from this study will help identify reasons people choose or reject the Internet for shopping of apparel needs. We are administering a survey among college female students in the age group 18- 24yrs.

**Presentation Type and Session:** Poster I



### **Location, Capacity, and Convenience: Obstacles Event Planners Face When Choosing a Venue**

**Joey Gansworth, Katie Helbig, Mary Henseler, Kurtis Kowalezyk, and Phillip Weiss**, HTR 375: Event Management  
Faculty Mentor: Professor Kathleen O'Brien, Hospitality and Tourism

As they say in real estate, location is everything according to Judy Alan (2009). This student group aims to understand the problems organizers face when choosing venues for a particular event. The question: "What are the obstacles event planners face when choosing a venue?" will be posed in a survey of local event planners and will provide data for research. Also, the Buffalo State College Gala Event held at the Connecticut Street Armory serves as a case study, where hospitality students will complete Event Management Fieldwork. The primary purpose of the research design is to outline the challenges of site selection, an essential component of all special events. The results of the survey and case study analysis will lead to a deeper understanding of the decision-making process relative to location selection. Students will outline the desirable characteristics and list the pro's and con's of selected venues and publish as a reference for use by event planners. This will help event professionals overcome the stated obstacles when choosing a venue.

**Presentation Type and Session:** Poster VI

### **Money Well Spent? Are U.S. Subsidies For Apparel/Textile Companies Really Worth the Money?**

**Alisha Shantz and Anthony Scaparo**, FTT 450: Issues in Fashion/Textile Industry  
Faculty Mentor: Professor Keunyoung Oh, Technology

The word subsidy is derived from the Latin word, *subsidium*, which means support, aid, and assistance. These subsidies are government granted funds given to businesses to help financially, in effort to prevent the decline of that industry. However, this word has been lost and replaced with the definition of corporate greed and misuse of government money. Our study focuses on the United States apparel subsidies and international conflicts that arise through the misuse of government spending. To find answers to the question 'is U.S. Subsidies worth tax payer's dollars' we are examining case studies covering the effects subsidies on the economy. Our focus is to address whether subsidies are worth the millions of taxpayers' dollars and whether they are just causing more conflicts between countries. It is also of interest to study the effects of subsidies for apparel and textile companies on society. We will compare the positive and negative effects of US government's apparel subsidy system on the growth of apparel industry domestically and internationally.

**Presentation Type and Session:** Poster I

### **Negative Effects of Advertising In the Textile Industry**

**Meghan Gleason and Ashley Toth**, FTT 450: Issues in Fashion/Textile Industry  
Faculty Mentor: Professor Keunyoung Oh, Technology

The problem facing young women today is that fashion media can affect their self-esteem as well as their perspective of what the human body should look like. Throughout our experiences, fashion advertising in the media has affected how we perceive ourselves as well as others. This attitude comes from years of being subjected to the media's view of the "perfect woman". This study focuses on the different ways people, especially young women, are affected by media. Our preliminary research showed that the textile industry would continue to produce a negative influence on consumers' perception of their own bodies. We will show photos and real life examples of women who are affected by the media. Some of these real life examples include eating disorders such as anorexia and bulimia and self-manipulation.

**Presentation Type and Session:**  
Oral – Fashion & Textile Technology

### **New Internet Technologies Used To Promote Retail Stores**

**Stephanie Minchin**, FTT 450: Issues in Fashion/Textile Industry  
Faculty Mentor: Professor Keunyoung Oh, Technology

The Internet is an ever growing and improving global system that connects its users around the world. This complex set of networks brings to us immediate information at the click of a button. Individuals are able to access virtually anything they want through the form of a Web site. Throughout the past decade, retail stores have begun to use this popular system to help promote their business on a global scale. Retailers use the Internet to constantly stay in touch with their customers and to help promote their business at all times. But how are retailers able to do this? Through the vast and constant technologies being both improved and created throughout the Internet. Advances such as 3-D technologies, web streaming, Web 3.0, and web mining make this all possible. The focus of this presentation is on the usage of these new Internet technologies and how they will effect the online promotion of retail stores in the future.

**Presentation Type and Session:** Poster II

### **On the Brink of the Falls: Governor David A. Patterson's Budgetary Cuts to State Parks**

**Kristine Shumway**, HON 400: All College Honors Colloquium  
Faculty Mentors: Professor Kathleen O'Brien, Hospitality and Tourism and Professor Andrea Guiati, Director, All College Honors Program

Governor Patterson and the New York State Legislature have decided to cut \$20 million from the state parks budget. This cut has forced the State Office of Parks, Recreation, and Historic Preservation to announce the closing of 41 parks and 14 historical

sites. My current employment at Delaware North Companies, in Niagara Falls State Park, gives me the unique opportunity to investigate the impact of a state park closure on the local community as well as the state. This country's recession has made it difficult for families to enjoy some of the luxuries that they may have had before. Expensive vacations have been changed to family vacations at state parks. These "stay-cations" multiply in number when the country is experiencing financial difficulties. Closing these parks takes away the opportunity for families to experience the local tourism and put the state at risk of losing revenue from park admissions and recreational spending by local, regional, national and international tourist markets. Also, I will prove that closing state parks will put hundreds of people out of work adding to the downward spiral of unemployment in the hospitality and tourism sectors. My research pertaining the state budget cuts as well as my work experience at a multi-national corporation with contracts in Niagara Falls State Park, put me in the perfect position to explore the effects of state park closures on park employees, the and the local communities.

**Presentation Type and Session:** Poster VIII

### **Premier Events: Education and Fundraising Inc.**

**Tessa Maldonado** and **Raheem Webb**, HTR 375: Events Management

Faculty Mentor: Professor Kathleen O'Brien, Hospitality and Tourism

After researching the Buffalo State College database, we found articles that addressed the roles of event planning in secondary and higher education institutions. The purposes include fundraising, entertainment and other reasons. This presentation is a comparative study that examines the reasons for incorporating fundraising events into educational settings and analyzes the successes and failures of those efforts. The authors of this study are both hospitality majors enrolled in Events Management, an elective in Hospitality Administration. Learning the different aspects of planning fundraisers and have been presented in class, including the possibility of both successful and unsuccessful outcomes. We will graph and chart data which depicts outcomes of two different events we participated in; Nardin Academy Fortune 2010 and the Buffalo State College Gala 2010. This study will lead to information that improves the event planner's chances for successful fundraising events.

**Presentation Type and Session:** Poster VIII

### **Renting vs. Owning Audio Visual Equipment for Events**

**Jeffrey Osterer**, Hospitality and Tourism

Faculty Mentor: Professor Kathleen O'Brien, Hospitality and Tourism

I would like to research to topic of audio and visual equipment for events. In this study I would like to view both the pros and cons of renting audio and visual equipment. I will do this by interviewing

different people in the field. I will also compare price lists on how much it is to rent equipment and how much it is to purchase equipment. Audio and visual aspects play a major role in forming an event. Without both audio and visual equipment it is very hard to pull off an event. I will look into the different prices and types of equipment people rent for their venues and how satisfied the venues were with the rentals that they acquired. I will then compare this to a venue that has their own in house equipment and inquire how they feel about owning the equipment and not renting things depending on the event being held. Once all of my information is in I plan on making a poster showing the satisfactory rates of out of house rentals to owning your own equipment as well as compare the spending for rentals versus owning equipment.

**Presentation Type and Session:** Poster VII

### **Sexuality and Race: Prejudice In Fashion**

**Jaida Van Putten** and **CaSandra Reid**, FTT 450: Issues in Fashion/Textile Industry

Faculty Mentor: Professor Keungyoung Oh, Technology

The fashion industry is nothing more than a sponge soaking up ideas, opinions and deeply held beliefs from society. It has been criticized for its omission of different ethnicities on the runway, in print and on the design end for years now. The fashion industry not having fair cultural and racial representation in these fields, raise serious societal problems. In the past, the fashion industry had been viewed as being feminine. Today, there are more successful male designers than female designers. Not only do they design for women but they design for men. Men are beginning to gain more interest in modeling in various fields from underwear to couture menswear lines. Fashion is available to all genders, races, and ethnicities but sometimes diversity is not reflected in the fashion industry. In this research, the issues of diversity and sexuality in fashion industry are discussed.

**Presentation Type and Session:** Poster I

### **Social Status: Are They Defined By Fashion?**

**Jenelle Jones**, **Michael Frazer**, **Victoria King**, **Allyson Mack**, and **Sarafina Hooper**, FTT 355: Research in Fashion Merchandising

Faculty Mentor: Professor Liza Abraham, Technology

Social status is the position or rank of a person or group within the society. It can be determined in various ways; however the quickest and easiest way to achieve high social status within the African American college community is to be stylish, innovative and confident. The purchasing behavior of African Americans has attracted the attention of marketers not only because of the billions of dollars they contribute to the marketplace but because of where the majority of this money is spent. Clothes and beauty products make up a high percentage of income spent by African Americans (The Buying Power of Black America). Why is this so important? The objectives of our study include: to explore the dimensions of social

status among African American college students and to explore the depths of frivolous spending among African American college students. We also are exploring the importance of clothing and personal style within the various cliques of African American college students.

**Presentation Type and Session:**

Oral – Fashion & Textile Technology

## **Sports Tourism: The Impact On Buffalo**

**Jeanelle Canelo**, Individualized Studies

Faculty Mentor: Professor Chenchen Huang, Hospitality and Tourism

Tourism is one of the fastest growing industries in the world. Sport as a passive or dynamic activity has an important role in our lives. Sport tourism involves traveling and visiting destination for sporting reasons, either active or passive. The aim for this research is to analysis the importance of travel and sport tourism in Buffalo. This research outlines the benefits and reasons for growth of sports tourism and provides examples of the scope and opportunities within the sport field. It suggests ways to maximize potential by underlining the role of local sports, market resources more effectively and target new markets and segments for sport tourism. Recent developments, current situations, customers and products in buffalo are discussed throughout this research. Finally, this proposes a framework that highlights a biography from an interview with Jay Josker, a sport logistics coordinator for the Convention and Visitors Bureau.

**Presentation Type and Session:** Poster VIII

## **Tourism Management Group Report**

**Tahisha Brown, Calla Rudolph, Tiona Petty, Maria Mangine, Evan Cross, and Kristine Shumway**, HTR 418: Tourism Management

Faculty Mentor: Professor Chenchen Huang, Hospitality and Tourism

This report starts by looking at the cultural and heritage attractions in Buffalo, NY. In the beginning, we direct our attention on the current tourism products, current customers, and the market environment. Secondly, we focus solely on the Darwin Martin House through the tourism websites, newspapers, textbooks, a site visit and an interview with the Director of Operations, Margie Slehlik. We analyze the history, the issues they face, along with the organizations biggest opportunities. Then, we look at the organizations marketing plan and the strategies used to attract tourists. Lastly, we suggest ideas on how they can spend their marketing resources more effectively, what other market segments to target and other ways they can advertise.

**Presentation Type and Session:** Poster VIII

## **Virtual and Real-World Fashion Collections**

**Brittany Chonka**, Fashion and Textile Technology and **Melissa Marchand**, Fashion and Textile Technology

Faculty Mentors: Professor Elaine Polvinen, Technology, Professor David Brinson, Technology, and Professor Shenlei Winkler, Technology

Our projects address the possibility of fusing the virtual and the real world together by developing a virtual fashion collection and subsequently developing a real life collection that replicates the virtual one. This was an ideal time to research this concept since the theme of the spring 2010 Runway 3.0 show is Technology: Progression Obsession. We started with virtual world fashion collection research and development in the fall of 2009. During this initial phase under the guidance of Shenlei Winkler, Professor Polvinen and David Brinson we developed sketches, researched color and styling trends and developed a mood board for our collections. Our designs were selected to represent a collection for each of us to develop into virtual outfits. Real world collections began in spring 2010 with the purchase of fabric and development of life size garment patterns that reflect the virtual garment collections. Each garment has a specification and costing sheet. Each phase of our real world experience is documented in a journal for inclusion into a PowerPoint with and audio interview. This project concludes during the Runway 3.0 event on May 1st, 2010. Our virtual fashion show will play simultaneously while our real life garments are modeled on the Runway.

**Presentation Type and Session:** Poster II

## **Volunteer Recruitment and Participation In Special Events: A Comparative Study**

**Kevin Kilmurray**, Public Communications, **Jaelyn Evans**, Public Communications, and **Alissa Keller**, Restaurant Management  
Faculty Mentor: Professor Kathleen O'Brien, Hospitality and Tourism

Volunteers are the backbone of any successful event for most non-profit organizations. The Buffalo Urban League's mission is to "To empower African Americans, other minorities and disadvantaged individuals to secure economic self-reliance, parity, power and civil rights" according to their website. In doing so, the League has depended on a variety of volunteers in order to host special events over the years. Volunteers are crucial to the success of events for non-profits nationwide, including the Urban League. The organization's volunteers represent a variety of different demographics of Western New Yorkers. Kevin, Alissa and Jaelyn volunteered at the Buffalo Urban League's Annual "Taste of Soul" Event held on February, 27, 2010 at Erie Community College, Downtown Campus. The poster presentation submitted to the forum analyzes a cross section of volunteers that make events for the Buffalo Urban League possible and compares it with the volunteer group of another WNY nonprofit organization. The focus of this research is on volunteer recruitment

and participation for special events to benefit the mission of non-profit organizations.

**Presentation Type and Session:** Poster VII

### **Wasting Away the Suite Life: Pollution Prevention and the Buffalo Niagara Lodging Industry Hospitality and Tourism**

**James Bernsdorf, Corinne Brogan, Adam Goodman, Dayquan Mitchell, Monique Sayles, and Erika Severino,** HTR 495: Internship

Faculty Mentors: Professor Kathleen O'Brien, Hospitality and Tourism and Professor Lori Till, Hospitality and Tourism

More than fifteen years ago the hospitality industry was not considered as one which contributed to environmental pollution nor was it known to consume vast amounts of non-renewable resources (Kirk, 1995). Fast forward to 2010, when the moral, ethical, social, and political arguments for taking action on environmental issues are becoming more persuasive and more widely accepted. Now the hotel industry is taking various initiatives for the sake of the environment, for economic reasons, or to build a positive image (Chan and Wong, 2004). A hotel's compliance with "green" standards can be at the forefront of decision making by planners who seek lodging for large groups or by individual business and leisure travelers. This is one reason why the Buffalo Niagara Convention and Visitor's Bureau has decided to tackle "Pollution Prevention" through a program with the Erie County Environment and Planning Division. Erie County Environment and Planning Division named Buffalo State College's Hospitality and Tourism and Geography Departments together with the Buffalo Niagara Convention and Visitors Bureau as partners awarded a grant in 2009. The hospitality student interns implemented evaluation methods including assessment, water sense, process mapping, and an audit check list and monitor progress of area hotels in reducing, reusing, recycling and environmental sustainability. Students will present data that support their argument that the hospitality industry does consume vast amounts of non-renewable resources and needs to lead efforts in pollution prevention.

**Presentation Type and Session:** Poster VII

### **What's the Skinny?**

**Sara Tremaine and Emily Tolnay,** FTT 450: Issues in Fashion/Textile Industry

Faculty Mentor: Professor Keunyoung Oh, Technology

After doing much research about issues in fashion industry one issue stood out more than others. The sizes of models today are extremely thin causing psychological and body issues for men and women around the world. The unrealistic expectation to be this thin causes many to suffer from eating disorders. Many models have sadly died from eating disorders such as anorexia nervosa and bulimia nervosa. Models have a big influence on the public eye. They are seen every day in places such as the media or the runway. This is a huge issue in the fashion industry that calls for much concern. We examined the size of models and the effect it has within the culture,

how the size of models has become smaller through the years, eating disorders that effect not only the models but people globally and recommendations for change.

**Presentation Type and Session:** Poster II

### **When Cheap Labor Costs Too Much**

**Kelly Orme,** FTT 450: Issues in Fashion/Textile Industry  
Faculty Mentor: Professor Keunyoung Oh, Technology

I am examining the ethical issues globally regarding the effects that the U.S. outsourcing has on labor and human rights in developing countries along with how we affect the standard of living for people in these countries and their economic conditions. I am intrigued by the positive affects that sweatshops and cheap labor have for other countries economies. The fashion industry is very labor intensive and is always seeking other countries for resources including human resources. There are so many positives and negatives to using developing countries to produce products. We as Americans benefit from seeking other options for clothing construction, but how are the other countries benefiting? Each manufacturer has vendor compliance manuals protecting the rights of these beings the same as our rights are protected here; although we are unaware of the standards they set and how they are followed. Are we taking advantage of them or helping the cause? We are spreading the fashion industry to less fortunate countries, along with giving them jobs, and helping support their economies. Some companies in the fashion industry are seen as villains for taking advantage. How does deferring our high ethical standards potentially benefit developing countries?

**Presentation Type and Session:** Poster II



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# Computer Information Systems and Technology

## The Answer Is Blowin' In the Wind

**Luke Gill, Steve Clement, and Joe Bella**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Barry Yavener, Interior Design and Professor Andrea Guiati, Director, All College Honors Program

We are all well aware of the rising price of fuel and energy. It is a fact that there is a finite source of fossil-based petroleum on Earth, and we will need to seek an alternative(s) as these reserves run low. Can power-generating windmills play a key role in that alternative? Our team will research operational windmill farms and the results that these installations are experiencing. We will also probe the viability of small-scale windmills for home use. Preliminary research shows that large-scale wind turbine usage is an integral part of the energy generation “big picture” for the 21st century, but it is not a solution by itself. As a part of this research, we plan to construct a working model of a non-commercial windmill generator, and have it on display. With luck (and some wind), observers may be able to witness real-time power generation on a safe, small scale.

### Presentation Type and Session:

Display 11:00 a.m. – 1:00 p.m.

Location – Student Union Quad (outside library)

## Assessing Customer Service Effectiveness At Ingram Micro – Buffalo

**Katie Gregory**, INT 689: Research Design and Methods

Faculty Mentor: Professor John Earshen, Technology

A growing number of organizations are giving increased attention to customer service. Financial institutions, hospitals, public utilities, airlines, restaurants, manufacturers, and wholesalers face the problem of gaining and retaining the patronage of customers-internally. Building long-term relationships with customers has been given a high priority by the majority of America's most successful enterprises. But the core principles of quality management dictate that there is always room for further improvement. In her professional position at Ingram Micro, the investigator is currently implementing upgrades to the existing customer service methodologies. The research question to be examined in this study is: how has this most recent customer service improvement program impacted customer perceptions of customer service? Using a series of questionnaires targeted to different types of customers, we plan to develop a set of data that will help identify areas where successful improvements have been made and other areas that may require further work.

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

## Assessment of Lesson Plans For the NYSTEA Lesson Plan Database

**Bahadir Baykal**, INT 689: Research Design and Methods

Faculty Mentor: Professor John Earshen, Technology

Though the field of technology education is relatively new compared to other core subject areas in today's k-12 curriculum, the world's global economy is pushing politicians and other representatives in education to extend student exposure to technology beyond the traditional realms of math and science. Unfortunately, there is no widely accepted national standard for Technology Education in the United States. Efforts to accomplish this have been promoted by the International Technology Education Association (ITEA) and the New York State Technology Education Association (NYSTEA). NYSTEA currently seeks to solve the “no national standard” problem by creating a statewide database that will contain juried lesson plans/curricula. The database would be built by inviting New York State Technology Education Teachers to submit their lesson plans, have them peer-reviewed, and if approved, made available to anyone wishing to download them. This approach raises two concerns: 1) How will NYSTEA select its peer-reviewers, and 2) What criteria will be established to accept/reject submitted lesson plans for the site? The expected outcome of this research will be to provide a specific set of recommendations to NYSTEA regarding the establishment of this important website.

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

## Biodiesel Research For a Greener Tomorrow

**Alex Hubert**, Mechanical Engineering Technology, **Tyler Oehman**, Mechanical Engineering Technology, and **Margaret Nash**, Mechanical Engineering Technology

Faculty Mentor: Professor James Mayrose, Technology

The major technical challenge of this research project was the development of a solar powered biodiesel processing plant that converts waste vegetable oil from campus restaurants into usable biodiesel fuel. The overall goal of this project was to design a self-sustaining, small-batch biodiesel processing plant, which utilizes energy from the sun to produce a renewable source of fuel that recycles its own waste streams in order to reduce polluting byproducts. This processing plant is used to develop various formulas of blended biodiesel from renewable sources such as canola and soy that meet ASTM D6751 specifications. This project demonstrates the feasibility of biodiesel as a sustainable fuel supply with applications in industries such as heating, power generation and transportation. The data collected through this research will be used to pursue grant funding to further develop the system and to enhance the learning environment of the Buffalo State College Alternative Energy Club.

**Presentation Type and Session:** Poster V

## **Come Sail Away: A Look Into the Exciting World of Sailboats**

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

One of the most instrumental technological inventions that made the development of civilization possible is the sailboat. They transported people, goods, ideas and cultures to every corner of the world. Without sailboats, the world would not be as it is presently. Today however, sailboats are viewed more so as luxury and recreational items. The purpose of this research is to look at the amazing history of the sailboat and follow its evolution from unadorned utilitarian vessel to leisurely pleasure craft. Already preliminary research is showing modern boat making techniques are not much different from ancient practices. During research we will watch the progress of a local craftsman making his own sailboat by hand for the very first time and attempt to learn the unique and intricate language of the nautical world. Finally, I propose to use my research and put it to first hand experience later this summer at the Chautauqua Institute where I can learn to sail the very same boat I watched being built.

**Presentation Type and Session:** Poster VIII

## **A Comparison of Career and Technical Education Student Competencies To Employer Expectations**

**Jonathan Dewart**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

Career and Technical Education (CTE), as offered in many U.S. secondary schools, emphasizes student exploration of career options across a wide range of categories. CTE aims to provide hands-on vocationally oriented programming that strengthens the connection between traditional core school subjects (math, science, and writing) and real world applications. One program track offered to CTE students is: the 'Building Trades'. The 'Building Trades' are expected to create nearly one million new jobs over the next decade. Today however, some states are experiencing shortages of qualified applicants to meet this demand. It is believed that in New York State, availability of CTE 'Building Trades' programming may not be sufficient to meet anticipated long-term demand. It is further postulated that existing 'Building Trades' curricula may not be meeting the expectations of employers seeking entry-level personnel. This study will closely examine several CTE Building Trades curricula in New York State, with an eye toward articulating competency objectives as currently delivered. Then, we will compare these findings to a survey of competencies as articulated by a selected group of building trades employers. The research objective is to identify any gaps between the CTE 'Building Trades' curricula studied and the entry-level competency expectations expressed by employers. The outcome of this research will be to suggest a set of program-specific curricular modifications as needed.

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

## **Design of the Braking System For Buffalo State's Mini Baja Vehicle**

**Anthony Ubal**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

As in past years, Buffalo State is participating in the SAE Mini Baja Competition. This year's competition includes water competition and to prepare for this, we are redesigning the braking system to operate safely while transitioning between the water and dry events. Semi-metallic organic brake pads are being used in both the front and rear calipers. Rotors are being machined from low carbon HPSR steel with a nickel finish to ensure the least amount of wear during the events. After the new rotors and caliper system parts are installed, the vehicle should be able to handle the transition from the dirt portion of the course to the water events without losing its braking ability.

**Presentation Type and Session:** Poster IV

## **Developing In-house Capabilities For the Testing of Food-Safe Plastics: A Cost Comparison Analysis**

**Shaun Carl**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

Developing In-house Capabilities for the Testing of Food-Safe Plastics: A Cost Comparison Analysis Many companies are faced with the question of whether to outsource or develop capabilities in-house. Bureau Veritas Consumer Product Services (BVCPS) – Buffalo, is faced with exactly this type of question, relative to the analysis and testing of food-safe plastics for a variety of clients. Currently, BVCPS outsources these analyses to its partner labs in Kwai Chung and Kowloon Bay, China. It is the objective of this study to conduct a thorough analysis of the costs required to bring food-safe plastics testing back to the United States, specifically to the Buffalo facility. The research approach will be to identify and visit other similar labs with these capabilities and to examine the literature that informs this field of testing. Criteria for making a final recommendation will include not only cost to set up, but also on-going operating costs (employee requirements, specialized training, etc.). Armed with the results of this cost-comparison analysis, leadership at BVCPS-Buffalo can determine the economic viability of bringing this analysis in-house, paying full attention to best-practice requirements and international quality standards.

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

## **Development of a Curriculum For a Middle School Technology Education Course In Biotechnology**

**Edward Williams**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

Williamsville Central School District currently does not have a middle school technology education curriculum for Biotechnology. Biotechnology is one of three key areas of technology. Of the three, it

is the one with the least amount of curriculum material developed for the middle school classroom. It is the research objective of this project to design and implement a 13 week biotechnology curriculum for a test group of 8th grade students in the Williamsville Central School District. The curriculum will follow guidelines established by the district's Curriculum Council, and the New York State Standards for Technology Education. The methodological approach will be to obtain and study sample curricula currently in use at other districts within New York State. The expected outcome is to prepare a biotechnology curriculum that adheres to district standards and that reflects best practice as exhibited by key practitioners and scholars in this topic area.

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

## Effectiveness of a Technology Education/Engineering Program At the Elementary Level

**Aaron Mednick**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

The United States has fallen down the global academic ladder and desperately needs to encourage more students to take up careers in Science, Technology, Engineering and Mathematics (STEM). Technology Education (Tech Ed) can provide a wonderful introduction to these types of careers because the STEM concepts comprise the core curriculum of the typical Tech Ed classroom. For the past 20 years in the US, the field of Tech Ed has made significant strides at the middle and high school levels. State standards are now established in most states for grades K-12. The International Technology and Engineering Educators Association (ITEEA) offers national standards and curricular resources Tech Ed. Exposure to STEM concepts at the elementary school level is still relatively rare - there has not been much progress made at this level. The purpose of this study is to answer the following questions: 1) How effective could a Tech Ed elective be at the primary school level? 2) Why does New York State fail to mandate Tech Ed as an elective in its public primary schools? This project will examine the historical perspective of elementary Tech Ed with the intent of making recommendations for the future. A cohort of primary schools will be identified that do offer Tech Ed. A series of case studies will be conducted to examine the similarities and differences between curricula, with the aim of identifying what appears to be most effective.

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

## Fire-Fighting Robot Prototype

**David Schmidt**, Electrical Engineering Technology, **John Ryndak**, Electrical Engineering Technology, **Zach Zunic**, Electrical Engineering Technology, and **Kevin Anderson**, Electrical Engineering Technology

Faculty Mentor: Professor Steven Barker, Technology

A fire-fighting robot prototype has been designed and constructed. A fire-fighting robot could protect human fire fighters. In 2008, The National Fire Protection Association (NFPA) claims

that there were 36,595 injuries at the scene of a fire. The NFPA also claims that there were 29 deaths at the scene of a fire. The fire-fighting robot has the ability to move and to locate the most intense part of the flame, move toward it, aim the fire extinguishing agent at the fire, and then deliver the fire extinguishing agent, in order to keep fire-fighters away from the fire. The fire-fighting robot was programmed using an Arduino Duemilanove programming board. The programming was transferred to two ATMEGA 328 microprocessors, which control all motions on the robot. The robot is controlled wirelessly. The hand-held remote control sends the user input to the robot. The robot will move in any direction, depending on the user input. The robot also has the ability to safely ascend and descend a staircase. The robot has the ability to aim and deliver a fire-extinguishing agent to the desired target. The robot's surrounding will be monitored by a camera mounted to the top of the robot. The camera also helps the user determine where to deliver the fire extinguishing chemical.

**Presentation Type and Session:** Poster IV

## Five Ways To Improve Electrical Efficiencies In Manufacturing Facilities: A Case Study Approach

**Nick Gilewski**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

Each year, the domestic manufacturing sector consumes billions of dollars worth of electrical energy. Suppose we could devise and implement a methodology to reduce energy consumption by 25%! The research approach of this project is to study a number of actual cases where significant electrical efficiency gains were realized. The research objective is to identify and describe a repeatable methodology that others could employ to realize similar gains in their facilities. Attention will focus on specific categories of savings, extent of savings possible, and the technology by which such savings were achieved. There are many ways to make efficiency gains. First, and most impactful, is to upgrade lighting fixtures to higher efficiency and install proximity detectors to control unnecessary usage. Second, is to install a Supervisory Control and Data Acquisition (SCADA) system - a sophisticated computerized industrial control system designed to direct energy usage via complex algorithms. Third, install a power factor correction panel or a capacitor bank to reduce the cost per kilowatt hour (KWH). Fourth, evaluate the economic feasibility of self-generation (wind, solar, and others). Fifth, replace energy-inefficient capital equipment.

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

## Follow Up Study Assessing the Impact of 'Engineers of the Future' Summer Program 2007 On Participating School Districts

**Shawn Sweet**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

A nation's economic productivity status can be linked to the



technological innovations it produces and the technological literacy of the work force. The United States has always been a prominent leader in output for advances in technology, but recently other countries have increased the competition. This has put pressure on education systems across the United States to upgrade high school student performance in science, technology, engineering and mathematics (STEM) curricula. In 2007 Buffalo State College offered a series of two-week intensive seminars called Engineers of the Future (EOF). The goal of these seminars was to expose STEM teachers to new knowledge and materials that would assist them in integrating fundamental engineering concepts into their curricula. The research objective for this study is to evaluate the degree to which EOF's strategies had an impact on the participating school districts subsequent student academic achievement in Math and Science classes. This will be accomplished by gathering the most recent standardized Math and Science test results from the participating schools and comparing these to base line data (collected from the years prior to the implementation of EOF). The end result will help assess the EOF program's effectiveness and potential future worth.

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

## Fuzzy Logic Controller For a Thermal System

**Gediminas Razmus**, Electrical Engineering Technology, **Franco Bruna**, Electrical Engineering Technology, **Luis Matos**, Electrical Engineering Technology, and **Eric Achille**, Electrical Engineering Technology

Faculty Mentor: Professor Steven Barker, Technology

Three temperature control systems were developed by our team using fuzzy logic theory. Fuzzy logic is a nonlinear method of comparing several statements and quickly producing a desired output. Controlling temperature as precisely as possible with maximum energy efficiency and comparing three fuzzy logic controllers running on three different computer architectures were our main objectives. A proportional integral derivative (PID) controller implemented in LabVIEW was compared to three fuzzy logic controllers, which were implemented in a programmable logic controller (PLC), in an Arduino microcontroller, and in a Dell Optiplex 745 computer running LabVIEW. All three controllers are widely used in the industry, but have different physical and operating specifications. In each case, a power resistor was heated and a fan was used to maintain the desired temperature of the resistor. The speed of the fan, and therefore the temperature of the resistor, was controlled within a tenth of a degree Fahrenheit using each of the three controllers. The temperature versus control voltage data for all four controllers was monitored using LabVIEW. From the acquired data, the efficiency and economy and also the advantages and disadvantages of each approach were determined.

**Presentation Type and Session:** Poster VI

## The Growing Problem of Digital Piracy On the Internet

**Luke Dookhan**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

With the rapid growth of Internet usage and the increased bandwidth and speed of connection, the frequency and seriousness of digital piracy has mushroomed. It is not uncommon today for users to share copyrighted materials among themselves without proper license or permissions. This peer-to-peer (p2p) sharing is made even easier because of the growth of virtual communities. This project will examine p2p networks that appear to be using the Internet illegally (digital piracy) and will examine the range of responses developed by companies to combat this activity. This topic is of intense interest to those who produce and provide music, movies, software and games. The central question that will drive this study: "How can the frequency of digital piracy activity be contained or reduced?" The research approach will be to administer a confidential questionnaire to specific p2p users between the ages of 15-28, to interview (face-to-face) users of p2p programs and to solicit expert opinion from professionals. The expected outcome of this research will be a better understanding of the motivations that digital pirates exhibit for their behavior. Based on these findings, a set of recommended protections for digital rights will be recommended.

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

## How Can Total Quality Management Be Integrated Into Customer Service Efforts Within the Graduate School at Buffalo State College?

**Esteban Brown**, INT 689: Research Design and Methods  
Faculty Mentors: Professor John Earshen, Technology and Professor Mohan Devgun, Technology

Customer service in higher education is not new. Many efforts have been made over several decades, to characterize student need and to design efficient systems to meet that need. Over the years, The Graduate School at Buffalo State College has made a number of attempts to address graduate student needs, but the work of quality improvement is continuous, so there is always more that can be done. The investigator, who formerly served as a staff person at the BSC Graduate Office, seeks to identify areas for further customer service improvement in that office. To accomplish this, the investigator will collect data about current office performance (process flow study). This present-state review will be compared to several benchmark examples. A gap analysis will be performed. The goal is to develop a set of recommendations and steps for to enable further advancement in day-to-day customer service within the graduate office at Buffalo State College.

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

## How Can We Encourage Students To Enroll In Tech Education Classes In Grades 9–12?

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

Technology Education (Tech Ed) seeks to demonstrate the application of science and engineering principles using a variety of hands-on systems and processes. Tech Ed curricula today embrace problem-based methodologies that highlight science, technology, engineering and mathematics (STEM) principles. In New York, 40 weeks of Tech Ed is mandated for completion by each student prior to the completion of 8th grade. However, the study of Tech Ed at the high school level is by elective only; there is no state mandate. For the past few years, the Cheektowaga Central School District has recorded low enrollment numbers, among entering freshman students, in Tech Ed classes. This may be due to a variety of factors including: lack of perceived program relevance; negative student experiences at the middle-school level; perceived low status of the technology education career trajectory (i.e.: association with non-college bound). This project focuses on an examination of three middle school Tech Ed programs. Each will be intensively reviewed on several fronts: curriculum; student perception; faculty perception; administrator perceptions. Several questionnaires will be developed to collect data. The expected outcome of this study will be to develop a better understanding of the middle school Tech Ed experience. This understanding will be used to formulate recommendations regarding the future of middle school curricula, with an eye toward improving enrollment in high school Tech Ed programs.

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

## Human Power Project

**Mark McLaughlin**, Electrical Engineering Technology, **David Dulanski**, Electrical Engineering Technology, **Donald Anstett**, Electrical Engineering Technology, and **Ram Jayaram**, Electrical Engineering Technology

Faculty Mentor: Professor Steven Barker, Technology

Two human powered electrical generating systems were constructed using a bicycle with a car alternator and a stationary exercise trainer with a 120 volt DC generator. The Human-Pedal Power (HPP) system would be ideal for people who own homes in remote locations or live in third-world countries that do not have a reliable source of electricity. The HPP system would provide them with the ability to communicate through amateur radios during emergencies and charge batteries for small loads. The HPP system clearly demonstrates the amount of human effort required to generate various quantities of electrical energy. Research through human endurance testing with a dynamometer, verified that the average person is capable of producing between 60 and 100 watts of power for approximately one minute and 40 watts of power for approximately three hours without much difficulty. A car alternator was used to convert physical energy into electrical energy. A Delco Remy 108 ampere car alternator was driven by a variable speed

DC-motor as a power source to verify the exact amount of voltage, current, and torque the alternator produces at various speeds. The first generation of the HPP system was built with an exercise trainer, standard v-belt, and a 120 volt DC generator. The second generation HPP system consisted of a ten speed bicycle, car alternator, and a 12-volt car battery. The HPP project has demonstrated that physical energy can be converted into useful electrical energy. The HPP system will also be used in future classes where students can experience exactly how much physical energy is needed to produce electrical power.

**Presentation Type and Session:** Poster IV

## An Introduction To Programming Through Alice

**Marisa Gaiser**, Computer Information Systems  
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

For many individuals, the underlying code in a computer is a foreign concept. If an individual has no prior programming knowledge the odds of a person failing an introductory level C++ , Java, or Visual Basic class is infinitely higher. Here at Buffalo State College most students with Technology majors must also take a programming class for their major. This can be even more difficult for them and some students may end up repeating the class. Alice is a program that is supposed to be a stepping stone to object-oriented programming. In this environment one is able to create a 3-dimensional animation or interactive video game with the easy to use, click and drag interface. My research questions are the following: Do schools around the United States that are implementing this program find it useful? Does Alice actually help students with other programming languages? Do students who used Alice program continued on to become Computer Science Majors? These questions and more will soon be answered.

**Presentation Type and Session:** Poster V

## Journal Bearing Analysis For Rigidized Metals Texturing Machine

**Jason Zaepfel**, Mechanical Engineering Technology and **Miles Williamson**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

Rigidized Metals Corporation is a local company that has led the world in development and production of textured metals and custom metal fabrications. Textured metals are used in industrial, architectural and transportation applications. Rigidized Metals uses a texturing machine to create a texture in metal. Currently the bearing system in this machine produces too much heat causing overheating of the ends of the rollers, resulting in bearing failure and machine downtime. Proper lubrication system design is an important factor in controlling bearing temperature. The goal of this project is to evaluate the current system to propose and implement a new design. The new system will need to be designed to increase the performance of the bearings and lower the average bearing



temperature. Design considerations include; adjusting lubrication rates, varying lubricant temperature and redesign of the bearing block. The resulting design will allow for greater productivity by reducing bearing failure and decreasing machine downtime.

**Presentation Type and Session:** Poster VI

## Mainstreaming In the Technology Education Classroom

**Evan TeCulver**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

High school guidance counselors are typically responsible for making student placement recommendations. Placement of students with special needs is a difficult and sometimes misunderstood process. Too often, special needs students are placed in programs just because there is nowhere else for them to go. Administrators are sometimes forced to mainstream a child who really belongs in a special-needs environment. Mainstreaming can have negative impacts on the special-needs child, as well as the mainstream classroom they are placed in. The Technology laboratory can be a particularly dangerous place for such special needs students. Working with hazardous machinery can be challenging even for students without disabilities and, although not a regular occurrence, injuries can happen. Placing special needs students in this environment can expose them to an increased risk of physical harm. The research objective of this study is to obtain the opinions and study the actions of high school guidance personnel, in a selected series of NYS school districts. Therefore, it will be instructive to examine the degree to which these counselors comprehend the demands and potential risks of the typical Technology lab. It is postulated that some guidance counselors may not appreciate the potential risks. It is hoped that this study can elicit a better understanding of those school administrators charged with making critical placement decisions.

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

## Mini Baja Off Road Flotation and Propulsion System

**Kristofer Wiktorowski**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

The Society of Automotive Engineers (SAE) sponsors a variety of student design competitions. A team from Buffalo State College will be participating in the SAE Mini Baja Rochester competition this June. In this dirt track competition there are many obstacles including the addition of several water based events. Water events require the maneuvering of our Mini Baja vehicle through four feet of water. The objectives of the design are to equip the vehicle with a device to make it float, and maneuver through water. Two pontoons located on the sides of the vehicle will provide flotation. The pontoons will be made from a polyurethane foam base and sealed with a coat of fiberglass epoxy. In order to propel the vehicle through water, the rear tires will be shrouded with a thin metal fender. The

fender will capture the water that is being moved by the tire and will provide propulsion for the vehicle while it is in water.

**Presentation Type and Session:**

Demonstration 11:00 a.m. – 1:00 p.m.

Location – Student Union Quad (outside library)

## Mini Baja Vehicle Transmission Design

**Anthony DiMascio**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

The Mini-Baja is a real world engineering design project that is sponsored each year by the Society of Automotive Engineers (SAE). The object of the contest is to design and build an off-road that is capable of completing a variety of different challenges while still meeting the specifications specified by the SAE. This competition allows college students the chance to apply the knowledge they acquired in the class room, and apply it to a real world application. This year the Buffalo State Mini-Baja Team will be competing in the Baja SAE Rochester from June 10 – 13. The goal of the 2010 Mini-Baja Team is to improve last year's design as much as possible. After evaluation of last year's vehicle it was decided that the manual transmission lacked power and presented an unbalanced gear ratio that was not suitable for this year's team needs. It was then decided that a CVT transmission was the best design for the requirements of this competition. The CVT clutch system will be modified from its off-the-shelf design by creating a perfectly balanced gearing ratio for the Baja design. Once optimal gearing ratios are achieved the Baja will be able to get a proper torque output that will allow the vehicle to easily get up tough hills and negotiate through various obstacles. Additionally, this clutch system is much lighter than the manual transmission and will be able to accelerate at a quicker rate and obtain higher top speeds. Ultimately the simplicity of the redesigned CVT makes it an ideal transmission for the BSC Mini-Baja.

**Presentation Type and Session:**

Demonstration 11:00 a.m. – 1:00 p.m.

Location – Student Union Quad (outside library)

## Onboard Vehicle Compression Storage System

**Brad Wargula**, Mechanical Engineering Technology, **Sara Ward**, Mechanical Engineering Technology, **Matt Geil**, Mechanical Engineering Technology, **Kenny Stafford**, Mechanical Engineering Technology, and **Miles Williamson**, Mechanical Engineering Technology

Faculty Mentor: Professor David Kukulka, Technology

The Compressed Air and Gas Institute (CAGI) sponsors a national collegiate competition that encourages engineering students to create innovative designs using compressed air or gas. The CAGI competition judges on the innovation, marketability, and presentation of the design. Buffalo State Mechanical Engineering Technology students were sponsored by Cameron Compression Systems to investigate ideas involving compressed air. In response to the competition, the team designed a double acting cylinder

to capture energy from a vehicle's suspension system. In order to determine the feasibility of this concept, a theoretical analysis was performed, and a prototype was developed. A possible application for this system is to utilize the stored compressed air to either supplement or replace current systems in a vehicle. For a larger impact, vehicle operators can deposit the stored compressed air into larger air reservoirs to obtain "energy credits." Compressed air collected in these larger reservoirs can be utilized as a power source. This device has proved to be an innovative method of capturing a renewable energy. Cameron Compression is currently pursuing a patent on this design.

**Presentation Type and Session:** Poster VI

## Overall SAE Mini Baja Design

**Anthony DiMascio**, Mechanical Engineering Technology, **Anthony Ubal**, Mechanical Engineering Technology, and **Kris Wiktorowski**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

SAE (Society of Automotive Engineers) Mini-Baja is a collegiate design competition in which teams from universities around the world compete in an off-road vehicle design challenge. In this competition student's work together in order to design, build, test, and race a rugged, single seat, off-road vehicle. Accordingly, the vehicle must be safe, attractive, easily transported and maintained, and fun to drive. This competition allows college students the chance to apply the knowledge they acquired in the classroom, and apply it to a real world application. This year the Buffalo State Mini-Baja Team will be competing in the Baja SAE Rochester event from June 10 – 13. The goal of the 2010 Buffalo State Mini-Baja Team is to create a rugged, dependable off road vehicle. By gaining insight into the downfalls of the 2009 vehicle, this year's team has decided to make appreciable changes to all aspects of vehicle design. A strong emphasis was placed on the decision to replace the vehicles transmission and braking system as well as the addition of a flotation system for this year's water event. In addition the entire back end will be redesigned and all the mountings changed to mount the new transmission and decrease overall weight.

**Presentation Type and Session:**

Demonstration 11:00 a.m. – 1:00 p.m.

Location – Student Union Quad (outside library)

## Playing With Blocks: Using Scratch-2D To Learn Programming

**Ernesto Miranda**, Computer Information Systems  
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

In today's world, we need computers for many things, and we need people who can program computers. Unfortunately, there is little interest in programming for young people because they find it difficult and boring. Software such as Scratch-2D is designed to make computer programming easier and more fun for someone who has little or no experience with it. It allows the user to create simple two-dimensional animations and games. This programming

software works by connecting blocks of programming statements together, and thereby eliminating syntax errors that can be extremely frustrating for new programmers. My research will include a literature review of how Scratch-2D graphing software has been used to teach computer programming and how effective it is as a teaching tool. I will also be discussing the capabilities and limitations of using the software to teach programming concepts.

**Presentation Type and Session:** Poster VI

## Redesign of Fabric Cutting Tables For Eastman Machine Company

**Matt Geil**, Mechanical Engineering Technology and **Kenny Stafford**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

Eastman Machine Company builds and internationally distributes fabric-cutting machinery. Their products range in size from handheld shears to large conveyor fed machines. The focus of this project is to redesign their cutting tables (static and rotational). The current design of the static table incorporates an un-adjustable frame in which fabric is placed on top and held down by a negative pressure system allowing a precise cut of the material. The rotational turntable is similar to the static table with the exception that it allows the fabric to be easily rotated 360 degrees, allowing for continuous cutting. The objective of the project is to improve the design of each table to minimize production cost, increase productivity, and allow Eastman Machine to fabricate these products in house.

**Presentation Type and Session:** Poster III

## Redesign of R.P. Adams Backwash System

**Caleb Hamlin**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

The Compressed Air and Gas Institute (CAGI) sponsors a national collegiate competition that encourages engineering students to create innovative designs using compressed air or gas. The CAGI competition judges on the innovation, marketability, and presentation of the design. Buffalo State Mechanical Engineering Technology students were sponsored by Cameron Compression Systems to investigate ideas involving compressed air. In response to the competition, the team designed a double acting cylinder to capture energy from a vehicle's suspension system. In order to determine the feasibility of this concept, a theoretical analysis was performed and a prototype was developed. A possible application for this system is to utilize the stored compressed air to either supplement or replace current systems in a vehicle. For a larger impact, vehicle operators can deposit the stored compressed air into larger air reservoirs to obtain "energy credits." Compressed air collected in these larger reservoirs can be utilized as a power source. This device has proved to be an innovative method of capturing a renewable energy. Cameron Compression is currently pursuing a patent on this design.

**Presentation Type and Session:** Poster III

## Solar Panel Fabrication For Maximum Energy Potential

**Brad Wargula**, Mechanical Engineering Technology and **Sara Ward**, Mechanical Engineering Technology  
Faculty Mentor: Professor David Kukulka, Technology

Solar panels have recently received a great deal of attention as a renewable energy source. Harnessing solar energy is achieved by capturing the light from the solar rays, converting it to electric energy, and then storing the energy. The energy can be stored in a battery for later use, or sent directly to the grid. Mechanical Engineering Technology students are working with Electrical Engineering Technology students on the fabrication of a solar tracking system. In order to capture the maximum solar potential, a design that allows for both angular and rotational motion of the system is desired. Through the implementation of this design, the system will be able to capture the maximum solar energy.

**Presentation Type and Session:** Poster V

## Solar Tracking Foundation

**Mike Brennan**, Electrical Engineering Technology, **Kristopher Schleiermacher**, Electrical Engineering Technology, **Vanessa Rodriguez**, Electrical Engineering Technology, and **Erik Walter**, Electrical Engineering Technology  
Faculty Mentor: Professor Steven Barker, Technology

An automatic sun tracking foundation for an existing solar-panel system was designed and built by electrical and mechanical engineering technology students. The existing solar-panel system consists of three 110 watt solar panels, a charge controller, an 1100 watt inverter and two large 12 volt marine batteries. The sun tracking foundation was designed so that the solar panel would track the sun in two planes, the azimuth and elevation. Five photo cells were placed on the panel arranged in a plus shape with the four outer photocells aimed away from the center photocell to collect light in different directions. Two linear actuators independently provide the desired azimuth and elevation rotations. The elevation actuator controls rotation of the solar panel about a horizontal axis. Voltage, current, power and energy are measured, recorded, and displayed by both LabVIEW and the microprocessor for the solar panel, load, and charge controller. The solar panel with the sun-tracking foundation is expected to collect more electrical energy than the fixed solar panel. The measured efficiency will be documented in the final report. For demonstration purposes, a 1000 watt load was connected to the 120 Volt AC inverter output in order to drain the battery so that battery recharging could be repeatedly demonstrated.

**Presentation Type and Session:**

Demonstration 11:00 a.m. – 1:00 p.m.

Location – Student Union Quad (outside library)

## Technology Education: Including Students With Special Needs In the Laboratory

**George Amann**, INT 689: Research Design and Methods  
Faculty Mentor: Professor John Earshen, Technology

Over time, education law has been moving toward mainstreaming students with special needs. The Americans with Disabilities Act (ADA) of 1990, The School-to-Work Opportunities Act of 1994, and The IDEA Amendments of 1997, each focus on the inclusion of students with special needs in regular classrooms to the maximum extent appropriate. Making provisions to include students with special needs into Technology Education (Tech Ed) classes, is no longer just encouraged, it has been written into law: special needs students must be given equal access to Tech Ed programs. As a result, today there is strong need to develop appropriate methodologies for including students with special needs. The literature suggests that the special needs student benefits from interactions that involve functional, hands-on learning. It is the objective of this study to demonstrate that special needs students can be effectively integrated into mainstream technology education lab classes. The research approach is to: 1. Conduct a thorough evaluation of methods currently in use to integrate special needs students into the Tech Ed lab, and 2. Devise and propose a master curriculum appropriate for the high school Tech Ed environment.

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

## Transition Between Alice and Media Computation Programming

**Chayan Gonzaque**, Computer Information Systems  
Faculty Mentor: Professor Sarbani Banerjee, Computer Information Systems

For past three years I learned programming in various computer languages. To me learning new programming languages is fairly easy but for others it could be difficult. In my research project I will be discussing how Alice-3D and Media Computation can be used to learn Java and the similarities and differences that exist among these languages. Java is a programming language highly used in the workplace. Media Computation and Alice-3D are fun way to learn about media programming and basics of programming language. The purpose of my research presentation is to compare and contrast Media Computation with both Alice-3D and Java, to create an easy transition between these languages. Topics that I will be presenting are as follows: drawing in Java, modifying all sound samples, modifying samples using ranges, modifying pictures using loops, modifying pixels, conditionally modifying pixels and creating classes. Other researchers found that learning Media Computation before any complicated programming language benefits a student. Some students say that Computer Information Systems major at BSC is very difficult. My research presentation will help student learn about an interesting while fun programming language that better prepares students for tough programming courses.

**Presentation Type and Session:** Poster VI



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## *Education*

### **Attraction Or Repulsion? The Road of Magnet Misconceptions**

**Kelly Laskowski**, Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

A misconception is a belief that contradicts scientific theory and everyone including children holds them. Misconceptions about magnets are very common in elementary education and often overlooked by teachers. Many teachers just don't know how to identify them or correct them, or think something as simple as a KWL chart will solve them. Common magnet misconceptions are all metals are magnetic, magnets only attract and the larger the magnet is the stronger it is. The research done for this manuscript being presented is on textbooks, tradebooks, and strategies to fix this as well as activities to perform such as cat & mouse to dissipate those common misconceptions. The presentation will be the manuscript combining all these types research into one easy accessible place for teachers to educate themselves on this topic.

**Presentation Type and Session:** Poster IV

### **Changing Students' Misconceptions of Viewing Stars and Constellations In the Night Sky**

**Jessica Kurdziel**, Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

Student's often times have misconceptions when it comes to science, and it may be very difficult for the misconceptions to corrected. This project deals with how students view the stars and constellations in the night sky. A common misconception is that we see the stars in the same position in the night sky no matter what time we look up. However, this project gives some suggestions of activities in order for students to better understand that this is not the case. Activities that are hands-on and meaningful for the students themselves, making it possible to correct the misconceptions.

**Presentation Type and Session:** Poster VI

### **Children's Perceptions of Scientists and How To Change Their Stereotypes**

**Sara Knapp**, Exceptional and Elementary Education and **Anna DeBalski**, Elementary Education and Reading

Faculty Mentor: Professor Dianne McCarthy, Elementary Education and Reading

This poster presentation focuses on elementary students' interpretations, stereotypes, and unique depictions of scientists; including characteristics such as age, race, gender, environment and overall appearance. Do children see scientists as smart, reserved, professionally dressed individuals, or do they perceive them to have

wild hair and wear blazing white lab coats? Studies show that over the years many of the recurring stereotypes have not changed much. Part of the research collected for this report is dozens of sketched scientist images drawn by elementary youngsters, revealing a stereotypic image. Preliminary data suggests that the stereotype of a scientist is a male with glasses, wearing a white lab coat, having wild hair, and generally working in a laboratory with an array of chemicals and schematics. Can we blame real scientists such as Einstein? Or perhaps it is more likely that the cartoon images of scientists like Inspector Gadget, The Mad Scientist, and Doc Brown have influenced society. We also decided to do our own research to see what our students' particular ideas of scientists were and if we could change any negative ideas. Will our students accept that anyone can be a scientist or will they keep their stereotypic ideas?

**Presentation Type and Session:** Poster V

### **Cognitive Comics: A Constructivist Approach To Sequential Art**

**Donald Jackson**, Art Education

Faculty Mentor: Professor Michael Parks, Art Education

Can appreciating and creating comics make you smarter? Sequential art is the visual language that forms the popular literature of comic books and graphic novels that schools and libraries are currently using to promote literacy, but what educational theory guides our understanding of this art form as a tool for cognitive development? In Cognitive Comics, the cultural paradigm of "Comics" is being challenged by bridging entertainment with education. Using Constructivist art education, Cognitive Comics maps out the 'how' and 'why' we can use sequential art to develop Higher Order Thinking Skills. Four sequential art narratives were created to correspond with this research project. When you "think of pictures as words and words as pictures", you can view the narratives using more learning centers of the brain. When we guide this aesthetic inquiry with a unique reconstruction of cognitive domains, we apply the theory that "the skills it takes to appreciate art are the same skills it takes to make art."

**Presentation Type and Session:**

Oral – Education and Health

### **Data Collection To Measure the Impact of Professional Development School**

**John McGowan**, Childhood Education

Faculty Mentor: Professor Leslie Day, Elementary Education and Reading

Buffalo State College's Department of Elementary Education and Reading and its Professional Development School (PDS) P-6 partners have supported their teacher candidates preparing to enter the teaching profession since 1991. It is this support, which has channeled teacher candidates into assuming more of a responsive role in each child's education. For a number of years,

teacher candidates within the department have executed numerous action research projects through a variety of reliable and valid data collection methods. Undergraduate Representatives and Graduate Assistants within the PDS Consortium and Advisory Council have specifically played a pivotal part in the critical effort to continuously assess PDS effectiveness. The value of PDS for its teacher candidates includes the assessment of all education methods courses, the level of support received from both course instructors and mentoring teachers, and the ability to provide teacher candidates with a more current and authentic outlook on the educational horizon. Our most recent study conducted at PDS retreats and Consortium meetings concluded that teacher candidates are of the opinion that PDS is in fact benefiting their professional needs and is allowing them to grow professionally into more readily equipped teachers in a globalized educational environment. This poster session will examine the impact of PDS on BSC elementary education teacher candidates.

**Presentation Type and Session:** Poster V

### **The Effects of Sheltered Instruction and Cooperative Learning On English Language Learners**

**Ginger DeMita**, Literacy Specialist, **Rachel Barnard**, Literacy Specialist, **Michele Beers**, Literacy Specialist, and **Jennifer Shane**, Literacy Specialist

Faculty Mentor: Professor Mary Cummings, Elementary Education and Reading

One of the most difficult challenges facing teachers in America is meeting the needs of English Language Learners in their classroom. Many teachers have little or no training in this area and struggle to adapt their teaching techniques to accommodate the unique needs of these students. Our project examines the needs of ELLs at the five different stages of English language acquisition and explores the use of Cooperative Learning and Sheltered Instruction Observation Protocol (SIOP) to address the needs of English Language Learners in an inclusive classroom. We will examine the Cooperative Learning activities and SIOP practices that best address the needs of ELLs at each of the English language acquisition levels and also highlight the benefits of using these techniques with English Language Learners at all levels.

**Presentation Type and Session:** Poster V

### **Emerging Educators Expanding Their Expertise: The Buffalo State College Chapter of the Association of Childhood Education International**

**Liza Acanfora**, Childhood Education, **John McGowan**, Childhood Education, **Krystal Bellanti**, Early Childhood and Childhood Education, and **Anna DeBalski**, Childhood Education

Faculty Mentor: Professor Dianne McCarthy, Elementary Education and Reading

As Buffalo State College future educators correlated with the Association for Childhood Education International, we have worked

rigorously to expand our expertise by developing an appreciation for play in the classroom. Our branch selected play in the classroom to be our reoccurring theme for 2009. We succeeded in developing creative strategies for implementing play in the classroom despite curriculums and state assessments. We watched films, read articles, and visited the Strong Museum of Play to increase our appreciation for play in the classroom. To assist children in our community as they play, our chapter collected stuffed animals for Gerard Place, a transitional housing program for single parents and children. Our chapter also actively participated in the Polar Plunge for Special Olympics. The strong focus of play in the classroom and the many activities we participated in earned us the 2009 "Chapter of Excellence" award from the National Association for Childhood Education International! Our chapter of ACEI chose Globalization in Education as our 2010 theme. Our Faculty Advisor, President, Co Vice-Presidents, and Secretary have worked extensively to form an excellent ACEI chapter. This poster presentation will highlight our chapter's activities and how they influence our development as educators.

**Presentation Type and Session:** Poster II

### **Engaging Students Through Technology: A Detailed PowerPoint Depicting the Events That Transpired During the Student Movement of the 1960s and 1970s**

**Kimberly Moore** and **Jellema Stewart**, CSP 670: The Student Movement

Faculty Mentor: Professor Wanda Davis, Student Personnel Administration

As teaching assistants this past academic year, we have broadened the curriculum to include technology in hopes of offering this course online. In doing so, we have developed a PowerPoint that captures the student movements of the 1960s & 1970s, focusing on Civil Rights, Human Rights and the Vietnam War. Much of our research originated from Professor Davis's course. Further research was conducted through qualitative research, online resources, books and video documentaries. The objective of this course is to understand the role of the American College Student as part of these movements. The PowerPoint captures these movements as well as pop culture and the counterculture movement of the 1960s & 1970s. The PowerPoint goes further into detail describing student rebellion while explaining the different levels of activism through the many student organizations such as Student Nonviolent Coordinating Committee (SNCC), Students for a Democratic Society (SDS), Black Panthers and the Weatherman. The PowerPoint educates students while emerging them into the decades of the 60s and 70s. Students utilize the knowledge gained from this course and implement it into their careers and practice as student affair professionals.

**Presentation Type and Session:**

Oral – Education and Health



## Feedback From Teacher Candidates Regarding the Impact of Their Professional Development School Experiences

**Lauren Waldroff**, Elementary Education and Exceptional Education

Faculty Mentor: Professor Leslie Day, Elementary Education and Reading

One of the most vital aspects of any Professional Development School (PDS) program is to constantly analyze the program's ongoing professional support for its teacher candidates. Therefore, it is essential for PDS to acquire feedback from teacher candidates at various points of their educational career to comprehend firsthand how they view their growth regarding knowledge of the learner, content and pedagogy. For this poster session as well as the poster session for the NAPDS conference, the impact of PDS on Teacher Candidates was measured. Surveys were created to analyze the impact of field placement opportunities on teacher candidate preparedness for their career. Interviews are planned to explore in detail the value of receiving a teacher education in the context of professional development schools. A brochure was created to describe PDS for current BSC students. This poster session will be held in conjunction with John McGowan and Rachel Barnard to share the multiple impacts of PDS on future elementary and exceptional education teachers.

**Presentation Type and Session:** Poster V

## Fly Me To the Moon: 2nd Graders Blast Off For an Out of This World Experience

**Kristina Zaleski**, Childhood Education

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

An interactive Webquest can be highly motivating for a class of second graders. In order to try something different as a teacher candidate and take a break from the traditional approach making a webquest on the solar system was the perfect way to integrate technology into our classroom. With help from or cooperating teacher and college professor this lesson will not only benefit our class of second graders but will give others the opportunity to locate and benefit from our work. Our webquest effectively uses the Internet and contains prescreened links for students to find important and interesting information quickly. Our five stops allowed our students to use real world, up to date resources on the web while we provided guidance. It was important for the students to experience a wider range of information from real world sources about the solar system. One stop was designed to assess students' newly created understandings by using interactive activities based on student choices. The interactions were similar to online games. Other links were designed so students could complete picture puzzles and word searches using online lasers. The last stop was a blog that students signed into and wrote a couple statements about what they discovered.

**Presentation Type and Session:** Poster III

## Get Ready To Soar Out of This World: Solar System Webquest

**Jason LeGrett**, Elementary Education

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

The Solar System webquest was a great way to help educate and put the fun back into science with urban second grade students. By creating an engaging webquest students were able to use a variety of intelligences. The webquest was also a great tool for assessing students current knowledge about the solar system and helping myself acknowledge what they still need to learn or work on. Throughout the webquest students are given information and later quizzed using fun interactive websites rich in graphics and fun facts. The last stop of the webquest was a blog opportunity for students to type in what they learned for the day and even the whole lesson as it is designed for multiple days. I created the webquest for students as well as a future guide for potential teachers looking to enrich their science lessons. My presentation at the conference plans to go over in detail each aspect of my webquest. Lastly, giving my motivation and reason for creating the webquest.

**Presentation Type and Session:** Poster III

## Historical Western New York

**David Benko** and **Marissa Fabrizi**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

Western New York is an area full of historical knowledge that can be utilized in the classroom. Students should have the opportunity to go to a variety of areas to reinforce their instruction or just to learn something new about their hometown. We conducted preliminary research through surveys of high school and middle school students from suburban and urban schools that shows that many urban students have not had access to these places. Budget cuts and disinterest in these areas are part of the reason for the lack of field trips and visitation to historical sites. We created a website as a tool for educators, parents and students to further their education and knowledge of the historical sites Western New York has to offer.

**Presentation Type and Session:**

Oral – Education and Health

## I Met a Lot of People In Australia – I Even Encountered Myself

**Stacey Jones**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

Last year I studied abroad in Australia. While this adventure was about meeting people from a foreign place and learning the intricacies of navigating through a different social structure, I went to prove to myself that I could adapt to my new surroundings. Prior to going abroad, I had never been required to find my way on my own, and so my objective was to explore life free of constraints. I

wanted to travel and experience new things without waiting for anyone to tell me when or how I should do it. So, I departed the United States having planned only a two nights stay in Sydney, which left me with nine days to decide how I was going to travel nearly nine hundred miles to Adelaide. Throughout my semester I learned to be proactive, developed a flair for choosing strange and interesting novels in which to invest my time, and most importantly learned how to function independently. I had never before chosen where I wanted to live, who I wanted to spend time with, or what I wanted to do on a daily basis with such freedom. What I ultimately discovered was, you don't need to travel around the world to adapt to a situation. To truly become more adaptable to new situations responsibly, however, that was exactly what I had to do.

**Presentation Type and Session:** Poster VIII

### **Invent, Imagine, and Incorporate: An Integrated Science and Mathematics-Based Learning Opportunity**

**Maria Emiliani, Ashley Simnson, Lindsey Martin, Katie Soares, Suzanne Koons, Jolie Pilsbury, Crystal Marquis, Rachel Francis, Kathryn Martin, Kelly Cleary, Jennifer Grant, Christopher Guidarelli, Mary Hager, Lisa Henning, Farrah Hepburn, Melissa Illingworth, Michelle Joseph, Kristen Loconti, Jessica Louttit, Cori Micheletti, Alyssa Perry, Naomi Snyder, Ilana Spector and Alicia Trippi,** EDU 312: Teaching of Science and Mathematics in the Elementary School

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

In EDU312: Teaching of Science and Mathematics in the Elementary School, junior participants are given the opportunity to develop and share a creation all their own. With the help of a cooperating teacher, and Buffalo State College faculty members, the junior participants are given a subject of math or science to write and illustrate a book, independently. The Create, Publish and Share Project is in Phases II and III. The 16 junior participants follow the New York State Standards and the appropriate reading level for the children that the book will be created for. The books are published by Student Treasures, Future Teachers. This company helps give the junior participants the opportunity to support on-going learning at the West Hertel Academy; a Professional Development Urban School. This in turn influences the student's pedagogy. Not only do the junior participants create their own story line while involving a certain subject, but they also understand the importance of being involved in the process of teaching for diverse populations. There is nothing more rewarding than putting hard work into something that you can use for years to come. The Buffalo State College Professional Development School Consortium and Center for Excellence in Rural and Urban Education provided funding.

**Presentation Type and Session:** Poster V

### **Investigating Student Subcultures In Higher Education**

**Jamie Jueckstock,** Student Personnel Administration

Faculty Mentor: Professor Timothy Gallineau, Student Personnel Administration

Understanding the psychosocial and cognitive-structural developmental tasks associated with college students is crucial to enhancing student development, learning and success. Multicultural competence is essential and enhanced through careful examination of the advising and mentoring strategies that can be utilized by professionals in the field. Comprehensive investigation of the contemporary nature of our college students is the basis for this student-focused session. A thorough review of the literature regarding college student sub populations including Veteran Students, Parent Students, Adult Learner, Native American Students, and interview with professionals in the field provides the foundation for this student-focused session. Participants will be able to focus on awareness and understanding regarding our special and unique contemporary student sub populations. In relation, a comprehensive resource and tool will be available for distribution presenting the results of an investigation of the characteristics and advising needs of the various student sub populations. Application to our college and university campuses also is being considered.

**Presentation Type and Session:** Poster IV

### **It's More Than Note Taking: Science Journals In the Elementary Classroom**

**Ashley Agnello,** Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

A debate amongst science educators is the efficacy of science journals within the elementary classroom. The following will show how science journals provide students with the opportunity to discuss and expand on the information that is presented in the classroom during a science lesson. The study focused on two groups: students with journals and students without within a fourth grade from an inner city school district of Western New York. Both groups were asked to answer a short survey that focused on confidence of their knowledge of information and their preparedness for the test. The results show that students who used science journals felt more confident and prepared.

**Presentation Type and Session:** Poster III

### **Kids, Germs, and the H1N1 Pandemic: Are Today's Students Connecting To This Health Issue?**

**Dawn Zasada Murphy,** Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

This study looks at 2009's H1N1 virus and connects it with what kids really know about germs and health issues. Educating

today's young students in the area of health education should be a top priority for any school district. If the health of students and communities become threatened, the question is: How is today's student body being prepared and taught to be proactive in their own lives? What do students really know about germs, the spreading of germs, and the prevention of infectious disease and viruses? Are lessons being taught based on curriculums to fulfill the needs of their students and the community as a whole? The answers to these vital questions are explored to show a relationship of student knowledge and awareness on the current pandemic and the effectiveness on health issues and topics that are being taught in health education courses. The essential ideas that this topic presents will show that lessons, discussions, and the media, on even basic curricula on health issues can be implemented in a non-threatening way to young students to give them a better foundation of learning about the world and environment in which they live.

**Presentation Type and Session:** Poster III

## Let's Get Back To the Seven Generations Philosophy

**Sonia Penaranda**, Museum Studies

Faculty Mentor: Professor Cynthia Conides, History and Social Studies Education

"What about the seventh generation? Where are you taking them? What will they have?" Seven generations sustainability is an ecological concept that urges the current generation of humans to live sustainably and work for the benefit of the seventh generation into the future. The Seventh Generation originated with the Iroquois, they thought it was appropriate to think seven generations ahead (a couple hundred years into the future) and decide whether the decisions they make today would benefit their children seven generations into the future "In every deliberation, we must consider the impact on the seventh generation... even if it requires having skin as thick as the bark of a pine." —Great Law of the Iroquois. This project is the redesign of the northeast region of Native Americans at the Buffalo and Erie County Historical Society. A chronological route through their life, starting from the beginning of their formation, the 6 nations, their philosophy of life, their contribution to our society and finishing with the Modern Iroquois. The design proposal is focus in K-12 school children, primary- visitors that they can understand, learn and get inspired for the Native of Americans' life style and life principles in their community. The configuration of the space is open, inviting the visitors to explore and to interact with the exhibition "hands on" and "minds on" is the goals of this design.

**Presentation Type and Session:**

Oral – Education and Health

## Magnetism: What Attracts and Repels?

**Anthony LoGrasso**, EDU 690: Elementary Education Curriculum and Education

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

This study was done to determine if a student could ascertain the types of materials that can be attracted to magnets or not. An activity was done to find whether a student could sort through materials that were given and organize the materials in two separate piles: yes or no. This studies real world application will show the students of the experiment that magnets are a part of our daily life. It is beneficial to know that magnets are everywhere in our daily life because we should know what types of things are magnetic and this information can be valuable to ones entire life. Historically, the topic of magnetism is done in a way that might not have been beneficial to the students. Mostly students are given magnets and items that are and are not magnetic and told to do the activity with little to no directions. In this study, the experimenter will use a facilitating role to the educational process by the method of guiding thinking through the use of strategic questions. The main reason the study was conceived was due to the authors interest in a Van Hook & Huziak-Clark article where students were given a magnet and magnetic materials and allowed to experiment with them and by the end of the lesson everyone knew what an electromagnet does, they might not have known what it was if asked flat out, but they certainly knew what it does.

**Presentation Type and Session:** Poster III

## A Manuscript About Erosion

**Anna Cosgrove**, EDU 690: Childhood and Early Childhood Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

Erosion... What Is Really Going On? Misconceptions can be found in many different aspects in life. One place where they are very common is in classrooms, especially with elementary school students. Science misconceptions occur often because the subject matter is sometimes difficult for the students to grasp and understand. I chose to concentrate my research on the sixth grade curriculum in the area of erosion. I asked my student general questions about science and also questions that focused on erosion and the effects of it; both long term and short term. The questions that I asked focused on whether or not erosion is the main factor for the changes that we see in our soil and landscapes. This manuscript also touches upon other factors, such as weathering, that can contribute to the changes in the earth's structure.

**Presentation Type and Session:** Poster III

## The Misconceptions of Oxidation At Its Finest

**Sarah Courtney**, Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

I started my research out with a question "Why do apples turn brown?" This was a question that a second grader asked me and when we began to talk about oxidation I came to realize that there are a lot of misconceptions about oxidation. So I began my research

to find articles that could help me explain what oxidation is. But I came to find out that there are not a lot of articles on oxidation but there are a lot on misconceptions so that is what I did my literature review on. My experiment is done using four different pieces of an apple. We used three different liquids to place the pieces of apple in the three liquids are vinegar, water, and lemon juice. We placed each apple piece in the liquid for sixty seconds then took them out. The conclusion showed us that the apple turns brown when the skin was taken off of the apple and it was exposed to oxygen.

**Presentation Type and Session:** Poster VIII

### **Misconceptions of Sinking and Floating In the Elementary Classroom**

**Mary Kate Hojsan**, Childhood Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

There are many misconceptions involved with the concept of sinking versus floating. A lot of my research has come from my own students who are currently working on this concept in fourth grade. Their observations of the objects included things such as if there is a whole in the object it will float because the air will get through the object and help it to stay a float. A lot of the other misconceptions was any kind of metal will sink, it didn't matter to them what the object was. I am having students experiment hands on with various objects in order to clear up their misconceptions and to come to a conclusion on why some things can float and other objects will sink.

**Presentation Type and Session:** Poster V

### **The Positive Impact of Professional Development School On Teacher Candidates**

**Rachel Barnard**, Literacy Specialist

Faculty Mentor: Professor Leslie Day, Elementary Education and Reading

Buffalo State College's Department of Elementary Education and Reading and its Professional Development School (PDS) P-6 partners have supported their teacher candidates preparing to enter the profession since 1991. This presentation will share the undergraduate and graduate teacher candidates firsthand experiences regarding their research studying the impact of PDS on teacher candidates' professional growth. Teacher candidate representatives to the PDS Consortium and Advisory Council have conducted a variety of surveys, exit questionnaires, and plan on conducting personal interviews to analyze the impact of PDS on our future elementary education educators. The results indicate that teacher candidates believe they have benefitted from PDS, both in their field placements and through attending PDS retreats and Consortium meetings, as well as from their involvement in PDS governance structures. As our Professional Development School Consortium matures, we have found many strategies for involving our teacher candidates so that they may benefit from the full impact

of our professional learning community. This poster session will demonstrate this impact on elementary education teacher candidates in Professional Development Schools.

**Presentation Type and Session:** Poster VI

### **Preservice Teachers' Understandings of the Effect of Parenting Styles On Child Development**

**Lydia Zappala**, Elementary Education and **Kayla Williams**, Exceptional Education

Faculty Mentor: Professor Reva Fish, Educational Foundations

After learning about the effect of parenting styles on children's development, preservice teachers wrote statements explaining how they would advise parents to use an authoritative parenting in order to build positive relationships with their children and to ensure their children will develop healthy relationships with other adults in their lives -- including teachers. A document content analysis was carried out to discover the common topics the preservice teachers would use when communicating with parents about parenting styles. The topics were categorized into themes and definitions of themes were developed. Follow-up document content analysis was done to confirm consistent coding between authors and to ensure that a comprehensive catalog of themes had been developed.

**Presentation Type and Session:** Poster VI

### **PUFM: Does Buffalo State Know How and Why?**

**Katelyn Casey**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Andrea Guiati, Director, All College Honors Program and Professor Jodelle Wagner, Mathematics

In recent years, there has been increasing debate over reconstruction of mathematics education in the United States. The vital link between procedural and conceptual knowledge of mathematics seems to be missing not only in the minds of our students, but also in our teachers. In the words of Liping Ma, "A teacher who is blind to the coherence of mathematics cannot help students see it." As she examines the fundamental differences in American and Chinese mathematics instruction, Ma, author of "Knowing and Teaching Elementary Mathematics" labels this level of teaching excellence as PUFM, "profound understanding of fundamental mathematics." Ma's research incorporates the use of a multidimensional interview process of teachers ranging from novice to expert, in which severe deficits of American mathematics teachers are revealed. Does Buffalo State pass the test? This study will investigate the teaching potential of current Buffalo State education majors and professors using the same underlying principles. The results of the investigation and how they may be used to reform our teacher preparatory courses are forthcoming in this presentation.

**Presentation Type and Session:** Poster V



## Seizing the Teachable Moment: Connecting With At-Risk Sixth Graders On Socio-Cultural Issues Through Pen Pals

**Reed Schall**, Childhood Education, **Lori Potteiger**, Elementary Education and Exceptional Education, **Olga Shpakovsky**, Elementary Education, **Alesia Johnson**, Elementary Education, and **Bethany Jones**, Elementary Education

Faculty Mentor: Professor Maria Ceprano, Elementary Education and Reading

Teacher candidates enrolled in an integrated ELA/SS methods experience wrote weekly to assigned at-risk 6th graders over the spring 2010 semester. Beyond creating a positive attitude about writing and modeling much needed writing skills for the students, the teacher candidates analyzed the students' written responses and looked for statements that suggested their potential interest in socio-cultural related topics. In subsequent letters to the students, the teacher candidates explored ways to encourage the students to continue their discussions on the topics. Teacher candidates improved their ability to determine and promote continuing discussion on topics generated by students. In addition to promoting positive attitudes and skill development, students' letter responses progressively revealed the impact of the teacher candidates' communications on socio-cultural issues. Building connections with students via pen pals has proven to be an effective way to seize teachable moments and run with them. Not only did learning take place on both ends, but many positive relationships were built as teacher candidates and students shared the details of their lives and became true pen-friends.

**Presentation Type and Session:** Poster V

## Solar System Misconceptions In Elementary Students

**Robert Warmus**, Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

Third grade suburban elementary students were given the opportunity to explore the scientific concepts of revolution and rotation using a real life object that would spark their schema. The students used a revolving door to simulate the earth revolving and rotating around the sun. Students traveled to a local bank to use the revolving door in their activity. While in the door, students walked through the door first to show the act of revolution, then walked and slowly spun in place to simulate rotation. Follow up questions about the concepts were discussed along with clarifying questions to ensure understanding.

**Presentation Type and Session:** Poster III

## Text All Day? Use Those Skills In Music Class!

**Melissa Bender** and **Teresa Leone**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Tomas Henriques, Music and Professor Andrea Guiati, Director, All College Honors Program

In today's society it is common for children to grow up immersed in technology. This pushes music educators to implement new ways of teaching to help the children learn more efficiently. Fortunately, there are a number of new technological applications that can be applied to the music classroom. We are currently taking MUS220 Technology Applications for music educators, that has made us realize that new teaching techniques stemming from new technologies improve and speed up the understanding of music. From current technology applications such as the iPhone and iPod touch, to the Morrison Trumpet, music instruction is more hands on and accessible than ever before. Technology has also opened the doors to music composition as programs such as GarageBand and Finale have enhanced musical creativity. Because of these new ways of learning, young students can express themselves creatively even before they can read. Since technology has such a large role in children's lives, it's easy for them to comprehend these new musical concepts. In our presentation, we will have a poster explaining beneficial teaching strategies incorporating technology into music curriculum, and also a computer showing GarageBand techniques that would be used in a classroom. We think our research will show that technology will ease the learning process.

**Presentation Type and Session:** Poster VIII

## Turning Theory Into Practice: Implementing Theories Learned In a Methods Course Into the Elementary Classroom

**Katelyn Racine**, Childhood Education, **Gloria Lassitter**, Childhood Education, and **Laura Jost**, Childhood and Exceptional Education

Faculty Mentor: Professor Hibajene Shandomo, Elementary Education and Reading

Teacher candidates in our math and science methods course, EDU 312, were required to attend four weeks of lecture, class discussions, and presentations. This time is allotted to ensure that proper theories and methods are used when participating in the professional development school placement. This spring semester, we were given the opportunity to work with peers in order to find different strategies based on theory to help deliver math and science content. We found this four-week period of facilitated instruction beneficial once we were placed in our elementary classrooms. We have used many theories to effectively enhance student learning and we believe that theory put into practice is a key component in becoming highly competent teachers. We intend to make concrete connections between the materials learned in the methods course and the methods we used in our elementary classrooms. In this poster we will provide specific research on how we used the article "I did it my way" in every lesson we taught. Future teacher candidates should know how a theoretical framework is turned into practice in their classrooms. Although theories alone are not strategies



for teaching, they help to inform and guide teaching, and make instruction smoother.

**Presentation Type and Session:** Poster V

### **Undergraduate Teaching Assistants In Course Redesign of Economics 101**

**Micha Owens, Kyle Kunkle, Ashley Hurd, Katie Brown, Erin McKenna, Amber Buchholz, Anna Cummings, Grace Higgenbottom, Heather Lucas, and Alysia Howells,**  
ECO 495: Special Project

Faculty Mentor: Professor William Ganley, Economics and Finance

Economics 101 is a basic course necessary for many college freshmen at institutions everywhere. At Buffalo State College we have taken the traditional survey course and created a unique experience for students and instructors alike. The project is part of a nation-wide process of course redesign; this particular redesign is funded by a State University of New York grant. The National Center for Academic Transformation is evaluating and overseeing the Buffalo State education experiment. By reducing the amount of hours required for students to be in lectures we have increased the opportunity to utilize multiple teaching techniques. We employ the use of undergraduate learning assistants who assist the instructor by dividing a class of 200+ students amongst themselves and attending to individual learning needs of the students.

**Presentation Type and Session:** Poster V

### **Using Real World Experiences To Develop Science Understanding**

**Amanda Caffarelli,** EDU 690: Master's Project

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

My research encompasses the importance of addressing science misconceptions, how to go about doing so in an appropriate manner, and the significance of relating science teaching and learning to the real world. Too often, we as teachers are quick to explain things to our students assuming that they take what we say as being correct and indisputable. Rather, students develop their own meanings based on their experiences of the world around them on a daily basis. Unless they observe something that questions their beliefs, they accept those observations as truths. Even though they are not always correct, it's still important because they are forming their own ideas. A favorite activity based on real world experiences that I have successfully used with second grade elementary students is an investigation of solids, liquids, and gases. The focus was on the science misconception that materials could only exhibit properties of one state of matter (our focus was on water). In this investigation, students were able to conduct experiments and identify which state of matter an object was taking on. While this activity was conducted in a classroom, it could also be expanded upon or repeated with a child and their parents at home.

**Presentation Type and Session:** Poster V

### **Using Technology To Understand the Students of Yesterday and Today**

**Justin Wojcik,** Student Personnel Administration and **Emily Tennant-Koller,** Student Personnel Administration

Faculty Mentor: Professor Wanda Davis, Student Personnel Administration

As future student affairs professionals, we have been taught that the key to our success is to know our students. It is critical to understand the ways in which our students grow, develop, and learn. To truly be able to comprehend this we must know how higher education has evolved and the challenges that students faced in the past and the current day. The world is rapidly changing and the students that enter college today are very different than the students 50 years ago. Or are they? In this project we used current technology to highlight differences and similarities between millennial students\* and college students in the 1960's, the era of student unrest. Note: Millennial students\* Although there is no specific time frame to quantify these students, researchers usually say that this generation encompasses students born 1982-today. They are children of late baby boomers and early Generation X. They were teenagers during Columbine. For much of their lives they have been sheltered, and yet do not know a world where terrorist attacks are not on the front page of the news.

**Presentation Type and Session:** Poster V

### **Water Cycle Misconceptions**

**Amanda Cavarella,** Curriculum and Instruction

Faculty Mentor: Professor Coralee Smith, Elementary Education and Reading

My action research project is on student misconceptions of the water cycle; focusing on evaporation and condensation more so than precipitation and accumulation. Evaporation and condensation seem to cause the most confusion when learning about the water cycle. Throughout this year I have taught in a third and fourth grade special education classroom. The water cycle is part of the curriculum therefore necessary for students to overcome certain misconceptions. Aside from this particular school year, I have student taught in a third grade inclusion classroom as well. While teaching the unit on the water cycle to both groups of students, I have realized the common misconceptions students have regarding the water cycle. These misconceptions relate primarily to the changing states of water when learning about evaporation and condensation. Evaporation and condensation are integral parts of the Water Cycle, therefore very important however very difficult for some students to understand.

**Presentation Type and Session:** Poster II

## **You Can Learn No Matter Where You Come From**

**Nicole Irizarry**, Early Childhood and Elementary Education, **Alexandra Drozd**, Elementary Education, **Melissa Cotton**, Early Childhood and Elementary Education, **Jillian Honan**, Elementary Education, and **Kahla Ciepiela**, Elementary Education

Faculty Mentor: Professor Hibajene Shandomo, Elementary Education and Reading

In the beginning of the fall semester of EDU 312: Teaching Mathematics and Science, a volunteer coordinator from “Journey’s End” was invited to our class to talk about her organization. Journey’s End Refugee Service is a Christian and community based organization with a mission to welcome refugees to Western New York without regard to ethnic origin or creed. The organization also assists refugees to become healthy, independent and productive members of the community. Five of us from the class decided to take part in this experience volunteering three hours every Saturday for five consecutive weeks at the Niagara Porter Library on the West Side of Buffalo. This volunteer work involved teaching refugees about our culture and assisting them with their academic work. Through this experience we learned that refugees have to cope with a lot of new challenges: learning the language, becoming educated, finding work, and adapting to a whole new culture. We thought teaching refugees would be a huge challenge but we quickly came to realize that not only were they eager to learn, they also learned very quickly. We also found through our experience that refugees had common basic needs like everyone else.

### **Presentation Type and Session:**

Oral – Education and Health

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# *Health, Social Work, and Speech-Language Pathology*

## **The Brain Is a Terrible Thing To Waste: Alzheimer's Disease**

**Caitlin Burke**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

Dr. Alois Alzheimer first uncovered Alzheimer's disease. It is a fatal brain disorder that affects a person's ability to function normally. It destroys brain cells and nerves to cause severe memory loss. It is the most common form of dementia, while being degenerative, and incurable. New drugs are finding ways to help cognitive structure, while slowing down the progression of memory loss. With better understanding of how the brain works, Neurologists are closer to finding new drugs that can eliminate the process in which brain cells expire. Drugs such as Aricept and Exelon, treat and slow down the chemical deterioration process. New drugs are being developed to remove and prevent plaques and twisted fibers in the brain that cause cells to diminish. Medications are not the only way to treat this disease; new researches investigating cognitive activities are being expanded. This will aid patients with Alzheimer's to develop good recollection skills. Managing good health, social interaction, and a calm environment can help continue proper brain function. It is important to recognize the great demands placed on doctors trying to improve the coordination, and assess the services available to patients.

**Presentation Type and Session:** Poster I

## **Communication Disorders: Stuttering**

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

Stuttering is a language pathology that affects approximately one percent of the population, which is equivalent to about two million people. There are three different types of stuttering: blocks, prolongations, and repetitions. Stuttering is often compared to an iceberg because there are obvious problems that lie on the surface but many more emotional difficulties that lie beneath the surface. There are two different therapies used to treat stuttering. Fluency shaping attempts to rid a client of stuttering and stuttering modification is used to treat the way a person stutters and how they feel about stuttering. It is important for individuals who stutter to know that it is ok to stutter. Through my research in books, peer-reviewed articles online, and a possible interview, I hope to make a decision about which form of stuttering treatment is most effective. I plan to explore the different treatment options and be able to develop a well-informed opinion into which one works the best.

**Presentation Type and Session:** Poster I

## **Drawing's Effect On Semantics and Spoken Language For People With Severe Aphasia**

**Nicollette Brown**, Speech-Language Pathology  
Faculty Mentor: Professor Deborah Insalaco, Speech-Language Pathology

**Purpose:** The purpose is to explore further the relationship of drawing to spoken language production in individuals with severe aphasia based on Farias et al.'s 2005 work. Farias et al. determined that drawing enriched the semantic system thereby improving spoken production. **Method:** This is a single-subject multiple baseline design completed in four phases, pre-testing, baseline collection, 10 treatment sessions, and post-testing with two participants with severe aphasia. Participants were administered language, semantic association, drawing, naming, written naming, and copying assessments. Treatment consists of copying and drawing depictions of five objects in context. Five other depictions are reserved to see if generalization occurs. Anagram spelling is serving as a control task. Post-testing will be performed at the end of treatment. **Anticipated Outcomes:** We expect treated depictions to improve and anticipate generalization to untreated depictions. We also expect semantic association and possibly spoken language to improve.

**Presentation Type and Session:** Poster I

## **Eating Healthy Without Putting Your Wallet On a Diet!**

**Betty Douglass**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

"It's too expensive to eat healthy food." With the poor economy, many families, individuals and college students are looking for ways to save money at the grocery store. Health care professionals are concerned people will start to make poor food choices. One fast food meal has enough sodium, calories and fat to satisfy one's caloric intake for the entire day. According to the CDC bad eating habits combined with a lack of exercise has lead to 310,000-580,000 deaths per year. There are many diseases linked to poor nutrition and a sedentary lifestyle such as; cancer, heart disease, obesity, diabetes, stroke, and high blood pressure. There are many tips to help you eat healthy on a budget such as creating a master shopping list, buying generic and buying bulk. Take advantage of in season fruits and vegetables while buying them locally. Stretching leftovers, doubling up on recipes, and packing lunches helps save money too. It is important to buy budget friendly ingredients such as pastas, grains canned and frozen beans, soups (low in sodium), fish, fruits, vegetables and non-fat powdered milk. Being healthy doesn't have to break the bank. There are many options for consumers, if you take the time to look.

**Presentation Type and Session:** Poster I

## The Effects of Repeated Reading On Three and Four Year Old Children

**Jennifer Marchese**, Speech-Language Pathology

Faculty Mentor: Professor Christine Scott, Speech-Language Pathology

The purpose of this study was to investigate whether the effects of multiple readings of the same text (e.g., storybook) while pointing to targeted, labeled words would improve sight word recognition in three and four year old children. Fifteen children enrolled in the summer session of an urban university's day care were assessed for word recognition skills using 16 monosyllabic words. The children were pre-tested on 8 targeted words from the text and 8 control words. A modified picture book was read to the children, in which the 8 sight-words chosen from the text were enlarged, and positioned near their corresponding illustrations. The researcher pointed to both the original text while reading and to the labeled sight-words as they were spoken. The story was read five times to small groups of 2 or 3 children. The children were post-tested on the original 8 targeted and 8 control words. Although two children increased sight-word recognition from pre- to post-assessment, it was determined that the majority of three and four year old children were not able to recognize sight words after five exposures of pointing to the targeted words without the pre-requisite alphabetic knowledge.

**Presentation Type and Session:** Poster IV

## Energy Drink Safety: Get the Facts

**Christine DeVoe**, Health and Wellness

Faculty Mentor: Professor Susan Baldwin, Health and Wellness

There is no doubt that energy drink consumption has dramatically increased across the country especially in the college-aged population. Consumption usually entails high levels of sugar and caffeine that may often be mixed with alcohol and can lead to serious chronic health issues such as obesity and addiction. This paper presentation will report the results of the health and safety issues associated with energy drink supplement consumption. Participants will also differentiate the ways that energy drinks can affect one's physical performance as well as compare and contrast the pro's and con's of energy drink consumption. It is the hope that these research results will attempt to prompt participants to value a decision to abstain from energy drink consumption.

**Presentation Type and Session:**

Oral – Education and Health

## Evaluation of the Px2010 Initiative "Underage Drinking: It's Everybody's Problem!"

**Leah Feroletto**, Student Personnel Administration

Mentors: Dr. William Wiczorek, Director, Center for Health and Social Research and Dr. Kelly Marczynski, Center for Health and Social Research

Px20 is the name of a group of prevention providers and related

professionals from Erie County, New York, who work in the area of mental illness and substance abuse. The Px2010 initiative is the result of a coordinated planning effort to increase the impact of prevention services in Erie County. The purpose of this research is to gather baseline data from individuals throughout Erie County regarding this topic. The information gathered will help to assess the awareness of the general population regarding underage drinking and how it affects all individuals in a community. Research assistants will recruit approximately 500 persons to participate in prerecorded telephone surveys. These persons will be recruited using a random digit dialing approach and the interviews will be conducted using a program called Telesage. The phone numbers will be made up of a combination of 80% land-line numbers with the remaining 20% being cell phone numbers. The goal of this data collection is to provide baseline information from the general population pertaining to the main concepts behind the Px2010 plan, its mission and goals related to the prevention of underage drinking and the fact that it affects everyone, not only the individuals who take part in the act. The main kickoff event for the Px2010 initiative will be in late April, which allows this baseline data collection to be an unbiased assessment. A similar data collection approximately one year from now will be done to assess the change in public knowledge and attitudes as a result of the Px2010 initiative.

**Presentation Type and Session:** Poster I

## Evaluative Research of Youth Placed In Residential Care 2008-2009

**Shaquita Shepard**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

The complexity of the emotional and behavioral problems youth experience thwart efforts to develop integrated and coordinated systems of care for children and adolescents. The difficulties of helping youth with multiple problems are compounded when these youth exhibit behaviors that span the mental health system and the juvenile justice system. This study was done to estimate the number of youth with mental disorders and substance abuse issues among Judge Paul Buchanan's Family Court Caseload that were placed outside their home for the year 2008-2009. The research we are conducting is intended to show that the needs of emotionally disturbed youth in this juvenile justice system were similar to the needs of emotionally disturbed youth in the general population. The Judges in Part 6 of Erie County Family Court will be informed of the results to hopefully lessen imprisonment and increase rehabilitation for these offenders.

**Presentation Type and Session:**

Oral – Education and Health



## **Freshmen: The Good, the Bad and the Influenced**

**Allison Convissar**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

Imagine starting over, with a new life, new persona and copious opportunities for problems. This is what college students face in their first year of college, a whole new world. Students experience “The Freshmen Fifteen” which happens to be fifteen health issues involving their day to day activities. Among these issues; sleep deprivation, mental health problems, as well as a lack of physical activity rank the highest in terms of affecting student’s lives. College students are trying to become successful in their new environment, and are easily influenced by peers partaking in activities that jeopardize their health. This contributes to their problems, and since they are inexperienced in life, finding help can sometimes be difficult. As a result of encountering these experiences students display negative self-criticism as well as occasionally falling victim to substance abuse. Studies have shown that the age range for mental health issues is 18 to 24 years of age and the statistics show that 45% of women and 36% of men felt so depressed that it was difficult to function (Tartakovsky, 2010). Help is out there. Students can attend on-campus/off-campus counseling as well as viewing certain websites in order for them to find help.

**Presentation Type and Session:** Poster I

## **Health Care Reforms**

**Mike Pizetoski**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

Health care reform is a hot topic in today’s political community. Universal health care is practiced in every industrialized nation except for the United States. Greater consumer involvement in health care is the trend today. Customers want to take preventative measures to protect their health. Consumers demand affordable costs. This comes down to a question of cost versus worth. Clearly health care as it stands has gotten out of hand. The cost effectiveness is very poor for being such a highly evolved nation. We have the best technology in the world if only everybody could afford it. President Obama is about to sign the Health Care Bill that will begin to reform health care in the U.S. The goal is to make health care more affordable and grant coverage to all Americans. A main goal will be to make the system sustainable in order to help our economy. Our nation is plagued with high health costs and low effectiveness. A change must occur. As a highly evolved nation our health care system needed reform. This reform will begin the process to provide every U.S. affordable health care.

**Presentation Type and Session:** Poster I

## **Hear Between the Signs: Social Acceptance of the Cochlear Implant**

**Jonathan Nadeau**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

The implantation of the cochlear implant into children has been questioned whether it’s ethically justifiable. This has been a century old debate between the Deaf community and hearing parents of deaf children. It’s the parent’s decision whether to have their child raised with the ability to hear or remain deaf growing up in the Deaf community. The cochlear implant is an implanted electronic device that’s placed into a profoundly hard of hearing individual with nerve damage, thus providing the individual with a sense of sound. Hearing parents have their children implanted to be a part of the parents accustomed hearing culture. The Deaf community views the cochlear implant as a way for the hearing majority to threaten the deaf minority. The cochlear implant takes away the child’s right to choose thus enforces the spoken language. Deafness is not a “disability” so why should it be fixed! There has to be a common ground of selfless interests between the Deaf and Hearing communities to best meet the needs of hearing impaired children.

**Presentation Type and Session:** Poster I

## **Indoor Air Quality: Can Plants Help?**

**Tameka Dampier**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

In the past several years, scientific evidence has indicated that indoor air has become a health hazard. One in five people will experience allergy related illness at some point during their lives. Indoor allergens are responsible for reoccurring sinus infections, post nasal discharge, asthma, bronchial infections, and ear infections. Solutions to air quality problems involve actions such as eliminating or controlling sources of pollution, increasing ventilation, and installing air cleaning devices. Purchasing household plants is part of the solution to indoor air pollution. Although plants will not cure major pollution problems on their own, they may be the ideal antidote to minor contaminants. Plants produce oxygen, add moisture and filter toxins. Research scientists funded by NASA conducted a study using plants to clean the air in a tightly sealed constructed building containing synthetic materials. Before the plants were added, anyone entering the building would experience burning eyes and respiratory difficulties. After the plants were added, the air quality improved and the symptoms disappeared. Critics suggest that a great deal of validation remains before the use of plants can be recommended for effective control of indoor air pollution.

**Presentation Type and Session:** Poster II



## **Kendra's Law: The Controversy Surrounding Court-Mandated Treatment**

**Alyssa McCutcheon**, HON 400: All College Honors Colloquium  
Faculty Mentors: Professor Kimberley Zittel-Palamara, Social Work and Professor Andrea Guiati, Director, All College Honors Program

On January 3rd, 1999 a woman by the name of Kendra Webdale was pushed in front of a subway train in New York City, resulting in her death. The man that pushed her had a severe mental illness, schizophrenia, and was not on medication. After this occurrence, Kendra's family and others fought to create and pass a New York State law: Kendra's Law. Kendra's Law allows courts to order certain individuals with brain disorders to comply with treatment while living in the community. This court-ordered treatment is called assisted outpatient treatment. This law has remained temporary for the past ten years but is up for re-vote in June 2010 to possibly make the law permanent within New York State. There is very strong support for this law as well as very strong opposition. This presentation will include the history of Kendra's Law and the reasons for and against the permanency of Kendra's Law. Original research will be conducted through personal and on-line interview on personal stories and opinions concerning Kendra's Law. Preliminary findings show that Kendra's Law has improved the quality of life and safety of those living with severe mental illness.

### **Presentation Type and Session:**

Oral – Education and Health

## **The Many Faces of Asthma**

**Sagr Ahmed**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

The incidence, prevalence, and mortality of asthma have increased over the past three to four decades. Asthma has become more common in both children and adults accounting for about 1 in 250 deaths worldwide. In many cases, asthma is a result of an inherited genetic trait and is known as the most common childhood disease. Individuals whom develop asthma as adults are termed adult-onset asthma. There are new asthma medications such as Advair and Singulair that can be used to prevent asthma attacks. Bronchodilators, which are found in rescue inhalers, can halt an attack once one starts having symptoms. However, there are better ways to prevent asthma attacks. New prevention techniques can be used such as a peak flow meter that has become an important part of managing asthma. No one really knows the exact reasons why more and more people are developing asthma. Some experts suggest that people are being exposed to more dust, air pollution, and secondhand smoke. While there is no cure for asthma, attacks can be prevented or reduced by taking medication daily. Prevention entails avoiding asthma triggers, and modifying one's environment such as minimizing dust and other allergens.

### **Presentation Type and Session:** Poster I

## **MyPyramid For Kids**

**Megan Braun**, Dietetics and Nutrition and **Chelsey Becker**, Dietetics and Nutrition  
Faculty Mentor: Professor Carol DeNysschen, Dietetics and Nutrition

Childhood obesity has become a major problem in the United States. By introducing nutrition education to kids, we can begin to raise awareness of this growing epidemic. The United States Department of Agriculture has developed various nutrition education tools, such as MyPyramid, which outlines nutritious foods, healthy eating habits, and encouragement of physical activity. We visited Lindbergh Elementary School in Kenmore, NY to educate and interact with first graders on the importance of healthy eating and physical activity, according to MyPyramid for Kids. We feel it is important to start nutrition education at a young age, in order for kids to develop healthy lifestyles as they grow up.

### **Presentation Type and Session:** Poster I

## **The Relationship Between Recognition and Comprehension of Idioms In Urban 5th Graders**

**Jennifer Samuel**, Speech-Language Pathology  
Faculty Mentor: Professor Constance Dean Qualls, Speech Language Pathology

The purpose of the study is to provide additional information about how fifth graders recognize and comprehend idioms. This study is an extension of prior studies looking at comprehension and recognition of idioms, but in isolation. Prior studies have shown that figurative language is correlated with reading proficiency, language abilities, and life experience. Therefore, students with speech, language, and learning disabilities may be disadvantaged on tasks and tests of idiom recognition and comprehension. Each student will complete two tasks, one will test recognition and one will test comprehension. This study is based on a within-group design in which participants will be administered both experimental tests. We expect that, regardless of literacy abilities, fifth graders will be able to recognize idioms, and that those students who are good readers will comprehend idioms with greater accuracy than those with lower literacy abilities.

### **Presentation Type and Session:** Poster IV

## **Supervised Play For Parents In the Child Welfare System**

**Jodi Sussman**, Social Work and **Cyelynn Carr**, Social Work  
Faculty Mentor: Professor Ronnie Mahler, Social Work

When Child Protective Services (CPS) removes children from their parent(s) due to a finding of child abuse or neglect, reunification is the intended goal. In NYS in 2007, according to the NYS Office of Children and Family Services Bureau of Management Information, 26,733 children were placed in foster home care. Nearly 29% of these children were 5 years or younger. Case workers strive

to teach parents to provide for their children's health care, safety, shelter and nutritional needs. Regular visits in a safe and supervised setting are essential to strengthen the parent-child bond, a key objective within permanency planning. This poster presentation will illustrate resources intended to help caseworkers show these parents ways to engage their children in age-appropriate play. During these visits, caseworkers can help parents further by modeling ways to nurture children's physical, mental, and emotional development. The social environment at supervised visitations could be enriched by utilizing stories, music, games, nursery rhymes, and objects that inspire interaction through creative play. Resource books, on-line materials, and observation in field internship were the sources we utilized to compile resources for caseworkers and parents.

**Presentation Type and Session:** Poster V

## **Weight Loss Without Leaving Your Home?**

**Michael Rinde**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

People have been trying to lose weight since the beginning of time. It is now possible to achieve weight loss at home. Instructional DVDs have used the concept of simulation to teach people to learn skills. It has been well documented that the terrorists in the 9/11 attacks could have used flight simulation tools to learn to fly the airplanes. This investigation initiates the question, does P90X, a simulation, DVD based workout program/diet plan, actually help individuals lose weight. The P90X program was first studied without the DVD. It was later put on to DVD to spread its perceived successes. The researcher will be using a skin fold and before and after pictures to draw conclusions on weight loss effectiveness. The skin fold will be taken 2 weeks into the program, and again 2 weeks before the program ends. This researcher hypothesizes that healthy weight loss will be achieved during the 90 days. In conjunction, due to the participant's early successes this investigator would suggest P90X to others. The researcher initial observation is that the DVD does not enhance weight loss. However, the DVD does not seem to hinder the weight loss program. The DVD is just another channel utilized to communicate the program.

**Presentation Type and Session:** Poster I

## **You Are the Eyes of the World: Biophilia - Feel It Change Your Life**

**Chelsea Coyne**, HEW 411W: Critical Issues in Health  
Faculty Mentor: Professor Scott Roberts, Health and Wellness

Have you ever been surrounded by lush trees and felt a deep sense of appreciation for how wonderfully breath-taking nature can be? This sensation has been labeled as Biophilia. E.O Wilson, a Harvard University naturalist, discovered the inherent genetic connection between nature and humans. He claimed that those who ignore Biophilia suffer from adverse health effects such as anxiety and depression. Our "biofields", an energy we emit around our bodies, is directly affected by Biophilia. Our biofields become clogged

daily by constant stress, emotional overload and other forces. This is often reinforced by the lack of serotonin in the brain. Serotonin and dopamine levels are increased by exposure to the sun and nature but what if there were more to it than meets the eyes? The objective is to focus not only on the beautiful feeling of nature, but also on the other benefits that nature has on your health. This investigation includes natural solutions to "the winter blues" and just maintaining happiness. Mother earth provides everything we need; we just need to attune ourselves to nature.

**Presentation Type and Session:** Poster I

## **Youth and Sports: A Positive Combination**

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

When most people think of sports they think of the games they see on television played by incredibly talented and well paid athletes who have trained for years. Something they should remember is how those athletes got their start that, for most of them, was while they were children. There are so many different types of sports and ways to be involved in them and sports are a great way for children to meet each other and new people and provide life lessons in a way that is fun and exciting. The research being conducted is intended to prove that playing sports positively affects the socialization of children and that sports teach more than lessons on winning and competition.

**Presentation Type and Session:** Poster VIII

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## *Humanities*

### **American Xenophobia: An Immigrant's Experience**

**Carlos Cisneros Vilchis**, Business Administration  
Faculty Mentor: Professor Michael Niman, Communication

Since the founding of the United States, this nation has become a nation of immigrants. From the independence of Texas, to the train tracks that covered the U.S. from coast to coast, this nation has been formed by people who have traveled from far and wide to expand its borders and to work. But now, as we are entering the 21st century, we are challenged by a pressing problem. Most students would think that Racism, Xenophobia or Ethnocentrism are things of the past, conquered with the advent of the Civil Rights Movement, helped in a small measure with the Reconstruction of the U.S. after the Civil War, but they would be surprised by all the discrimination suffered by what most Americans still consider "minorities." This paper examines various aspects of xenophobia from the perspective of a newly arrived immigrant trying to understand his new host nation. It examines the history of xenophobia in the United States, exploring both its origins, political uses, and its impact on both native and immigrant populations in the United States.

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

### **Artificial Bowl, Artificial Lights**

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

With the rapid advancement of social media, seeing into the lives of everyone around us has become easier than ever before. For the first time in history we are able to leave our own circle of friends and learn about the lives of acquaintances, family, peers and coworkers. In a way, we've now got access into everyone's own, personal fish bowl. My short story, "Artificial Bowl, Artificial Lights" is an attempt to share the idea that every person lives in their own environment, while emphasizing that for many, this environment is shrouded by false perceptions, swayed motivations and ultimately synthetic justifications. Appropriately enough, I was inspired to write this story after watching the growth, development, and day to day activities in a salt water fish tank. It fascinated me to observe the stark differences between my world and the fish world. I started to ask questions like, "is that a good thing?" and "who's world is the most legitimate?" and I hope to encourage the readers to do the same and hopefully leave with a new perspective on people, reality, and their own personal fishbowl.

**Presentation Type and Session:** Poster VIII

### **Columbus and Me: Exploring a Persistent Myth**

**Josh Sherman**, BSC 101: Foundations of Inquiry  
Faculty Mentor: Professor Michael Niman, Communication

For over 500 years we have celebrated a man responsible for starting a wave of terrible atrocities that have lasted for over a half millennia. American educators teach us that Christopher Columbus (Christobal Colon) is a hero and founder of the Americas, and since the 400th anniversary of his first voyage in 1892, we as a nation have been celebrating him as the "Great Discoverer." My research documents the historic falsehoods that anchor the Columbus myth. It examines evidence arguing the existence of prior voyages of discovery made by African and Viking explorers long before Europe's colonial adventures. I intend to use Columbus's own words to document his crimes against humanity, such as genocide against the native Taino people who occupied the island of Hispaniola, which we now call Haiti and the Dominican Republic, when he enslaved them and later completely destroyed their population. My previous knowledge of Columbus (Colon) contrasts the new insights I have gained from more deeply investigating the history of this mythology. Before I did some of my research I thought that Columbus was exactly what elementary school taught us he was, that he founded America and that he was the only one that thought the earth wasn't flat. The history teachers and verbal stories I encountered about Columbus never mentioned anything about the complete annihilation of the Taino population. Armed with this knowledge, I now see Columbus Day as a celebration of the extermination of the Haitian people, and the beginning of the Trans-Atlantic slave trade in the Americas.

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

### **Coverdale Uncovered: "De-veiling" the Mystery of the Blithedale Romance**

**Philip Bowman**, English  
Faculty Mentor: Professor Peter Ramos, English

Who is Miles Coverdale? Through the seemingly incongruous admission of his love for Priscilla, we are given the opportunity to see who Miles Coverdale is, and what his role has been throughout Nathaniel Hawthorne's *The Blithedale Romance*. Coverdale's love-confession serves as the volta to the work, and upon its consideration, we soon discover that Coverdale's claim of being a dim figure is wholly unsupported. The *Blithedale Romance* is, essentially, a work of self assertion – a way, perhaps, to make up for the overextended bachelorhood his life has become in its final pages. We find Coverdale fossilizing himself in every strata of the narrative: as author, narrator, artist/medium, director, stageplayer, dramatic onlooker, and spectator. While he claims to be a secondary or tertiary character, we come away from *The Blithedale Romance* more intimately familiar with Coverdale than any other character. Where he perhaps hoped to redeem the tragic elements of his life at the Blithedale experiment by converting it to a Romance, he has instead

emptied it of anything resembling substantial meaning, and thus has reinforced his own feelings of meaninglessness and emptiness. Coverdale, by his insistence on the Romantic ideal, displays how those ideals ultimately undermine themselves; by his own valuation, a vision worth having is “certain never to be consummated otherwise than by failure.” In his final confession, we are offered a peek beneath Miles Coverdale’s own romantic veil, where we are offered an occasion to understand his role better than he himself has yet understood it. While he might live out his days a mysterious contradiction to himself, now uncovered, he need not remain so to the readers of *The Blithedale Romance*.

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

### **Death In the Alps: A History of the Italian Theater In World War I**

**Thomas Golombek**, History

Faculty Mentors: Professor Andrew Nicholls, History and Professor Norman York, History

This session will feature a power point presentation that will cover the Austro-Italian front during the First World War. It will show what led these two nations that were war allies before the war, to come into conflict with one another. It will break down in detail the major campaigns in this theater. It will show that although this was considered a side show in the Great War, it was in fact a major theater of operations. Furthermore, given the alpine topography over which the major fighting took place, it also featured some of the war’s most harrowing stories, dramatic engagements, and controversial strategies. My research presentation will also discuss the effects that World War I and the Treaty of Versailles had on both of the combatant states.

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

### **Forgery of Oscar Wilde’s Letters: Reprehensible Deception Or Criminal Aestheticism?**

**Kelsey Till**, English Education

Faculty Mentor: Professor Lisa Berglund, English

This project was largely conducted in the Special Collections Department at the University at Buffalo, focusing on the extensive collection of Oscar Wilde material housed there. A collection of letters to and from Wilde was found, including four known forgeries. The letters were studied in the context of nineteenth-century British notions of forgery. This research has led to the conclusion that three of the forgeries may have been crafted by Arthur Cravan, a known forger of Wilde documents. Also, looking at Wilde’s various comments on criminals and forgery, as well as indications within his works, one can conclude that Wilde himself did not frown upon forgery. Although forgery is often regarded as reprehensible, forgery can also be seen as a form of creative art. Forgers do not always forge purely for monetary purposes, and the public has always been

a fascination with forgery and the reasons behind it, particularly in the nineteenth-century.

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

### **From Humble Origins**

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

The German navy was a highly debated topic within Germany. There seemed to be no middle ground. It was either loved or despised. While that debate was going on technology made situation even more complicated. There were new designs and technological innovations during the late nineteenth and early twentieth centuries that made ships bigger, faster, stronger, but also more expensive. This was one of the reasons why it was so highly contested. Two men in particular used their influence to try and make the navy as strong as it could be. These two men were Kaiser Wilhelm II and Admiral Tirpitz. Their performance in World War I makes the navy seem more of a toy of the Kaiser than an actual fighting machine. So was the navy worth it. After looking at both sides of this debate through various books, articles, and encyclopedias The paper will conclude with a description about whether or not this was worth it. This decision will be based on my findings and it will be using hindsight but that is how all decisions are measured anyways.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **Horace Benbow and an Outdated Sense of Morality In Faulkner’s “Sanctuary”**

**Jeremy Williams**, English

Faculty Mentor: Professor Peter Ramos, English

Horace Benbow and an Outdated Sense of Morality in Faulkner’s “Sanctuary” examines the canonical status of one of William Faulkner’s most controversial works, *Sanctuary*. The idea that Faulkner wrote the novel merely for money has come into question. More contemporary critics view *Sanctuary* as a well thought out, puzzlingly complex, and powerful novel examining the nature of evil in the individual and his/her society. Horace Benbow, a man raised up as a gentleman of the south, is the key to unlocking these complexities. Bound by his social obligations, he sets off, just as the addled Don Quixote does in Cervantes’ novel “Don Quixote,” to bring justice and morality back to Mississippi and the south, namely in his hometown of Jefferson. During his quest Benbow’s actions and personality conflict with the prejudices and actions of Jefferson’s residents, offering quality insight into a post Civil-War Southern society and the corrosion of old-South ideals, which are replaced with vices Faulkner believes are responsible for the problems in the post-reconstructed South: racism, avarice, selfishness, and the psychological inability of individuals to become determinants.

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



## **How To Plan a Backpacking Trip of Your Own**

**Cassandra Andrusz**, Spanish Education 7-12

Faculty Mentor: Professor William Raffel, Communication

It is difficult for many students to travel because of the cost, but many other people are also hesitant. Frequent problems include the planning process, budgeting money, finding lodging or buying tickets. So I produced a 10 minute instructional video using my previous traveling experiences to show others how create a backpacking trip of their own. It addresses all the planning, traveling and money concerns as well as unexpected problems that could happen along the way. I focus on what is important before trips, such as having the proper gear and having a back up accommodations while traveling. I also created two worksheets to aid future travelers: a budget sheet to keep track of money and a trip planner to assist with the planning process.

### **Presentation Type and Session:**

Oral – Humanities and Social Sciences

## **If You Can't Speak the Language... : The Location of Identity In Native Speaker**

**Tom Poehnelt**, English

Faculty Mentor: Professor Lorna Perez, English

Identity and language are necessary bedfellows – this is illustrated in the novel *Native Speaker*, as spoken language is key to the main character's identity. This project appealed to me because my life as a hybrid Korean American is applicable to my understanding of Asian American literature and the texture created by the commingling of language and identity. The end result is the paper that explores the link between language and identity in the life of Henry Park, the protagonist of *Native Speaker*. I have gained understanding of the work, the criticisms applied to it, myself and my aspirations. While I experienced kinship towards a literature I can identify with, I don't want it to define me. I would like to delve further into the criticisms, the machinations that drive the story. In this way I would like language to forge my identity. For the talk, I will introduce an example of the hybridity of Asian identity with culture in the United States, to show that the awkwardness of being in two places at once is commonplace in Asian American life. This will juxtapose with the question of Asian American identity that is posed and answered for Henry Park.

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

## **The Importance of Historical Restoration and Preservation**

**Amanda Arki**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

Some may ask why it is important to preserve and restore old buildings that have been neglected over time and have become run down. Why not just tear them down and build something new

in their place? For centuries now, humans have created structures to live, work and play in. These buildings hold clues to how past cultures lived that we can use to create an identity for the current and future cultures. That is why historical restoration is such a critical practice, and has become increasingly more so in recent decades. In 1966, the National Historic Preservation Act was passed into law creating guidelines for preserving, restoring and conserving sites and buildings deemed to be of historic value. Additionally, the Venice Charter provides international guidelines for preserving and enhancing historical buildings. Using these guidelines, we can ensure that all significant buildings are preserved for the future. This project aims at investigating if we are doing enough to preserve architectural history.

### **Presentation Type and Session:**

Oral – Humanities and Social Sciences

## **Influenced? Effects of the Media On Youth**

**Melissa Kania**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

The media is filled with negative representations of modern society. Newspapers, movies, video games and other forms of media often emphasize things such as violence, sex, drugs and negative body images. The purpose of this research is to investigate the impact of these negative societal representations on the youth of today. How do violent video games affect the attitudes of children who play the games? Does the prevalence of drugs and/or sex in many movies influence the youth who watch said movies? The workings of negative body images in magazines, movies and many other forms of media - how does this affect the body images and ideals of youth who are exposed to this media? The research and its preliminary findings is intended to prove that the media, in various forms, has a strong impact on modern youth, and to suggest how the media can provide a more balanced outlook on society in order to balance its influence on youth today.

### **Presentation Type and Session:**

Oral – Humanities and Social Sciences

## **It's Not a Small World After All**

**James Richards**, Communication Studies

Faculty Mentor: Professor Michael Niman, Communication

Disney animated movies have lived in the hearts of children (and many adults) since Mickey Mouse's 1928 debut in *Steamboat Willie*. Disney studios created these movies to entertain children of all races. The question this paper addresses is, does Disney portray these races portrayed accurately? I argue that the answer is a resounding "no", and this is a fatal flaw in the Disney formula. The opening theme song to *Aladdin* (1992) is about the people who will sever body parts if they do not like you, but claim it is a perfectly acceptable practice in this country. The indigenous people Disney portrays in *Peter Pan* (1953) are warriors shouting a battle cry and smoking a peace



pipe. Wendy, however, cannot join in the festivities because she is a woman, and her place is in the kitchen, which raises the issue of sexism. Sexism is another topic that is blatant through Disney films. Most of the main women in Disney films (Jasmine from Aladdin, Ariel from The Little Mermaid, Belle from Beauty and the Beast, etc) are essentially the same woman recreated over and over. Each woman is very thin, with long, perfect hair, and very attractive. They are flawless beings in appearance but each lacks agency, and in effect, is textbook “damsel in distress” needing to be saved. Mulan (1998) appeared to be a breath of fresh air by displaying a strong, independent woman, but Mulan (1998) has proven to be a repeat offender on many levels. Many oppressed groups have strived for equality (African-Americans and the Civil Rights movement, the gay population and the Stonewall Rebellion) and visible changes now often portray minorities more accurately. This paper employs contemporary scholarship in the field of Queer Studies, Women’s Studies, and African-American Studies to empirically argue that Disney has yet to adequately follow suit.

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

## The Language of Oppression

**Angela Lambrix**, English Education (7-12)

Faculty Mentors: Professor Jennifer Ryan, English, Professor Lorna Perez, English, and Dr. Sandra Washington, Director, McNair Scholars Program

My research investigates the language authors use when writing about the oppression of women. Charlotte Temple by Susanna Rowson (1794) and A Thousand Splendid Suns by Khaled Hosseini (2007) share a universality of oppression that crosses time, ethnicity, and geographical location. I will explore the phenomena of language as a symptom of the broader issues found within a patriarchal society. The texts share similar themes and language patterns, such as the objectification of the female body during periods of violence, the arrest of maternal development, the overt social, psychological or physical oppression of women as well as metaphors that involve animals, objects, or nature, and other literary elements that provide a commonality between the texts. A close reading of the text from a feminist perspective reveals the manipulation of language as a vehicle that perpetuates continued violence toward women.

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

## Love: What Is It To You?

**Elizabeth Delano**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

In The Name of the Rose by Umberto Eco the character of Adso of Melk is struck with love for a woman. He asks his master William of Baskerville if he has ever experienced such love and William automatically assumes that Ados must be talking about the love of knowledge and of the lord. If two people that are very close in

relationship to one another can have such different takes on what love is then everyone must have different ideas of what love is to them and yet we all experience it and some with one another. This project is designed to survey people and ask them to write a love poem or a definition of love that they feel summarizes what they have experienced with love and try to draw some conclusions on where the similarities and differences lie and why these might be so while comparing the findings with definitions of love through the centuries.

**Presentation Type and Session:** Poster I

## Making a Case: Philosophical Discourse In Applied Ethics

**Michael Cardus**, Philosophy, **Marguerite Golia**, Philosophy, **Matthew Guminiak**, Philosophy, **Ryan Harvey**, Philosophy, and **Alicia Whittman**, Photography

Faculty Mentor: Professor Julian Cole, Philosophy and Humanities

In our research we studied philosophical discourse by focusing on the features of effective argumentation in a competitive setting. We conducted our research in Poughkeepsie, New York at the Northeastern Regional Ethics Bowl. This event is designed to promote the competitive discussion of ethically controversial topics. The competition is structured in a series of head to head matches allowing teams to present arguments addressing topics of recent social concern. Due to the complexity of these topics, success in the competition directly reflects each teams ability to argue a position convincingly. Performance is assessed by how well their position answers a question posed prior to each round. Our original methodology involved a quantitative/qualitative analysis based on an assessment tool. This involved constructing a set of criteria which reflected our assumptions on how effective particular features would be in helping win the competition and numerically rating teams according to these criteria during particular matches. Unfortunately, during the competition, due to personnel shortages, we were unable to assess each match in this way. As a result, the only data collected was the personal testimony of the participants. Our results and conclusions show particular characteristics that appeared correlated with success. These characteristics fall into two categories, one related to arguments, the other to teams. Concerning arguments, it was determined that coherence and nuance were most important and in some regards related to one another. Coherence was most evident in how closely the team adhered to its answer to the posed question. Nuance was important in that it provided the ability to demonstrate subtle distinctions with clear examples. Moreover, the coherence and nuance of arguments were most evident when teams showed organization, effective communication, and the ability to articulate clearly. An example of this was the continuous passing of notes during presentations restricted to one speaker. Using this method teams exhibited effective organization and communication by reminding speakers of key points they intended to make. In our presentation we intend to expand on the results of our study and

describe in full the connection between coherence, nuance, and team work.

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

### **Oh God, Where Are You Now? Chicago? Iowa City? Memphis? Buffalo?**

**Kevin Kaminski**, HON 400: All College Honors Colloquium  
Faculty Mentors: Professor Michael Johnson, Modern and Classical Languages and Professor Andrea Guiati, Director, All College Honors Program

*“The great individualistic motto shall be written over him in avenging irony. . . with dreadful truth, ‘He believes in himself.’”* – G.K. Chesterton

According to the dollar in my wallet, we still trust in God, but do we really? Or have we banished God in our sincere individualism? Where is God in America, and is there even a place for God? These are questions that I will examine on a road trip through the Midwest. I will leave Buffalo March 27 and return on April 2. The creative activity will result in a piece of creative nonfiction in which I will document my trip to the cities listed in the title alongside an intellectual investigation of the relevance of God in the human experience. The final piece of writing will consist of 10 – 15 pages, and I will also maintain a blog while on the trip. A conversation of religious thought is becoming extinct in America. On my trip I will actively listen for spiritual conversations and ways to engage people in this discussion. Chesterton argued that we need belief in the fantastical—in something greater than ourselves. During this project I will evaluate the relevance of God in relation to the cities I visit.

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

### **Teatro Italiano**

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

The learning of a new language is always a difficult scholastic challenge to take on. Through first hand participation I am exploring the benefits of theater to further my knowledge and comprehension of the Italian language. I have immersed myself in a trial program in which I, and three other students as well as Italian and non-Italian members of the community with varying theatrical backgrounds are putting together a play in Italian. This program consists of 2-3 rehearsals a week, culminating in a performance here in Buffalo and a performance in Italy with a group of Italian students. With the help of an Italian director, we are learning the correct pronunciation and connotation of our Italian lines. I am observing the obstacles as well as the benefits of learning Italian in script form. I am also in contact with language professors to attain their reaction to this type of language instruction. This poster will be recounting a journey of this learning process through observation.

My presentation will offer testimony to a less common way to study a foreign language.

**Presentation Type and Session:** Poster VIII

### **Twentieth Century Transcendentalists: Kerouac and McCandless**

**Tyler Johnson**, English  
Faculty Mentor: Professor Peter Ramos, English

This presentation will focus on the link between the American transcendentalists of the late 1800s and some of their more prominent philosophical heirs of the 20th century. The paper will highlight the transcendentalist precepts that most directly impacted the thoughts and lifestyles of Kerouac and Christopher Johnson McCandless and illustrate how over-zealous devotion to these ideas may have contributed to the disillusionment and downfall of these two iconic figures. In this way, this presentation will address the difficulty of adhering to the ideologies of Ralph Waldo Emerson and Henry David Thoreau - two of the most influential and celebrated thinkers in American history.

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

### **Unveiling Coverdale’s True Intentions In the Blithedale Romance**

**Carly Wacker**, English  
Faculty Mentor: Professor Peter Ramos, English

This essay is an examination of the internal and external motivations of Miles Coverdale, Nathaniel Hawthorne’s narrator in *The Blithedale Romance*. While popularly perceived as a steadfast, ardent, and almost stoic crusader for societal improvement, Coverdale’s character reveals frailties of a very human sort. This essay also illustrates Hawthorne’s excellence when it comes to exposing human weakness, even in light of concerted attempts to improve the human condition. In my presentation, I will outline the main objectives of my paper that defend Miles Coverdale and his actions associated with the destruction of *The Blithedale Romance*.

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

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## ***Physical Geography, Sciences, and Mathematics***

### **Analysis of a Watershed: Cayuga Creek, Niagara County, New York**

**Marilyn Kush**, Human Geography

Faculty Mentor: Professor Kelly Frothingham, Geography and Planning

The United States consists of over 3.5 million miles of stream and river corridors. Watershed management is a unique and very important multi-disciplinary approach used to improve the quality of streams and rivers. The watershed management process typically involves: organization, identifying the problem(s) and opportunities, developing goals and objectives, and implementing, monitoring, evaluating, and adapting. During the problem and opportunity identification phase, a number of stream assessments can be used to collect baseline data on current stream characteristics. The Stream Visual Assessment Protocol (SVAP) was used to collect baseline data of stream characteristics of Cayuga Creek, Niagara County, NY in 2004 and 2008. The objectives of this project were twofold: 1) SVAP scores from 2004 and 2008 were compared in order to determine if stream channel characteristics changed over time; and 2) SVAP stream section scores and the Cayuga Creek Restoration Road Map were compared in an effort to identify potential stream restoration sites. Preliminary results indicate that on average, Cayuga Creek's scale ratings have continually decreased between the two years. The poor conditions observed have resulted in the need for future restoration.

**Presentation Type and Session:** Poster II

### **Anthropogenic Contaminants In the Soil and Air of Delaware Park, Buffalo**

**Rachael Taylor** and **Suzanne Shapiro**, GES 460:

Environmental Field Methods and Analysis

Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

We are proposing to study the urban contaminants in soil and air of Delaware Park, Buffalo. We are interested in Delaware Park because Scajaquada Expressway cuts through the center of it. We will use a stratified systematic sampling method to select sampling locations. At each sampling site we will expose a greased petri dish for 20 minutes to collect air particulates that will then be counted under a microscope. We will take particulate samples at each site during peak hour traffic and again at quieter times. At the same sites we will also take a soil profile sample and test this for a range of urban contaminants, focusing on heavy metals. The soil samples will be tested for a number of contaminants using a Niton XLt x-ray fluorescence analysis. We will have some discussion of how the contaminants found may affect flora and fauna in the park. We expect to find that soil contaminants and particulates in the air are in greater concentration nearer the expressway. As it is an urban

park, we expect there will be contaminants found throughout the park but that there will be some variation in concentration with distance from the road network around the park.

**Presentation Type and Session:** Poster VII

### **The Application of Case Studies In the Teaching of General Chemistry Laboratory Courses**

**Brittany Peoples**, Forensic Chemistry and Criminal Justice

Faculty Mentor: Professor Maria Pacheco, Chemistry

The objective of this research project is to assess the impact of case study usage in the teaching of a General Chemistry laboratory in the students' academic performance and their attitudes towards the course content. By developing case studies to be used in a laboratory setting, students will be presented with concepts that are usually difficult to comprehend in a context-enriched setting, rather than in a traditional laboratory experiment. The students will be exposed to real life examples of how chemistry can be applied in society and will then perform a related laboratory activity. Pre-post course attitude survey responses and student academic performance throughout the semester will be statistically analyzed to detect any changes in student's attitude towards chemistry, the level of understanding of concepts presented in the course and their ability to apply the concepts learned to a problem presented in a laboratory setting.

**Presentation Type and Session:**

Oral – Sciences and Mathematics

### **Assessing Ichthyoplankton Drift Densities of Round Gobies (*Neogobius melanostomus*) In a Great Lakes Tributary**

**Shana Chapman**, Biology

Faculty Mentor: Professor Christopher Pennuto, Biology

Round gobies are now present in Great Lakes tributaries and implicated in the loss of some darter populations and reductions in benthic macroinvertebrates. Tributary streams may be significant sources of recruitment to the Lakes if spawning activity is high. Drift densities and diel abundances of larval and juvenile round gobies will be investigated in Ellicott Creek to quantify ichthyoplankton drifting downstream toward Lake Erie. Initial ichthyoplankton collections were conducted bi-weekly in Ellicott Creek from mid-July through mid-October, 2009. Preliminary results showed round goby ichthyoplankton drift densities peaked in early August. We estimated that 305,000 larval and juvenile round gobies entered the drift in Ellicott Creek during the spawning season. To further assess drift densities, weekly drift collections will be conducted at sunset from June through September, 2010. Additionally, a 48-hr diel drift study will be conducted during the last week of July using 30-minute collections every two hours. Discharge, dissolved oxygen, conductivity, turbidity and temperature will be measured during each collection to examine correlations to ichthyoplankton drift densities. It is expected that round goby ichthyoplankton drift densities will be highest after sunset. Round goby ichthyoplankton drift densities are

also expected to be significantly greater than those of native species.

**Presentation Type and Session:** Poster II

### **Assessing Potential Threats: Parasitological Surveys of Great Lakes and Finger Lakes Non-Native Species**

**Marissa Hajduk**, Biology

Faculty Mentors: Professor Lyubov Burlakova, Great Lakes Center, Professor Sergey Masitsky, Great Lakes Center, and Professor Alexander Karatayev, Great Lakes Center

Parasites introduced with non-native host species may pose serious threats to wildlife and human populations, including negative effects on populations of native species, mass mortalities of native hosts, and public health issues. In the spring through fall of 2009, we surveyed 15 water bodies in the Great Lakes and Finger Lakes region for the presence of parasites associated with zebra mussels (*Dreissena polymorpha*), quagga mussels (*Dreissena rostriformis bugensis*), New Zealand mud snails (*Potamopyrgus antipodarum*), and faucet snails (*Bithynia tentaculata*), all non-native molluscs in North America. Nematodes, trematodes, and oligochaetes were found in zebra and quagga mussel samples from Lake Erie and the Finger Lakes. In addition, a species-specific ciliate (*Ophryoglena bempophaga*) was found in zebra mussels, indicating the likelihood of adult mussel introductions into the region. No endosymbionts were detected in *P. antipodarum* ( $n = 270$ ). However, a host-specific pathogenic trematode (*Cyathocotyle bushiensis*) was found in *B. tentaculata* ( $n = 35$ ). While most of the endosymbionts found in invasive molluscs were non-pathogenic species, the trematode found in *B. tentaculata* is a pathogenic species known to cause mass waterfowl mortalities, and thus poses a risk for the lower Great Lakes region.

**Presentation Type and Session:** Poster II

### **Bioinformatic Analysis of Common Loon, *Gavia immer*, Genetic Sequence**

**Michael Ando**, Biology

Faculty Mentor: Professor Amy McMillan, Biology

The focus of this study was to organize and interpret part of the Common Loon (*Gavia immer*) genome sequence provided by the University of South Carolina. The sequence database has over 1.6 million base pairs across 6,144 contingency files of suspected *Gavia immer* DNA. The goal of this project was to first confirm that this was indeed loon DNA by searching for similar sequences using the NCBI database. Once confirmed, we separated the sequence into mitochondrial and genomic sequence by cross referencing with existing NCBI entries. We then further separated the genomic sequence into ribosomal RNA genes and other genomic DNA. After this identification, we will search the mitochondrial DNA for any highly conserved sequences between *Gavia* and other members of the Aves class, specifically *Gallus gallus* (common chicken). Our hypothesis is that much of this mitochondrial DNA will be highly

similar, and we may be able to identify some entire gene sequences in *Gavia* that correlate to *Gallus* mitochondrial genes.

**Presentation Type and Session:** Poster II

### **Brownfield To Valuable Asset: A Waterfront Development Plan For Cherry Farm Site, Tonawanda, New York**

**Benjamin Bissell**, HON 400: All College Honors Colloquium, **Scott Petrus**, Urban and Regional Analysis and Planning, and **Marilyn Kush**, Human Geography

Faculty Mentors: Professor Kim Irvine, Geography and Planning and Professor Andrea Guiati, Director, All College Honors Program

The waterfront in Tonawanda, NY, is not utilized to its full potential since most of the land is inactive industrial zones. One particular area, known as Cherry Farm Park, has been remediated but remains a brownfield. Buffalo Niagara Riverkeeper, our service-learning partner, was interested in developing plans for use of the site that preserves the environment but also provides some economic benefit to the Town of Tonawanda. In the waterfront development plan that our group proposed for the Cherry Farm Park Site, five major elements were considered: 1. Overall image from on- and off-site; 2. Access to the site; 3. Economic considerations; 4. Quality of life for local residents and visitors; and 5. Environmental concerns. The planning process involved examination of other waterfronts throughout the United States, creating different development scenarios based on this review as well as our understanding of local conditions, and analysis of the costs and benefits of each scenario that we developed. After this analysis, one particular scenario seemed the most viable and is illustrated on the poster.

**Presentation Type and Session:** Poster II

### **Buffering Capacity of Freshwater Wetlands Bordering Lake Ontario**

**Monique Wilson**, Forensic Chemistry and **Latisha Harris**, Biology

Faculty Mentor: Professor Charlotte Roehm, Geography and Planning

Ecosystem functions, such as nutrient retention, provided by coastal wetlands are being recognized as invaluable as efforts to construct and restore wetlands become more widespread. However, some wetlands have lost this function due to potential supersaturation of nutrients over time, as evidenced by wide spread and more frequent algal bloom events, rendering them ineffective as buffers. In hand, long term sustained loading of nutrients to wetlands can result in an increased export of nutrients to adjacent lakes increasing the chances of algal bloom development. In this study we examine if wetlands along the coast of Lake Ontario have reached their critical load and are now acting as sources rather than sinks for nutrients. Preliminary results show increasing spatial concentrations of soluble reactive phosphorus moving from the



stream input to the wetland output, suggesting that these systems have reached and/or surpassed their critical load. In addition both the wetland ponds and the nearshore regions of Lake Ontario experienced algal blooms. By broadening our knowledge of the consequences of wetland nutrient saturation and algal blooms effects on wetland function we may have the ability to prevent and control future blooms; further preserving the integrity of the Great Lakes.

**Presentation Type and Session:** Poster II

### **Building For Understanding: A Community Project-Based Learning Opportunity**

**Crystal Sailor**, Mathematics Education and **Jason Robinson**, Mathematics Education

Faculty Mentor: Professor David Wilson, Mathematics

This College-Community Partnership project focused on the construction of a park shelter. The partnership was seen as an opportunity to actively engage youth in a project involving substantial mathematics that would help address the ongoing question: Where are we ever going to use this? Preservice teachers worked with summer youth to build understanding of various aspects of the construction process and the underlying mathematics. In-class and on-site activities included scale drawing and modeling, use of geometric properties of figures, and measurement. Students were given a pre- and post-test to assess growth in mathematical ability through the project. The poster presentation features pictures of the learning and application of mathematics as well as summary data from pre-post test analysis. Project insights regarding teaching and learning, including a multi-grade approach, planning, assessing, etc. will be shared as well.

**Presentation Type and Session:** Poster IV

### **Calculation of Contact Angles On the Basis of Density Functional Theory**

**Joseph Crawford**, Mathematics, **Mark Lojaco**, Biology, and **Derrek Greene**, Mechanical Engineering Technology

Faculty Mentor: Professor Lana Berim, Mathematics

Contact angle, which is a measured angle that a drop makes with a solid surface, is an important characteristic of wetting properties of a specific surface. Contact angles usually depend on temperature and on the nature of the surface and can range from very small values (hydrophilic surfaces) to large values of the order of 180° (ultrahydrophobic surfaces). In the present study, the contact angle of liquid argon is calculated for various surfaces at different temperatures on the basis of density functional theory (DFT). The advantage of DFT is that it involves only potentials of intermolecular interactions and does not employ the macroscopic characteristics such as surface tension. The obtained results show that for a specific choice of energy parameter  $E = E_0$  of a liquid-solid interaction potential, the contact angle is almost independent of the temperature. For  $E > E_0$ , the contact angle increases and for  $E < E_0$ ,

**Presentation Type and Session:** Poster V

### **Chemical Analysis of Regular and Decaffeinated Coffee Samples From Vendors In Western New York**

**Lindsay Brignon**, Forensic Chemistry and **Brittany Gipple**, Multidisciplinary Masters

Faculty Mentor: Professor Jamie Kim, Chemistry

Coffee is one of the world's most popular beverages. Therefore, health effects of coffee have been extensively studied to determine how coffee drinking affects humans. Coffee contains numerous chemicals that are critical to human health including caffeine and antioxidants. Caffeine is a central nervous system (CNS) stimulant, having the effect of temporarily warding off drowsiness and restoring alertness. Antioxidants such as chlorogenic acid or caffeic acid in coffee are known to prevent cardiovascular disease and cancer. The main goal of our project is to quantify caffeine and antioxidants present in regular and decaffeinated coffee samples from vendors in the local area. Five samples were collected from five separate vendors. In our presentation, preliminary results of the concentration of caffeine and antioxidants determined by high performance liquid chromatography (HPLC) will be reported.

**Presentation Type and Session:** Poster VII

### **Condensation Rates of Vapor Molecules On the Surface of a Liquid Drop As a Function of Drop Dimension and Temperature**

**Mark Lojaco**, Biology, **Derrek Greene**, Mechanical Engineering Technology, and **Joseph Crawford**, Mathematics

Faculty Mentor: Professor Lana Berim, Mathematics

The rate of condensation of the vapor molecules on the surface of a liquid drop is calculated on the basis of the kinetic theory of nucleation. The theory is based on the microscopic interaction of fluid molecules and does not employ certain macroscopic concepts such as surface tension and detailed balance principle. An interaction potential between molecules combines the attraction part at distances between molecules larger than some characteristic length  $\ell$  and a repulsive part at distances smaller than  $\ell$ . It was determined that the rate of condensation of vapor molecules on the surface of the drop is controlled by the diffusion process. This rate was calculated numerically for various sizes of a drop and various temperatures. For large spherical drops of radius  $R \gg \ell$ , the condensation rate at all considered temperatures increases linearly with increasing  $R$ , the slope of the straight line being dependent on the temperature. For small drops with  $R \sim \ell$ , the  $R$ -dependence of condensation rate is not linear. The obtained results can be used for study of the rate of nucleation involving condensation.

**Presentation Type and Session:** Poster VI

## **Conservation of Angular Momentum In the Martian Atmosphere**

**Matthew Hensley**, Earth Science

Faculty Mentor: Professor Jude Sabato, Earth Sciences and Science Education

Martian atmospheric angular momentum is very well conserved. On Earth the angular momentum is not conserved due atmospheric waves, caused by changes in the topography, thermal inertia, and albedo from location to location. Since these same properties are also present on Mars one would expect that the angular momentum of the Martian atmosphere would not be conserved. We will examine this difference between Earth and Mars using a General Circulation Model (GCM) and a Lagrangian parcel trajectory code. The Ames GCM, designed by NASA, is used to investigate the properties of the atmospheric waves of Mars. Using this computer model we are able to determine how the topography, thermal inertia, and planetary albedo affect the atmospheric waves by isolating each variable and examining it separately. In the second part of the research a numerical code is developed to calculate Lagrangian parcel trajectories. This piece of code enables us to analyze a parcel of air as it travels through the circulation pattern. The goal of this research is to learn what special features of Martian atmospheric waves allow them to conserve angular momentum so well.

**Presentation Type and Session:** Poster VI

## **Construction of a Rotating Tank For Visualization of Geophysical Flows**

**William Forth**, Earth Science and Earth Science Education,  
**Melissa Chudyk**, Physics, and **Steven Dutter**, Physics

Faculty Mentor: Professor Jude Sabato, Earth Sciences and Science Education

Atmospheric and oceanic fluid dynamics are extremely complex and widely studied through theory and modeling. Laboratory experiments are also useful for understanding these phenomena. Such experiments are difficult because the Earth rotates. Therefore, experiments must be performed in a rotating environment. Here we outline the construction of a rotating turntable for simulating atmospheric and ocean flows. A 24x18 inch clear lexan tank rests upon a 3/4" piece of hardwood mounted to a vertical drive shaft. The bearing assembly is composed of a modified heavy-duty cast iron band saw drive system turned on its side to achieve a stable and true rotation. A wood frame fitted with four custom fabricated leveling feet supports the assembly. The table rotates by a modified 12-volt DC motor from a hospital bed fixed with a belt driven pulley system. The motor is on an adjustable platform designed to assure proper belt tension and simple belt removal. Mounted to the table is an adjustable stand that holds a web camera above the tank. A custom fabricated electrical slip ring connects the rotating camera to a computer allowing continuous control during rotation. The slip

ring is capable of handling eight circuits allowing Ethernet connect ability.

**Presentation Type and Session:** Poster IV

## **Continued Microanalysis of Rocks That Have Record of Continental Collision In Western Connecticut: The Famous "Log-Jam" Schist**

**Kerri Spuller**, Geology

Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

As part of an ongoing study of the tectonic record of the Northern Appalachians, I have documented mineral pattern and compositional variations in a collection of oriented rocks from the famous "log-jam" schist, a set of rocks known for their unusually large size kyanite crystals (up to 1 m long), western Connecticut. These metamorphic rocks represent middle-crust during the formation of the Appalachians ~300 million years ago (now exposed after erosion). The name "Log-Jam" stems from what at a glance appears that the kyanite are arranged as if in a scattered or 'log-jam' arrangement. This pattern along with the other minerals in the rocks required documentation in order to understand their record of the continental collision episode. This project built upon work done in the field and in the lab by previous researchers that produced a number of specimens, and associated processed specimens for this study. Primarily, my work was on thin sections (0.03mm thick slices) for microscopic analysis. Results confirm that these rocks are schists of high grade metamorphism, composed mainly of micas and quartz, as well as metamorphic minerals including garnet and staurloite. What makes these rocks unique is that a localized area within the area of study has a high content of kyanite, which is an extremely high pressure Aluminosilicate mineral. Analyzing the mineral content and microstructures of these rocks through microscopy is ongoing, but is intended to provide clues about the field relations and their formation.

**Presentation Type and Session:** Poster IV

## **Deciphering the True Beauty of Eye Shadow**

**Brittany Gipple**, **Todd Isbrandt**, and **Jongseok Lee**, GES 513: Forensic Geoscience

Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

The goal of this project is to do a comparative study of the mineral composition of six different eye shadows from the following product lines: Revlon, Wet N Wild, Cover Girl, Almay, Max Factor and Maybelline. All of the eye shadow samples will have approximately the same color and matte visually. Samples of eye shadow from the different manufacturers will be analyzed using techniques such as

X-ray Diffraction, UV Fluorescence, Optical Microscopy and Thin Layer Chromatography to determine mineral, organic and crystalline composition. Secondly, a blind study will be conducted involving preparation of unknown samples in order to determine if it is possible to match the unknown with the product manufacturer. The blind study will be used to determine how effective the methodologies mentioned above are for differentiating samples of eye shadow that are visually analogous.

**Presentation Type and Session:** Poster VIII

### A Deeper Look Into Real Analysis Concepts

**Donald Turner III**, HON 400: All College Honors Colloquium  
Faculty Mentors: Professor Daniel Cunningham, Mathematics and Professor Andrea Guiati, Director, All College Honors Program

In my presentation, I intend to prove a theorem in mathematics, specifically using concepts from real analysis. The theorem that I will prove can be summarized as follows: Suppose that a function  $f(x)$  in the real number system is continuous from 0 to infinity and that the limit of this function as  $x$  goes to infinity equals  $L$ . Then the limit, as  $n$  goes to infinity, of the integral of the function  $f(n-x)$  from 0 to 2 is equal to  $2L$ . To prove this theorem, I will use ideas and concepts such as integrating by substitution, sequences, continuity, limits, functions, and writing proofs. These ideas are presented in a few courses here at Buffalo State, such as Calculus I, Calculus II, and Real Analysis. As stated in my problem, I know that the answer will be  $2L$ , but I will be proving this equality. I will present a formally written and detailed proof that shows all of my work and reasoning.

**Presentation Type and Session:**

Oral – Sciences and Mathematics

### Development of Polymorphic Microsatellite DNA Markers For Genetic Diversity Estimation In Hellbender Salamanders (*Cryptobranchus alleganiensis*)

**Andrea Cifonelli**, Biology Education  
Faculty Mentor: Professor Amy McMillan, Biology

The hellbender (*Cryptobranchus alleganiensis*) has been the focus of population studies New York. Since 1983, studies of distribution and abundance have resulted in categorization of hellbenders as a species of special concern. New York populations of hellbenders are scattered within the Alleghany and Susquehanna River drainages. In order to understand this species of conservation concern, polymorphic genetic markers can be used. One technique for investigating genetic polymorphism takes advantage of regions of microsatellite DNA, which serve as useful genomic molecular markers in population studies. The purpose of this research is to develop new polymorphic microsatellite markers using primers previously developed for a closely related hellbender species (*C. a. bishopi*) and Asian giant salamanders (*Andrias* sp). Such

techniques provide researchers with information about the genomic make-up of individuals and populations. Developing polymorphic markers in New York hellbenders will supplement the hellbender recovery plan that is currently being drafted by the New York State Department of Environmental Conservation (NYSDEC). There has been little genetic analysis of the New York hellbenders, inhibiting further action to prevent these populations from becoming endangered in the state. Microsatellite polymorphic markers will increase information about the genetic diversity and understanding of the population structure between and within the two watersheds.

**Presentation Type and Session:**

Oral – Sciences and Mathematics

### Dirty Sewers: A Look Into What Is Being Released Into Our Local Waters

**Tim Wood** and **Chris Bova**, GES 460: Environmental Field Methods and Analysis  
Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

For our research project we will be testing water quality at five sewage overflow locations in the Buffalo region. We will be testing for coliforms and *E. coli* using Coliscan water monitoring kits. Samples will be collected from each location as quickly as possible after a significant rainfall event (greater than 1 inch). The selected sites are in: Scajaquada Creek, Cazenovia Creek, Cornelius Creek, Smith St. Park on the Buffalo River, and the Erie Basin Marina. We will be taking two samples of the water and culturing it immediately. We plan to collect samples after two distinctly separate rainfall events. We will also have a blank sample used as our control for each day we collect samples. We know that there is an over flow of sewage from these locations on average 48 per year due to the city's outdated sewer system. We hope that there is not an unacceptable amount of coliform and *E. coli* in the water that we sample.

**Presentation Type and Session:** Poster VII

### Educating the Public About Seismology and Earthquakes

**Jennifer Voelker**, Elementary Education and **Michael Ludwick**, Earth Science Education  
Faculty Mentor: Professor Kevin Williams, Earth Sciences and Science Education

Seismology is the study of earthquakes and seismic waves that move through and around the Earth. Seismic energy is released in an earthquake, travels through the Earth, and is recorded using seismographs. For this project our goal is to research and compile seismic information in order to produce educational displays about seismology and earthquakes. We compare the magnitudes of significant historic and recent earthquakes including the 2010 earthquakes in Haiti and Chile. We are also setting up a seismograph on campus to produce seismograms that will show how earthquake energy appears when recorded at Buffalo State College. After this



project, the seismograph will be monitored by future Earth Science students. In addition to the actual seismograph, we are building a working model of a seismograph that can be used as part of a public display and for classroom demonstrations. Our project includes development of a display in the lobby of the Science Building and posters in Butler Library to educate Buffalo State College students, faculty and staff, and the general public about seismology.

**Presentation Type and Session:** Poster V

## Effects of Changing Calcium Levels In the Canadian Shield Lakes On Zooplankton and Their Ecosystems

**Jennifer Kishbaugh**, Biology

Faculty Mentor: Professor Alicia Perez-Fuentetaja, Biology

The Canadian Shield lakes are experiencing environmental changes affecting their ecosystems, the most significant change being decreasing calcium levels. The decline in calcium is accelerated by acidic deposition and loss from logging. Zooplankton obtain calcium by absorbing it from the surrounding water, and in calcium depleted lakes the amount available to zooplankton is minimal. Zooplankton use of calcium varies depending on species uses and requirements; therefore, the availability of calcium may regulate the presence of certain species, influencing the entire ecosystem of the lakes. Daphnia are zooplankton sensitive to the changing ambient calcium levels of the Canadian Shield lakes. They are some of the most abundant zooplankton in many Canadian Shield lake systems, having a great effect on the regional food webs. Bosmina, a smaller animal, could replace Daphnia as their population levels fall with decreasing calcium. Changing the prevalence of a species or replacing it with another will affect the populations of algal food, the fish and other predatory zooplankton, up through the trophic levels. This is a study imperative to the knowledge of how decreasing calcium levels will affect the entire region and its intertwining ecosystems.

**Presentation Type and Session:** Poster II

## Effects of Different Diets and Ration On Energy Content and Condition Indices In Laboratory-Reared Alewives

**Todd Duval**, Biology

Faculty Mentor: Professor Randal Snyder, Biology

The alewife (*Alosa pseudoharengus*) is a small fish first introduced into the Great Lakes in the 19th century, and has become an important forage fish for the salmonids and walleyes. Alewives are seasonally variable in length/weight condition factors, and exhibit an inverse relationship between lipid and water content. It is still unclear how their actual energy content and dietary composition relates to Fulton's condition factor (K), an important fisheries measure. To determine the role of diet on condition factors, we raised alewives under laboratory conditions on either a plant oil

or fish oil based diet and at rations of 1% or 3% of average body weight. After 8 weeks, these fish were measured for length and weight. Fish were dissected, and hepatosomatic and gonadosomatic indices were calculated. Preliminary data suggest that Fulton's K is loosely correlated with diet type and ration; the fish fed fish oils had higher K than plant oil fish. There seems to be some significant difference in percent water between the diets and ration levels. Bomb calorimetry is currently being performed to assess energy content, but a preliminary analysis shows that fish fed with fish oil have more energy per gram at both ration levels.

**Presentation Type and Session:** Poster II

## The Effects of N and P On Photosynthetic Light Response In a Restored Grassland On the Lake Erie Shore

**Kristall Waldron**, Biology

Faculty Mentors: Professor Daniel Potts, Biology and Professor Christopher Pennuto, Biology

The effects of nitrogen (N) and phosphorus (P) and their co-limitation on grassland annual net primary production (ANPP) are well documented, however fewer studies have examined their effects on photosynthetic light response. This study examined the interactive effects N and P on photosynthetic light response and ANPP in a reclaimed grassland near Buffalo, New York. During June 2009 we measured photosynthetic light response of mature leaves of the perennial grass *Festuca rubra* grown in field plots that had received factorial N and P addition. Later, we measured ANPP by clipping aboveground biomass. From the photosynthetic data we estimated maximum rates of photosynthesis (A<sub>max</sub>), light use efficiency (LUE), light compensation point (LCP), and dark respiration (R<sub>d</sub>). Nitrogen increased A<sub>max</sub>, and LCP but did not influence LUE or R<sub>d</sub>. In contrast, P did not influence photosynthetic light response variables, nor did we observe co-limitation effects. Likewise, ANPP was positively influenced by N but was not influenced by P or co-limitation. Our results consistently show that P addition does not stimulate additional biological activity. In contrast, N exerts a strong influence on carbon assimilation across biological scales in this restored grassland.

**Presentation Type and Session:** Poster II

## Environmental Survey of Devil's Hole Cave: Lewiston, New York

**Chris Keroack**, Physical Geography

Faculty Mentor: Professor Stephen Vermette, Geography and Planning

The intent of this study is to provide an environmental and historic survey of Devil's Hole cave. The cave is located along the Niagara Escarpment at Devil's Hole State Park, in Lewiston, New York. The survey was conducted between mid-December 2009 and mid-April 2010. The survey included a study of the cave's position



within the geologic stratification of the Niagara Gorge, mapping of the known chamber and exploring a potential new passage, and monitoring of the cave's temperature and relative humidity. In addition to the physical characteristics, the appearance of cave fauna at each visit was documented. The documentation of bats within the cave is particularly important given the prevalence of White Nose Syndrome (WNS) affecting bats in New York State.

**Presentation Type and Session:** Poster VII

### Even In Death a Person Can Be Toxic

**Sarya Randolph**, GES 513: Forensic Geoscience

Faculty Mentors: Professor Elisa Bergslien, Earth Sciences and Science Education and Professor John Song, Criminal Justice

During the Civil War up to 1910, bodies were embalmed with a fluid composed of arsenic, mercury, copper, lead, and other toxic elements. This method was common practice in embalming until the early 1900's, when arsenic was banned for its health risks. Methods of burial and the types of caskets used have since posed environmental concerns. One concern is that the arsenic embalmed remains decomposed in porous containers that allowed the toxic heavy metals to seep into the surrounding soil and ground water. The purpose of this research is to evaluate samples from three different cemeteries located in Rochester, NY and/or the County of Monroe. The cemeteries included will be: Mt. Hope Cemetery, Riverside Cemetery, and Holy Sepulcher Cemetery. Contaminants such as arsenic, mercury, copper, lead, or other metals will be assessed by collecting surface soil samples from the bases of slopes in sections of the cemeteries that pre-date "1910" and sections that post date 1920's. The goal of this research is to determine if older sections of the cemeteries contain higher levels of known pollutants in their soil as opposed to newer sections. In addition, the contaminant loads will be compared between cemeteries.

**Presentation Type and Session:** Poster VIII

### Expression of Stress Resistance Genes Thought To Be Involved In Huntington Disease In *Drosophila* Stressed By Deletion of a Stress Resistance Genes Or Heat Shocks

**Sandra Seep**, Biology, **Nicaury Baez**, Biology, and **Lesly Retamozo**, Biology

Faculty Mentor: Professor Douglas Easton, Biology

There are a number of genes that are known to reduce the amount of toxic protein aggregates in *Drosophila* engineered to express the Huntington protein. We have measured the expression of these genes (Hsc70-4, Hop, Hsc83 and Shot) in the larvae and adults of *Drosophila* subjected to heat shock or the deletion of a critical gene in the stress response, Hsp110. Our hypothesis is that since these genes act in a system that prevents protein aggregation and that they are implicated as genes that are responsible for reduction

of aggregates of the Huntington protein they will be expressed at a higher level in *Drosophila* exposed to stresses that promote protein aggregation (heat shock or heterozygous deletion of a heat shock protein gene, Hsp110). Hsp110 has been identified as one of the genes critical for reduction of Huntington protein aggregation (Zhang and Perrimon, 2010). We would expect that heterozygous deletion of this gene alone would lead to compensatory expression of the other Huntington resistance genes. Our experimental animals were treated as follows: Control larvae and adults, heat shocked larvae and adults, and mutant larvae and adults. We measured the quantity of mRNA for each of the stress proteins by Reverse Transcriptase PCR (RT-PCR). The results will be discussed.

**Presentation Type and Session:** Poster II

### The First Transmembrane Domain of a *Drosophila* Innexin Is Loosely Packed

**Adam DePriest**, Biology

Faculty Mentor: Professor Martha Skerrett, Biology

A tryptophan-scanning technique was applied to the first transmembrane domain (M1) of the *Drosophila* gap junction protein ShkB (lethal) variant A with the aim of identifying sites of transmembrane domain interaction. The tryptophan-scanning technique is based on the premise that the large bulky side-chain of tryptophan is tolerated when positioned in a lipid environment but disrupts protein function when inserted at a site of protein interaction. Tryptophan was substituted sequentially for sixteen amino acids within M1 of ShkB(lethal) and channel function was assayed using the *Xenopus* oocyte expression system. Four sites of transmembrane domain interaction were identified, all positioned along the same helical face of M1. The results suggest that M1 interacts closely with only one other transmembrane helix.

**Presentation Type and Session:** Poster II

### Forensic Investigation of Perfume Residues On Fabric Samples By Gas Chromatography

**Alicia Maneen**, Forensic Chemistry and **Mike Munella**, Biology

Faculty Mentor: Professor Jamie Kim, Chemistry

Commercially available perfumes contain many distinguishable chemical components, each of these in varying concentrations. Therefore, identification these perfumes by analyzing the residual components of the perfume over a certain period of time is a significant issue in forensics. The goals of our research over the summer of 2009 was to determine how long chemical residues of perfumes remain on fabric samples, what components of each perfume stay on samples, and more importantly, can we distinguish perfumes by their residual components. For these goals, six commercial perfumes of varying prices were placed on fabric samples (cotton, silk, nylon, and polyester) and left in room temperature conditions for different periods of time (1, 4, 8, 12, 24, 48, 72 hours, 7 day, and 14 day). After the time period

elapsed, the perfume residues were extracted and analyzed by gas chromatography. Our results showed that more expensive perfumes contain higher concentration of less volatile components. Less volatile components remained on the fabric longer than more volatile components, which could be used to identify original perfumes. In addition, cotton was found to hold the perfumes better than any other fabric samples used in our study.

**Presentation Type and Session:** Poster VII

## **Geographical Spatial Analysis of Northern Diamondback Terrapin (*Malaclemys terrapin*) Movements In Response To Boat Traffic and Being Displaced In Barnegat Bay, NJ**

**Andrew Harrison**, Biology and **Nicole Wood**, Biology  
Faculty Mentors: Professor Ed Standora, Biology, Professor Hal Avery, Biology (Drexel University), and Professor Wende Mix, Geography and Planning

The Northern Diamondback Terrapin is listed as a species of special concern in New Jersey and is subjected to increasing anthropogenic pressures. To determine the behavioral responses of terrapins to boat traffic, twelve female turtles divided into three different class sizes were outfitted with radio and sonic transmitters and temperature/depth data loggers. We used depth data along with release/recapture points to plot the path of submerged terrapins. Along the way, points were determined using a compass, range finder and GPS receiver. These locations were plotted using ArcGIS 9.2 with the Spatial Analysis Extension. Two home range models were applied for analysis: the Minimum Convex Polygon (MCP) and Confidence Ellipse. Turtles that were deliberately harassed with a boat were found to be significantly deeper in the water column. With the help of Earthwatch volunteers, further research will be conducted in the summer of 2010 to determine the homing ability of the terrapins in response to displacement. Eighteen terrapins will be tracked using biotelemetry after being displaced three distances north and three distances south from the capture site to determine their homing ability.

**Presentation Type and Session:** Poster II

## **Geology Research Internship: Pathway To Becoming an Independent Researcher**

**Annabelle Wardzala**, Earth Sciences  
Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

This project is an internship working with a more experienced student researcher who is studying partially-melted rocks (migmatites) associated with a granite body (pluton) in southern Maine. The technique for this introductory level was the experience of learning the material as it is applied in the lab. This research is part of an ongoing project focused on highly metamorphosed rocks adjacent to the Sebago Pluton in Maine. Introductory background

research on the geologic history of the area was a large part of the project; understanding the conditions that migmatites (extreme metamorphism) form in, and being familiar with the area that the samples being looked at in this project are from. Also an introduction to lab work was a primary focus in the early stages of the research. This includes learning how to thin section hand specimens of the migmatites, and to analyze and interpret the mineralogy of thin sections. This research will continue as the course curriculum and experience in the lab advance, so will the results. The goal of this project is to become an independent researcher and continue this project.

**Presentation Type and Session:** Poster IV

## **GIS Spatial Analysis of Motor Vehicle Accidents: A Case Study For the Town of Cheektowaga, Erie County, New York**

**Joseph Skowronski**, Geography  
Faculty Mentor: Professor Tao Tang, Geography and Planning

Motor vehicle accidents can be a traumatic and horrifying experience for the individuals involved. Reducing the number of accidents occurring in a region is often a significant goal and objective of the law enforcement and local government of that jurisdiction. With the support of the Cheektowaga Police Department, this research applies Geographic Information Systems (GIS) technology to map and analyze the spatial and temporal patterns of the accidents occurred in last two years in the Town of Cheektowaga. More than 2,500 different accidents recorded by the Cheektowaga Police in two year period were analyzed. Spatial statistical tools, such as kriging or kernel density analysis were used to understand spatial patterns of the accidents. This research is anticipated to assist in the discovery of accident high density areas (hotspots). This research also determines and suggests possible road and traffic sign changes and modifications in order to help in reducing the number of accidents.

**Presentation Type and Session:** Poster II

## **Green Living: Lessons From a Tree House**

**Kyla Christie**, Sociology  
Faculty Mentor: Professor Louis Colca, Social Work

In recent years the environmental movement has grown in popularity. According to the Gallop poll in 2007 seventy percent of Americans were either an active participant or sympathetic to the environmental movement. Over the summer I had a unique opportunity to live in an ecologically sustainable tree house with a practicing environmentalist for a little over a week. The aim of this project is to examine some components of environmentalism such as recycling, composting, and use of solar power, using the tree house as a prime example. I will also incorporate national statistics on environmental practices in the United States in order to present a wider spectrum of the environmentalist movement.

**Presentation Type and Session:** Poster II

## Introduction To Mapping: Geologic History of Mars

**Annabelle Wardzala**, Earth Sciences

Faculty Mentor: Professor Kevin Williams, Earth Sciences and Science Education

As part of an on-going project to map the surface of Mars, recent orbital images are being used to create a geomorphic map of the Margaritifer Terra region. The beginning stages of this project involved introductory research into Mars' history and the progress of technology leading to high resolution images, and learning the basics of the ArcGIS ArcMap program. THEMIS (Thermal Emission Imaging System) infrared and visible images, MOLA (Mars Orbiter Laser Altimeter) topography, and Viking Orbiter images were used to interpret the surface features in this mapping area. Better resolution images were also used where available. There is strong evidence of a long fluvial history on Mars; meandering channels cut the surface of the mapping area, including Loire Valles - a major drainage channel. Ancient craters that filled with sediments and mud-flow like ejecta blankets around craters both lend evidence for past fluvial activity that helped create the surface we now see. Today the most active events on Mars are aeolian processes, which are depositing sediments and reshaping the surface. The map produced in this project is meant to help gain a better understanding of the geologic history of Mars.

**Presentation Type and Session:** Poster III

## Investigation Into the Source of Barium In Erie County Groundwater

**Nicole Bennett**, GES499: Applied Geochemistry

Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

Last semester I was given the privilege of doing research for the Erie County Department of Health to find the source of different potentially harmful elements being found in our groundwater systems. There I learned that barium has been found in excessive amounts in groundwater wells in Erie County. In some water samples levels as high as 8.30 mg/L have been detected. The source of this barium is unknown. Barium can be anthropogenic or naturally occurring in water systems. Oil and gas companies use barium in drilling mud for well drilling (lenntech.com) and the mineral barite ( $\text{BaSO}_4$ ) is commonly found in sedimentary rocks such as limestone, clay deposits formed from the weathering of limestone, and in other marine deposits (Bonewitz 2005). Both barite and drilling mud could be possible sources of the barium in Erie County groundwater. There are many gas and oil wells located in Erie County and the bedrock in Erie County is sedimentary. Cattaraugus Indian Reservation in Gowanda, NY had similar problems with their ground water. One ground water sample taken in 1982 contained 23.0 mg/L of Barium (Moore 1984). This was the highest reported barium level in any natural ground water system in the world (Moore 1984). In 1984 USGS Scientist Richard B. Moore's water investigation led to

the conclusion that the source of barium was the dissolution of barite by sulfate reducing bacteria in the water. My hypothesis is that the barium in Erie County is naturally occurring and is also due to barite being dissolved by sulfate reducing bacteria.

**Presentation Type and Session:** Poster VII

## Is Being Plasmid-less More Advantageous For Escherichia coli In Surviving Stressful Environments?

**Shannon Nangano**, Biology

Faculty Mentor: Professor Gary Pettibone, Biology

*Escherichia coli* are common rod-shaped intestinal bacteria that are potentially pathogenic and are routinely found in polluted water. Some strains are known to carry plasmids that confer antibiotic resistance to the cell. Maintaining plasmids requires energy from the cell and might have a negative effect on cell survival in aquatic environments. An ampicillin resistance plasmid from an environmental strain of *Escherichia coli* (AC54) was transformed into a plasmid-less environmental strain of *E. coli* (AC15). The plasmid-bearing and plasmid-less strains of AC15 were inoculated into separate 5-liter well water microcosms and 5-liter creek water microcosms at a density of about  $10^6$  bacteria per milliliter of water. Sub-samples from these microcosms are being taken and transferred to a general plating medium to determine the number of survivors in each water type. Parallel platings on medium containing chemical stressors are also being done to assess the health of the organisms. Both types of plates are counted at both 24 and 48 hours to ensure recovery of stressed organisms. Survival curves for each organism in each type of water will be evaluated to determine if carrying plasmids affects the survival of *Escherichia coli* in water from environmental sources.

**Presentation Type and Session:**

Oral – Sciences and Mathematics

## Levels of Chlorine Residuals In Determinating Tetracycline Resistance of Aeromonas caviae Isolated From Wastewater

**Lynn Hesse**, MS Secondary Education, Biology

Faculty Mentors: Professor Gary Pettibone, Biology and Professor Joseph Zawicki, Earth Sciences and Science Education

For ten weeks, wastewater effluent samples were collected from Bird Island Wastewater Treatment Plant before and after chlorine treatment. As part of a separate study, plant operators reduced the amount of chlorine used to treat effluent to determine how low residual chlorine concentrations could be and still meet their NYSDEC permit for bacterial kill. *Aeromonas caviae* are ampicillin-resistant bacteria found in sewage that are known opportunistic pathogens. Any tetracycline-resistant *Aeromonas caviae* surviving wastewater treatment are discharged into receiving waters and could potentially transfer tetracycline resistance to other bacteria. Of 398



stains of bacteria collected, 100 strains of *A. caviae* were isolated and differentiated using selective media, biochemical testing and randomly verified using API20E tests. Chlorine residual levels at the time the bacteria were collected were grouped from lowest to highest concentrations for chlorine treated isolates. This study will determine if lowering chlorine residual levels during wastewater treatment increases survival of tetracycline resistance in strains *Aeromonas caviae*.

## **Presentation Type and Session:**

Oral – Sciences and Mathematics

## **Levels of Iron In Erie County Soil Compared To Erie County Ground Water**

**Stephanie Mohr, Thomas Ristich, and Nicole Bennett**, GES 460: Environmental Field Methods and Analysis

Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

High levels of iron have been detected in some of Erie County's ground water wells. Iron levels as high as 4.12 mg/L have been measured in the ground water (Erie County Department of Health). Iron is the 10th most abundant element in the universe and it makes up 5% of the Earth's crust (lenntech.com). In our proposed research project we will collect soil samples from below the organic rich topsoil layer (the O-horizon) at various locations throughout Erie County. Global Positioning System (GPS) coordinates will be taken at each sampling location so this information can be plotted used a Geographic Information System (GIS) mapping software package. Collected soil samples will be taken back to Buffalo State College to be analyzed using a Niton X-Ray Fluorescence (XRF) unit. Levels of iron in the soil will then be compared to iron levels in local ground water systems and underlying bedrock units.

**Presentation Type and Session:** Poster VIII

## **Low Cost Demonstration For Optics**

**Jessie Segal**, Psychology and **Alyssa Cederman**, Physics Education

Faculty Mentor: Professor Dan MacIsaac, Physics

In this research project we designed low cost apparatus for high school physics demonstrations using laser pointers. They have recently become affordable, and can be used to demonstrate different properties of light. Before lasers, these demonstrations were costly to set up and therefore they weren't used high school settings. Green lasers are more intense than red lasers, therefore allowing more detailed results. We utilized this property in making a cheap apparatus for Poisson's Spot, which is a phenomenon in optical interference. In addition to Poisson's Spot, we explored how laser light interacts with sugar solution in a gradation of densities. This bends laser light according to density, which demonstrates the same light properties found in mirages. We also built an apparatus to study total internal reflection, which is the property used in fiber optics. Lastly we found cheap apparatus to demonstrate Young's Double Slit and Newton's rings which are both classic demonstrations

in optics. Beyond developing apparatus for the demonstration of optics, we made a website which explained both the apparatus and the scientific concepts behind the phenomenon they show. We did this with the purpose of reaching high school classrooms, so these apparatus can be used in real settings.

**Presentation Type and Session:** Poster IV

## **Mapping of a Granite Pluton Contact In Southern Maine**

**Thomas Bohlen**, Geology

Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

Collisional tectonic processes (e.g., at the Himalayas) are recorded at great depth (> 10 km), and out of direct view. Therefore we look at ancient cores of collision zones to study this record where the rocks are exposed after erosion (e.g., the Appalachians, collision ca. 400-300 million years ago). This research focuses on rocks in the northern Appalachians, north of Portland, Maine, where rocks are part of a belt that extends through Canada and New England. Evidence shows partial melting of rocks during their deformation, and the emplacement of associated granite bodies of various sizes as the collision progressed. Study of the relations of the mineral patterns and associated granite bodies at several scales is a means of understanding granite magma production, travel and emplacement as granite bodies. For this project, I examined exposed rocks located in the area at the eastern edge of the Sebago pluton near Gray, Maine. This examination built on the work of former undergraduate researchers that have studied individual exposures in this area, both in the field and in the lab. Although individual locations have been assessed by previous study, no work was attempted to correlate data among exposures in the field, or to map potential exposures between known locations. To meet this objective, several traverses were conducted in the subject area in order to produce a detailed map across the pluton edge in both directions. Structural and mineralogical data were collected, and samples were collected for lab analysis. Mapping was completed after field data was collected along the several traverses. Subsequent laboratory study involved textural analyses of hand specimens, creation of thin sections for microscopy and the further analysis of the geometry of minerals.

**Presentation Type and Session:** Poster IV

## **Measurements of Fluid In Solid Body Rotation**

**Melissa Chudyk**, Physics, **Steven Dutter**, Physics, and **William Forth**, Earth Science Education

Faculty Mentor: Professor Jude Sabato, Earth Sciences and Science Education

In order to model atmospheric and oceanic patterns, the use of a fluid-rotating apparatus built in the summer of 2009 was employed to make scaled reproductions of phenomena that occur on Earth. While there are many phenomena that may be replicated, the theory behind the most fundamental effects caused by a rotating system was



first tested. The effect on a rotating fluid in solid body rotation is a deformation in the surface of the water in the form of a parabola, governed by the pressure gradient force and the centrifugal force. The relationships between (1) the measured angular frequency of the rotating tank of water and the measured height of the subsequent parabola, and (2) the relationship between the two nondimensional parameters involved in the system, were measured and compared to theoretical results, yielding very low percent errors. LoggerPro and compatible photogate sensor were used to collect the period of rotation of the turntable, and the use of a laser level and meter stick were sufficient to capture accurate enough data for the parabola-height measurements. The project was modeled after MIT's "Weather in a Tank" labs, found at <http://www-paoc.mit.edu/labguide/solbody.html>.

**Presentation Type and Session:** Poster III

### **Mineralogical and Textural Analysis of Granitic Rocks From the Eastern Sabago Pluton, Southern Maine: Beginning Stages of Research**

**Krista Ventura**, Earth Sciences

Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

As part of a large-scale, ongoing project, the beginning steps of research have begun focused on rocks in the northern Appalachians, north of Portland, Maine. Rocks there are part of a belt that extends through Canada and New England. Evidence shows partial melting of rocks during their deformation, and the emplacement of associated granite bodies of various sizes. Study of the relations of the mineral patterns and associated granite bodies at several scales is a means of understanding granite magma production, travel and emplacement as granite bodies. My work focuses on the microscopic textures and mineral patterns of granitic rocks from the Eastern Sabago Pluton. Thus far, work has been to prepare specimens for study, and study already prepared samples in both hand-specimen and under the petrographic microscope. Work is ongoing and preliminary results are presented.

**Presentation Type and Session:** Poster III

### **Mineralogical and Textural Variations In the Migmatite-Granite Complex Near the Western Contact of the Sebago Pluton, SW Maine**

**Ernest Thalhamer**, Geology

Faculty Mentor: Professor Gary Solar, Earth Sciences and Science Education

In order to fully understand the flow of magma and deformation within a body of rock, we must use multiple scales of observation. As part of a larger scale project I studied rocks previously collected southwest of Sebago Lake, in Southwestern Maine. These rocks have recorded magma production, magma emplacement, and

subsequent deformation associated with the Appalachian mountain-building events (400-300 million years ago). These rocks were approximately 15 kilometers deep in the crust during the collision, and are now exposed after erosion. It is only in places like Maine where we can observe this evidence. Previously done research on the area focused on outcrop to hand specimen scaled samples. For my work I looked at rocks at the microscopic level in an attempt to understand relationships within the field area. The rocks in the field area consist of migmatitic meta-pelitic schists, partially melted metamorphosed sedimentary rocks. In hand specimen I could see that rock fabrics were defined by mica and sillimanite foliations. Under the microscope microstructures indicated that deformation in the migmatites took place during the solid-state, after migmatite formation was complete. These findings were consistent with both hand-specimen and field observations.

**Presentation Type and Session:** Poster III

### **Modeling Random Birefringence and Its Impact On Fiber Optic Communication Systems**

**Lucas Bunt**, Applied Mathematics and **Benjamin Kanouse**, Applied Mathematics

Faculty Mentor: Professor Joaquin Carbonara, Mathematics

Failures in many industrial systems are extremely rare by design and as a result are extremely difficult to predict. We developed a mathematical model using an adaptive variance reduction technique that combines importance sampling and the cross entropy method. We then implement this method to accurately model and predict the occurrence of birefringence-induced failures in installed optical fiber communication systems. We used the University at Buffalo's supercomputer at their Center for Computational Research (CCR) to run our model, and compared our results with those of previous models.

**Presentation Type and Session:** Poster VII

### **Monte Carlo Simulation of Consumer Loans**

**Frederick Meyer**, Applied Mathematics

Faculty Mentors: Professor Saziye Bayram, Mathematics and Professor Joaquin Carbonara, Mathematics

It is important for financial institutions to predict the behavior of their loans; it informs their decision-making and financial planning. Future behavior of loans can be used to identify loans that seem likely to default and act on them preemptively. If an institution knows which loans are likely to default, they can try to work with the customer to find a mutually beneficial solution. Financial institutions use mathematical models to predict loan behavior, but most models only predict one possible outcome. Using Markov Chain Monte Carlo methods, which are used to model uncertainty, we simulate many possible outcomes and generate a statistical distribution, which in turn, better informs decision-making.

**Presentation Type and Session:** Poster VI

## **Numerical Analysis of Fluid Dynamics Within a Mammalian Nephron**

**Steven Leuthe**, Applied Mathematics

Faculty Mentors: Professor Saziye Bayram, Mathematics and Professor Bruce Pitman, Mathematics (University at Buffalo)

Nephrons are the basic functional units of the kidney. They filter waste from the blood and assist in excretion of the residue as urine. A pair of human kidneys consist of approximately two millions of these functional units. The rate at which blood enters to each nephron is referred to as the glomerular filtration rate (GFR). The GFR is controlled by two regulators known as the “tubuloglomerular feedback mechanism” and the “myogenic mechanism.” We studied the mathematical models governed by partial and ordinary differential equations that capture the key features of these mechanisms. We used deterministic and stochastic numerical simulations and observed the complex dynamics and bifurcations arising through the interaction of these two regulators. In our poster presentation, we will be presenting our numerical results.

**Presentation Type and Session:** Poster VII

## **Pond Water Samples**

**Joe Odrobina** and **Todd Collier**, GES 460: Environmental Field Methods and Analysis

Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

Our project will consist of taking water samples from a pond near a farm in Cooperstown, New York and a pond from Stiglmeier Park in Cheektowaga, New York. Both ponds are approximately that same size when compared to one another. We are planning to test for Nitrates, Phosphates, Ammonia, Iron, BOD, Calcium, pH and Hardness in the water samples. We will use field screening methods via La Motte field sampling kits. We are hoping to find some explanation as to why these ponds are in the condition that they are today, as they have clearly been adversely impacted. The water quality testing that we will be conducting will hopefully give us some of the information that we need to answer this question. We already know that the pond in Cooperstown, New York contains a bit of calcium. In the course of our work we will develop a protocol for sampling handling and testing. Based on the results of the field testing, additional more sophisticated testing may be performed.

**Presentation Type and Session:** Poster VIII

## **Seasonally Dynamic Patterns of Resource Limitation 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 root:shoot ratios, increasing ANPP and altering rates of soil microbial respiration. During the 2009 growing season, we observed

the seasonally dynamic effect of N and P addition on ecosystem CO<sub>2</sub> exchange in a restored temperate grassland at Tiff Nature Preserve. We predicted that N and P addition would affect net ecosystem CO<sub>2</sub> exchange (NEE) because N addition increases gross ecosystem exchange (GEE) and P increases rates of soil microbial respiration (Re). In a factorial N and P addition field experiment, we measured ecosystem CO<sub>2</sub> exchange, canopy light interception and soil moisture periodically throughout the growing season. As predicted, N addition increased GEE. In contrast to our predictions, P did not increase Re. Effects of N and P addition were greatest during mid-season, but were less pronounced during early- and late-season. These results suggest that episodic water limitation during the late-season may constrain the influence of N and P on ecosystem structure and function in this restored temperate grassland.

**Presentation Type and Session:** Poster II

## **Simulating the General Circulation of Earth's Atmosphere In a Rotating Tank**

**Steven Dutter**, Physics, **Melissa Chudyk**, Physics, and **William Forth**, Earth Science Education

Faculty Mentor: Professor Jude Sabato, Earth Sciences and Science Education

Many weather systems on Earth can be simulated on a much smaller scale using a rotating cylindrical tank. Near the Earth's equator warm air rises and travels north or south and descends near the mid latitudes. A circular flow of air, known as a Hadley cell, is formed. At the mid latitudes, where the rotation of the Earth has a greater effect, jet streams form and create high and low pressure systems, which is weather. In order to mimic these atmospheric conditions a rotating tank was set up with a round metal container in the middle containing freezing water (0°C) while the water outside remains at room temperature (about 20°C). To observe the flow dye was added to the tank. Three experiments are conducted, one with no rotation, one with low rotation, and another with high rotation. With no rotation the dye around the inside is observed to sink and move toward the outer edge, while the dye on the outside moves toward the central annulus, creating overturning cells (Hadley cells). As the rotation is increased, the dye shows that the flow of water distorts and eddies are seen. These eddies are analogous to weather patterns.

**Presentation Type and Session:** Poster IV

## **Smart Design Using Low Impact Development In South Buffalo, New York**

**William Dobson** and **Justine David**, PLN 412: Urban and Regional Analysis and Planning

Faculty Mentor: Professor Kim Irvine, Geography and Planning

For this project we were asked by Buffalo Niagara Riverkeeper, our community service-learning partner, to analyze two areas in South Buffalo for possible Low Impact Development (LID) upgrades. LID is a form of smart sustainable design used to manage storm

water runoff and reduce combined sewer overflows to local rivers. We have developed a design plan that will enhance the immediate local study areas and the community as a whole. First, we recommend installing a rooftop garden on Southside Elementary School and the design is presented. Second, we propose to install a series of planters and a rain garden near the wildlife habitat overlook area. Through sustainable development and green design we will be able to help manage storm water runoff. These projects will educate individuals within the community and encourage citizens to do their part in establishing a greener city.

**Presentation Type and Session:** Poster II

### **Snow Spotting On Campus 2009 - 2010**

**Alyssa Russell**, Geography

Faculty Mentor: Professor Stephen Vermette, Geography and Planning

This poster describes snow depth and weather conditions for the 2009-2010 winter season on the Buffalo State campus. As a snow spotter, I was responsible for measuring and recording snow fall and snow depth, temperature, and associated weather conditions on campus. Snow depths were measured with a ruler. The techniques and location of snow depth measurements - least affected by wind drifting, trees, and snow blown snow - will be presented in the poster. Water equivalent, the amount of water contained within a snowpack, was measured once weekly if the snow depth was greater than four inches. Results from this winter show an accumulated snowfall of 58 inches and a maximum snowpack depth of 12.5 inches. Overall, snowfall and temperatures for the winter were near average. Notable, was the short time periods during which snow events occurred.

**Presentation Type and Session:** Poster VII

### **Soil Analysis of Selected Urban Gardens In Buffalo, New York**

**Joseph Petre** and **Keith Prine**, GES 460: Environmental Field Methods and Analysis

Faculty Mentor: Professor Elisa Bergslien, Earth Sciences and Science Education

Due to a prolonged history of urban areas being used for industrial, commercial and residential land uses, urban soils are often drastically disturbed and polluted. In the city of Buffalo some of the lots where buildings once stood have been transformed into community gardens, providing fresh produce to neighborhood residents. This project looks to explore the health of those soils by sampling and testing the soils of selected urban gardens within the city of Buffalo to determine their contents. Additionally investigated will be potential chronic health effects from eating crops grown where polluted soils are found. Heavy metals such as lead, mercury, zinc, iron, cadmium, chromium, and copper are expected to be found. Also preformed will be visual checks for asbestos, and measurements for soil radiation and the percentage of organic content. The pH of the soils will be measured as well, but highly acidic levels are expected due to possible slag contamination.

Historic records and photos will be used to present background information and conceivable pollutant sources. After soil analysis is completed achievable biological and chemical remediation techniques will be discussed if needed.

**Presentation Type and Session:** Poster VII

### **Spatial Analysis On Relationships Among Air Particle Pollution, Residential Income, and Environmental Perceptions**

**Lei Cai**, Economics

Faculty Mentor: Professor Tao Tang, Geography and Planning

This collaborative research analyzed the spatial relationship of airborne particle pollution distribution, economic income levels, and air pollution concerns of local residents in Beijing, China. We utilized the universal kriging model to interpolate the spatial distributions of air pollutions, and did the questionnaire survey in those possible air pollution source sites. The situation of rapid economic development and environmental pollution, in particular the air pollutions was analyzed. A total of 78 samples of air particle concentration, which were selected randomly across the urban area, were measured in the field. Trimble Navigation GeoX GPS was applied to identify the locations of the sampling sites and possible pollution sources. The questionnaire was being used for collecting opinions of the residents around the possible source sites. I also obtained the personal income and expenses data from Beijing Statistic Bureau. Comparing those data sets of 2008 and the first quarter of 2009, we can summarize that there is 9.34% increase of disposable income and 10.73% increase in disposable expense. That means people are getting higher living standards with the rapid economic development, and they concern more about the air quality. As the economy develops and the income of people increases, more and more people concern the air pollution issues. (Note: The author expresses his sincere thanks to Dr. Stephen Pendleton of Economics and Finance for guidance of survey questions.)

**Presentation Type and Session:**

Oral – Sciences and Mathematics

### **A Storm Water Reduction Plan For Buffalo State College**

**Kevin Ward**, **Bernice Radle**, and **Eric Prentiss**, PLN 412: Community Planning Agencies and Issues

Faculty Mentor: Professor Kim Irvine, Geography and Planning

Storm water runoff is a contributor to the pollutants in the waterways surrounding Buffalo State College, including Scajaquada Creek. We have used Low Impact Development (LID) principles to develop a comprehensive and innovative plan to reduce the storm water runoff for the campus. The plan includes upgrading parking lot conditions, creating enhanced green space and implementing education for all faculty, students and community members. The plan also offers two options to accommodate cost related concerns. This comprehensive plan and its projected storm water reduction savings are presented. The planning effort was done as part of a

service-learning course in which Buffalo Niagara Riverkeeper was the community partner. Buffalo Niagara Riverkeeper has an interest in restoring and maintaining the environmental integrity of local waterways.

**Presentation Type and Session:** Poster III

## **A Study of Water Level Changes In the Buffalo River To Understand the Behavior of the Lake Erie Seiche**

**Alice Mayer**, Earth Sciences

Faculty Mentor: Professor Jill Singer, Earth Sciences and Science Education

The Buffalo River is a meandering river that flows into the eastern end of Lake Erie. The lower 9 km of the river is classified as a Great Lakes Area of Concern (AoC) for a number of environmental reasons, including poor water quality, degraded habitat, and contaminated sediments. Geological and engineering approaches have been used to better understand sedimentation processes in this portion of the river. These approaches include conducting several Sediment Trend Analysis (STA) to understand sediment transport processes and deployment of five horizontal and five vertical Acoustic Doppler Current Profilers (ADCPs). Results from STA indicate a downstream flow regime dominated by fluvial processes and an upstream flow regime dominated by water level changes in Lake Erie; the two regimes intersect halfway (4-5 km) between the river mouth and upper end of the river. Lake Erie seiches are the probable cause of upstream sediment transport. A better understanding of the magnitude and behavior of seiches is being gained through a multi-year investigation of the velocity and direction of the currents in the river using ADCP data. The upriver movement of Lake Erie waters related to seiches can result in an increase in water level in the river. To determine the frequency and magnitude of these changes, water level gages will be deployed at three locations in the river (mouth, halfway point, and upriver). My project involves researching water level gages to recommend the best model for use in the Buffalo River and developing design(s) for the deployment of the gages which will allow easy access for downloading data and provide protection from river debris and high flow events. Once the gages are in place I will be responsible for downloading and helping to interpret the data. This study is ongoing and preliminary results will be reported.

**Presentation Type and Session:** Poster IV

## **Taming the Seiche: A Study of Current Flow and Sedimentary Transport In the Buffalo River**

**William Hughes**, Physics Education (7-12) with Alternative Certification, M.S.Ed.

Faculty Mentor: Professor Jill Singer, Earth Sciences and Science Education

To understand the frequency and magnitude of Lake Erie seiches and the distance upriver seiches propagate, five sites have been established on the Buffalo River between the river mouth

and 9 km upriver. Each site includes a horizontal and a vertical Acoustic Doppler Current Profiler (ADCP), temperature sensor and meteorological sensors. These sensors record river velocity, flow direction, and water temperature, along with atmospheric conditions such as wind speed, direction, and temperature. My involvement in this project has been in support of establishing the five sites and the monthly collection of scientific data for the past two years. I am continuously challenged to design and implement solutions to technical problems that arise and work as part of a team to overcome unforeseen obstacles, including ice flows, tree limbs, and assorted debris. These have resulted in severed cables, bent I-beams, and lost equipment. Learning from our first field season, I provided input into modifications of our shore-based and underwater equipment deployment configurations to better survive the challenges related to studying an urban river that is prone to high flow events and ice jams. I also am designing a mounting bracket that will allow us to deploy a current meter directly from "The Seiche", the College's 24' aluminum workboat. My poster summarizes my activities on this research project to date including details showing the current meter boat mount.

**Presentation Type and Session:** Poster IV

## **Teaching Climate Change To a "Not-So-Green" Generation: Climate Literacy In the High School Classroom**

**Shannon Foster**, Multidisciplinary Studies

Faculty Mentor: Professor Jill Singer, Earth Sciences and Science Education

Today's generation of high school students in the United States have grown up hearing about "global warming" and "climate change". Going "green" has become a part of their vocabulary, and it has a significant meaning as a way of life. One could conclude that this generation of students are more environmentally conscious and consider the impacts of their carbon footprints. Yet, carbon dioxide levels in the atmosphere continue to increase and a high percentage of students do not fully understand the significance of this. This project examined the inconsistencies present in the educational system that hinder the building of a foundation for students in appreciating the scope and seriousness of climate change. The expectation to be proactive and make lifestyle changes and conserving resources may not make sense when connections and meaningfulness are not achieved. The recently developed "Climate Literacy" framework provides educators with a comprehensive and well-rounded approach to teaching climate change in today's classrooms. By combining technology with relevant, interdisciplinary and well-rounded lessons and tools, educators may be able to increase understanding and create life-long habits in their students. Examples of lesson plans that can be integrated directly into high school science courses (e.g., biology, Earth science, environmental science) show how students can learn about the nature of science and uncertainty (key ideas that underpin climate change literacy) and concepts identified in the "Climate Literacy" framework.



Resources include a collection of lessons and activities that are easily accessible to teachers and students through reputable websites and organizations.

## **Presentation Type and Session:**

Oral – Education and Health

## **A Theorem of Linear Algebra On Similar Matrices**

**Andrew Havey**, Mathematics

Faculty Mentor: Professor Daniel Cunningham, Mathematics

I am exploring topics in linear algebra that include the definitions of linear independence, dimension, and the null space and rank of a matrix. After reviewing these concepts, I will state and prove an interesting theorem that involves square matrices  $A$ ,  $B$ , and  $S$  where  $S$  is invertible. Assuming that  $S^{-1}AS = B$ , I will prove that the null space of  $A$  and the null space of  $B$  have the same dimension. I will then conclude that  $\text{rank}(A) = \text{rank}(B)$ . The proof uses the important definitions of linear independence, the null space, and the rank of matrix.

## **Presentation Type and Session:**

Oral – Sciences and Mathematics

## **Thin Film Studies of Spinel Ferrite $MFe_2O_4$ ( $M = Ni, Co, \text{ and } Zn$ )**

**Steven Wilser**, Physics and **Matthew Guminiak**, Physics

Faculty Mentor: Professor Ram Rai, Physics

This project investigated thin films of a class of magnetic materials with a chemical formula,  $MFe_2O_4$  ( $M = Ni, Co, \text{ and } Zn$ ), also referred to as spinel ferrites. Transition-metal oxides research is conducted to find functional materials that have scientific and technological applications. The properties of oxide materials are determined by how molecules are situated in the crystal structure and how ions interact in the structure. Particularly, the magnetic and electronic properties of oxide materials are strongly dependent on their crystal structure. The spinel ferrite family,  $MFe_2O_4$  ( $M = Ni, Co, Zn$ ) exhibit unique magnetic properties which could be attributed to their crystal structure. Among the ferrite family, nickel ferrite is one of the most studied and technologically important materials because of its typical ferromagnetic properties, low conductivity, and high electrochemical stability. It is also a suitable material for device applications in the upper microwave and lower millimeter wave ranges as well as spintronics. While there have been studies on thin films of this class of spinel ferrites, most of the studies have focused on the magnetic and electronic properties; and there has been little study of the optical properties of the thin films of ferrites. These investigations of the optical properties have been limited to room temperatures and therefore, understanding of the optical and electronic properties in relation to the spin-charge-lattice couplings is fundamentally important to understanding these spinel ferrites and utilizing these materials in devices.

**Presentation Type and Session:** Poster III

## **Tryptophan Scanning Study of the Second Transmembrane Domain of Cx32**

**Matthew Brennan**, Biology

Faculty Mentor: Professor Martha Skerrett, Biology

Gap junctions are formed by nearly all cells in the body and play diverse roles in communication. Connexin 32 (Cx32) is a gap junction protein expressed in vertebrates. Intercellular gap junction channels are formed when subunits oligomerize to form connexon hemichannels in adjacent cells which bind tightly together in a process known as docking. The purpose of this experiment is to understand the structure of Cx32, specifically the arrangement and function of the membrane-spanning helices. Each Cx32 subunit spans the lipid bilayer four times creating helical transmembrane domains (M1-M4) that anchor the protein in the membrane. Tryptophan-scanning mutagenesis is based on the premise that the large bulky side chain of tryptophan will be if placed in a region of loose protein packing, a position facing the lipid environment, or in the pore of the channel. On the other hand tryptophan will render the channels nonfunctional if placed at a site where tight protein interactions are necessary. Site directed mutagenesis techniques were used to mutate single amino acids in the second transmembrane domain (TM2) to tryptophan. Using *Xenopus* oocytes the mutant protein was expressed and tested for its ability to form junctions. Functional mutants were categorized as those that allowed current to flow between oocytes whereas nonfunctional mutants were categorized as those that did not. Results suggest that TM2 is tightly packed with several tryptophan insertions causing a complete disruption of Cx32 function.

**Presentation Type and Session:** Poster II

## **Unraveling the Geologic History of Margaritifer Terra, Mars**

**Eric Betzold**, Geology

Faculty Mentor: Professor Kevin Williams, Earth Sciences and Science Education

The surface of Mars displays evidence of a history influenced by fluvial activity. The Margaritifer Terra region contains two complex outflow systems and chaotic terrain, which are both indicators of fluvial activity. Within the MTM -15017 quadrangle, Loire Valles played a major role in shaping the surface. The area displays meandering fluvial eroded channels comparable to erosional features seen on Earth. The main goal of the mapping of the surface was to gain a deeper understanding of the geologic history and different processes which have taken place, such as impact cratering, fluvial erosion and deposition, aeolian erosion, and tectonic activity. The mapping of Mars' surface was conducted by using the ArcMAP GIS program to view images from past and present NASA missions to Mars. These images were used to interpret the various features

on the surface. MOLA topography also assisted in the interpretation of different geomorphic features, and crater size frequency data provided an indication of different aged material. The resulting geomorphic map gives a better understanding of the geologic history of Mars and geologic events which have manipulated the surface.

**Presentation Type and Session:** Poster III

## Upstate New York's Cool Pool Project

**Lindsey Higgins**, Geography

Faculty Mentor: Professor Stephen Vermette, Geography and Planning

On January 14, 2009 an episode of extreme cooling took place in Lewiston County, New York under radiational cooling conditions. At the time in question, nighttime temperatures at the Watertown Automated Surface Observing Systems (ASOS) station fell to a low of -22 degrees Fahrenheit from -6 degrees Fahrenheit within an hour. At the same time a few mesonet weather stations within a 10 mile radius of Watertown, dipped to a low of -28 degrees Fahrenheit, while other nearby mesonet stations reported lows of only -16 degrees Fahrenheit. Similar cooling events occur a few times a year at the Watertown site. The current hypothesis under investigation is that the Watertown station, along with a few nearby stations, is located in topographic depressions, where a pool of cool air accumulates until it reaches the height of the station thermometer, and a rapid drop in the air temperature is recorded. The poster to be presented will show results of a land survey at the Watertown site, as well as some temperature results from winter 2009-2010 taken from data loggers positioned at one foot intervals along a six foot tower.

**Presentation Type and Session:** Poster VIII

## Urban Geology Rocks!

**Justin Simet**, Earth Science Education 7-12 (M.S.Ed.)

Faculty Mentor: Professor Kevin Williams, Earth Sciences and Science Education

This project involved designing a field trip for NYS Regents Earth Science students that covered geology topics such as identifying rock types, their compositions, formations, and weathering. Five buildings/sites were selected in downtown Buffalo that reflect various building materials that students can examine and analyze to better familiarize themselves with the geology/weathering topics. The sites of interest include the restored Erie Canal Harbor, the Ellicott Square building, the ECC City Campus (Old Post Office) building, the Statler Tower, and Buffalo City Hall. Initial research was carried out to identify the building composition for each location, and photographs were taken of rocks, brick, and stone. This field trip presents a unique opportunity for visual and kinesthetic (hands-on) learners to interact with the information studied in class and to put their knowledge into practice through first-hand experience. Most students might not realize that the rocks studied and learned about in class (which are traditionally thought of by most as "extremely boring") are actually common building materials that they may

walk past every day. This project was specifically devised with urban students in mind since they may not have as many opportunities to observe rock formations in the field, and it will hopefully spawn a greater appreciation of Buffalo's rich architectural history from a geologic perspective.

**Presentation Type and Session:** Poster V

## The Use of Ground Penetrating Radar As a Geophysical Mapping Tool On Glacial Deposits

**Jason Bartoszek**, Earth Sciences

Faculty Mentor: Professor Kevin Williams, Earth Sciences and Science Education

Ground penetrating radar (GPR) has the potential to reveal the internal structures of glacial deposits left behind as a glacier retreats. The last glaciation was at its peak in Western New York roughly 18,000 years ago. As the glacier melted away due to a warming climate, it left behind deposits making up different landforms. Although GPR has been used for many applications, it has not been widely used to study glacial deposits. GPR uses electromagnetic waves to penetrate the subsurface. The radar energy passes through material and reflects off of interfaces between materials of different properties. The radar reflections recorded by the GPR are stored by the computer and are later processed into images. During data processing, further adjustments, such as correction for topography, are made to the data to allow for more in depth interpretations. In this study, GPR data were collected over an esker, two drumlins, and two kames. Near-surface structures show up well in data from the esker and parts of the kames, but data collected at the drumlins is harder to interpret. This first part of a systematic investigation of glacial deposits suggests that GPR can be useful for studying the internal structure of glacial deposits.

**Presentation Type and Session:** Poster IV

## When Is a One-To-One Function Equivalent To Being Strictly Monotone?

**Steven Leuthe**, Mathematics

Faculty Mentor: Professor Daniel Cunningham, Mathematics

In this talk I will prove a theorem using ideas and concepts from real analysis. It is known that a strictly increasing function is one-to-one. I shall give a condition for which the converse holds. Let  $f$  be a continuous function defined on a closed interval. I will prove that if  $f$  is one-to-one, then it must be strictly increasing or strictly decreasing. Prior to the proof of this result, I shall discuss the intermediate value theorem, an important theorem that is covered in real analysis. The presentation will end on a question concerning the possibility of weakening the assumption that  $f$  be continuous.

**Presentation Type and Session:**

Oral – Sciences and Mathematics

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## *Social Sciences*

### **ADHD and Sex**

**Lyndsey Marsh**, Psychology

Faculty Mentor: Professor Jill Norvilitis, Psychology

It is well-established that those with ADHD have more difficulties with friendships than those without ADHD. However, the relationship between ADHD and sexual relationships and intimacy is not well understood. This study will examine ADHD symptomatology, fear of intimacy and sexual anxiety in approximately 500 participants- 250 from the United States and 300 from China. It was hypothesized that higher levels of ADHD symptoms would be related to low levels of sexual anxiety and high levels of fear of intimacy in both countries. Data collection is ongoing and results will be presented at the conference.

**Presentation Type and Session:** Poster IV

### **Affects of the European Union's Peace Building Process In Somalia**

**Timothy Walters**, Political Science and Applied Economics

Faculty Mentor: Professor Laurie Buonanno, Political Science

Somalia is a post-conflict state governed by rival clans and warlords. Somalia's conflict threatens to destabilize the Horn of Africa, already a volatile region that has endured years of civil war (Ethiopia and Eritrea). Somalia has also become a breeding ground for terrorists and pirates. What can the international community do to bring stability to Somalia? There are three dominant theories of stabilization and development in post-conflict regions: nation-building (associated with political sociology) and the two distinct strands of state-building theory found in political science. Nation-building refers to the power of the state to construct a national identity (socialization), which is thought to be a pre-condition for a stable state. Only Somali leaders can create this sense of national identity or the "imagined" identity postulated by Benedict Anderson. State-building refers to the role of the state in building stable institutions. Larry Diamond and other scholars argue that state-building can be imposed externally through targeted development aid that fund activities associated with state-building, while other scholars argue that state building cannot be modeled--it is a process unique to each nation, and, therefore aid should not be linked to "state-building activities." Instead, foreign aid should focus on humanitarian and socioeconomic needs such as those agreed to in the UN Millennium Goals. The European Union (EU) peace-building efforts are the largest of any nation or organization in Somalia since the UN Mission ended in 1995. I utilize primary sources (fieldwork in Somalia and the EU, EU reports and budgets, content analysis of EU press releases) to test which of the two state-building theories best explains EU development aid in Somalia. I find that the EU's pattern of aid best fits the humanitarian model.

This finding has important implications for the direction of development aid, because the US has been employing the Diamond model in Iraq. The next step in my research is to undertake a comparative study of the effectiveness of the two models in Iraq and Somalia.

**Presentation Type and Session:** Poster VIII

### **African American Christians: Not At the Frontline For the Same-Sex Marriage Battle?**

**Henry Zomerfeld**, Political Science

Faculty Mentor: Professor Kyeonghi Baek, Political Science

Same-sex marriage has been a highly controversial issue in the United States that has triggered religious, political and social institutions to respond in various ways. Some are blatantly against it, and others are unsure about this issue. For now, most states have banned same-sex marriage. However, there are few states that currently support or perform same-sex marriage. This battle began in California in 2005 when they were the first state to declare same-sex marriage legal. After a public outcry by religious and political leaders denouncing their support for such a measure, California put Proposition 8 on the ballot, which passed and made same-sex marriage illegal. This motivates this research in the demographical differences of supporters and skeptics, specifically looking at African American Christians as they hold different, highly divided views. Those who share similar views are those of the Jewish faith who are also conservative in their practices. However, they too are divided and tend to favor same-sex marriage. Why is this? I hypothesize that due to historical contexts, Civil Rights and slavery for African Americans and the Holocaust and persecution for Jews, that these influence respondent's religious ideological views.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **ALAS-R: A Revised Appreciation of the Liberal Arts Scale Developed At Buffalo State College**

**Brian Kline**, Psychology

Faculty Mentors: Professor Howard Reid, Psychology and Professor Karen O'Quin, Associate Dean, Natural and Social Sciences

A 30-item revision of the Appreciation of the Liberal Arts Scale (ALAS) was developed at BSC. This scale has good reliability and, as predicted, undergraduate students who reported more positive attitudes towards the liberal arts on the ALAS-R indicated that they were less materialistic and they scored higher on the Deferral of Gratification Scale. The ALAS-R was also found to be positively correlated with Openness to Experience, however, our analyses indicated these scales were measuring distinctly different student characteristics. It is anticipated that the ALAS-R could prove to be of value in advisement at both the high school and college levels. The

ALAS-R may also prove to be of use in curriculum development as it provides a standardized measure of student value change.

**Presentation Type and Session:** Poster IV

### **Breaking For Beauty: Foot Binding and Corsetry - Body Modification On Women**

**Sarah Karan**, Anthropology

Faculty Mentor: Professor Lisa Marie Anselmi, Anthropology

Foot binding and corsetry are body modifications that have been practiced by women for centuries. At their height, these practices were universal in their respective locals, such as China, England and Germany. These practices seriously crippled the bodies of the women, who were forced to participate from a very early age. These practices are modifications to the skeletal elements of the body and are irreversible. Both foot binding and corsetry were practiced on females for their supposed suppression in a patriarchal society, however foot binding and corsetry became the embodiment of what it meant to be a woman in these societies. These modifications gave women power and agency in a patriarchal world. For my honors thesis I looked at radiographs, journals, magazine advertisements and photographs of foot binding and corsetry in order to get a better understanding of what the physical changes to the body were when these modifications were practiced. I used these sources in conjunction with publications on these topics to explore how corsetry and foot binding changed how women perceived the world around them and how women with those modifications were perceived by others.

**Presentation Type and Session:** Poster VI

### **Brewing Ancient Egyptian-Style Beer**

**Joseph Dudek**, Anthropology

Faculty Mentor: Professor Lisa Marie Anselmi, Anthropology

I will attempt to brew beer-using techniques from the period of ancient Egyptian history referred to as the New Kingdom (1550-1070 B.C.E.). The processes involved with brewing in ancient Egypt are not widely agreed upon, though some basic methods generally are agreed upon to have been used, based on archaeological evidence. A considerable amount of interpretation and research will be required in order to determine the quantities of raw ingredients that will be required to successfully produce a palatable finished product because specific instructions were not preserved in the archaeological record. This experiment will explore this ancient method of brewing within a specific framework that focuses on two particular processes: the mechanical processes involved with transforming whole grains into a beverage; and the chemical process of converting carbohydrate-laden plant material into a high-calorie, alcohol-fortified liquid. Existing research has paid close attention to the chemical processes of brewing, while notably less attention has been paid to the mechanical processes. It is the goal of this project to investigate and replicate (when possible) both the chemical and mechanical process ancient Egyptians would have used in order to brew beer.

**Presentation Type and Session:** Poster VIII

### **Childhood Experiences and Social Adjustment of College Students**

**Kelly Reuter**, Psychology

Faculty Mentor: Professor Jill Norvilitis, Psychology

The purpose of this study is to examine college students' experiences with childhood trauma and their resulting social adjustment in college. Gunilla, Kjell, and Goran (2009) found both the levels of social interaction and social adjustment for women sexually abused during childhood to be significantly improved after treatment in a group setting. This study only examined sexual abuse and did not discuss physical or emotional abuse. Daignault and Hebert (2009) found that a substantial number of school aged girls who experienced sexual abuse presented clinical school adaptation difficulties in at least one of the following areas; academic specific, acting out/withdrawn, polyclinical, and resiliency. This study was limited to girls between ages 7 and 12. In this study the girls were younger so less time lapsed between their experiences of child sexual abuse. College students are typically 18 to 30 years old and the time period since their experience of childhood trauma would be longer. Furthermore, neither Gunilla et al. (2009), or Daignault and Herbert (2009) used men in their sample. There is a tremendous amount of research on women's sexual abuse experiences, but research is lacking on other types of childhood trauma experienced by college students, including men. The study will examine whether students' who experience childhood trauma have different social adjustment in comparison to other students who did not experience trauma.

**Presentation Type and Session:** Poster III

### **Conscientiousness and Its Connection To Drinking-Related Consequences In College Students**

**Samantha Belanger**, Psychology, **Nicole Danzi**, Psychology, **William Webber**, Psychology, **Amy Crowley**, Psychology, and **Sierra Johnston**, Psychology

Faculty Mentor: Professor Michael MacLean, Psychology

While many college students take part in drinking as a social activity, the number of negative consequences that an individual experiences depends on many factors. In the present study we are investigating how the Big Five factors of personality influence drinking-related consequences. Specifically, our hypothesis is that college students who are high in conscientiousness will experience fewer negative consequences. An anonymous self-report questionnaire was administered to 92 college students. It included the IPIP, which measures the Big Five personality factors, an alcohol use index, and the RAPI, which assesses the negative consequences related to alcohol consumption. The data have been collected and are currently being analyzed. At the Student Research and Creativity Celebration we will present our findings as well as suggestions for further research. The results of this study could be used for identifying those college students at greater risk for experiencing drinking-related consequences.

**Presentation Type and Session:** Poster I



### **A Contemporary Facial Reconstruction Method Regarding Individual Identification**

**Lori Cerny**, ANT 499: Forensic Anthropology Independent Study  
Faculty Mentor: Professor Julie Wieczkowski, Anthropology

There are at least 40,000 unidentified human remains in law enforcement agencies across the United States. Meanwhile, there are an estimated 100,000 reported missing persons. The need to correlate each and every set of human remains to a missing person file is crucial, yet DNA evidence, fingerprints, and dental records may not exist to provide positive identification. The skull is a support, and with the muscles, defines the contours of the skin and thereby the face. However, the efficacy of achieving an accurate likeness to a definitive individual depends partly on established data and partly on subjective inference by the forensic anthropologist. For my project, I have undertaken exacting a face on a cast of a human skull using published guidelines for facial reconstruction. I utilized clay, artificial eyes, and a wig to create a 3D sculpture. As forensic reconstructions are not admissible in court because they are subjective renderings, they still provide an impetus for illicit information that in turn may lead to positive identification because humans do not recognize skulls, but faces. If my sculpture bears a resemblance to photographs of the once-living individual, it may suggest forensic reconstructions are more objective than previously presumed.

**Presentation Type and Session:** Poster VII

### **Contextual Perception: Differences Between United States and Chinese College Students**

**Ethan Spann, Chen Li, Adam Smithson, and Fang Ruan**, SOC 208: Sociology of Contemporary China  
Faculty Mentor: Professor Zhang Jie, Sociology

We are studying the effects of culture on the perception of ones surroundings. Although the formal relationship between USA and China has already been in existence for 30 years, each has their own distinct cultural values and norms. What we observed is that the former often is characterized as highly individualistic while the latter collectivistic. We intend to study how each group views the world around them in terms of their focus on the individual versus the whole. To measure the concept of individualistic focus we are using indicators of the focus of subject matter and the relation of the subject to the surrounding background. We intend to have a sample of 10 US and 10 Chinese college students as a sample to study and have each person in each group take 10 pictures of various people and locations on campus. We are using the subject matter as well as the focus of the picture as a function of the subjects' degree of individualism. We hypothesize that the Chinese students' pictures will be wider in focus showing more of the scenery and or environment around the subject whereas the US students will be more focused on a single object.

**Presentation Type and Session:** Poster VII

### **The Death Penalty As Applied To Corporate Crime**

**Morris Suttles**, Criminal Justice  
Faculty Mentors: Professor Geoffrey Skoll, Criminal Justice and Professor Elizabeth Szockyj, Criminal Justice

Should corporate executives face the death penalty when their acts kill people? My study asked respondents this question. When corporate executives face charges for such crimes, they usually sustain lenient sentences, trivial fines, or no charges at all. With rare exceptions, it is the poor and the minorities who suffer the death penalty. I interviewed respondents drawn from a random sample at Buffalo State College. The people interviewed were culturally, and ethnically, diverse. They had various levels of income, education, and political views. The study tested the so-called 'switch hypothesis' of Unnever, Benson, and Cullen (2008). They hypothesized that those who support tougher sanctions for street crimes will not support such sanctions for corporate criminals, and vice versa. The data revealed limited support for this hypothesis, but there is enough to encourage future research on the question. In addition, the study examined death penalty views for specific corporate and street-level crimes, perceptions of crime seriousness, Lex Talionis, variations in views according to demographic variables, how death penalty support changes when offered the alternative of life behind bars, and what influences respondents' death penalty views the most.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **The Development of the Relationship Between the United States and the 14th Dalai Lama**

**Chen Li and Oscar O'Neill**, SOC 208: Sociology of Contemporary China  
Faculty Mentor: Professor Zhang Jie, Sociology

The goals and anticipated outcomes of the project are, to become aware about the history between the United States government and the 14th Dalai Lama, and how their relationship developed. Second, we want to find reasons why they kept in touch with one another in while ignoring protest from China. Next, how this friendship became an international issue. We want to make some guesswork based on our research about the future of development of the relationship of the United States government and the 14th Dalai Lama, and also provide a resolution for this issue. We will collect information from domestic newspapers and from abroad. We will make 50 questionnaires that are designed by ourselves. The questions are about their level of interest about the development of the relationship between US government and the 14th Dalai Lama and how do students think about it. All of our participant to fill the questionnaire will be random selected at school. We will make questionnaires during lunch and dinner time at Student Union to make sure we can get enough participants. Through the survey analysis, we will compile a data sheet that will support points in our research.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

**Diggin' In the Dirt: Field School At Old Fort Niagara - Where History and Archaeology Meet**

**Megan Myrie**, Anthropology

Faculty Mentor: Professor Susan Maguire, Anthropology

Over the course of six weeks during the summer of 2009, I attended the archaeology field school at Old Fort Niagara in Youngstown, NY. These excavations explored the relationship between the Native Americans and the British and French militaries during the 18th century. Historical maps guided the placement of our test units on the foundation of an 18th century building. We also implemented archaeological field methods such as excavation, screening (dry and water), artifact recovery, mapping, stratigraphy, soil analysis, artifact cataloging, and artifact dating, just to name a few. My project will present the findings of the field school and their connections with life at the fort and the trade activity that took place.

**Presentation Type and Session:** Poster VIII

**Distinguishing Among Personality Characteristics Associated With Belief In Parapsychology**

**Sumit Shukla**, Psychology

Faculty Mentor: Professor Howard Reid, Psychology

Within the field of Psychology there is substantial skepticism concerning parapsychological claims. However, there is great interest in which personality variables distinguish between those individuals who do, and those who do not, accept parapsychological claims. The current study is re-examining the relationship between personality and parapsychological belief. Previously studies have identified a number of variables associated with belief in parapsychological claims, including ADHD, Openness to Experience and Sensation Seeking. One goal of the present study is to clarify which of these variables is primarily responsible. In addition, we are assessing the effects of two additional variables, Hartmann's Boundary Personality measure and student's Belief in Astrology. Data are currently being collected. A multiple regression analysis will be utilized to determine which of these personality characteristics are most predictive of belief in parapsychological claims.

**Presentation Type and Session:** Poster IV

**Do Students Reflect Their Level of Understanding Through Non-Verbal Behaviors?**

**Mary V. Rivers**, Psychology

Faculty Mentor: Professor Stephani Foraker, Psychology

This study examined the role of non-verbal behaviors (NVBs) that students exhibit in the classroom. I proposed that the NVBs

of students can provide insightful information about their level of understanding of class material, since their cognitive state may be leaked out unconsciously through their NVBs. I focused on NVBs that occur in the absence of speech, focusing on students in a passive, receiver role. The fifteen participants were given easy vs. difficult material to learn, in a normal classroom setting. Their videotaped NVBs were annotated, which included hand-to-body self-adapters, such as scratching, rubbing, biting fingernails, or leaning head on hand, posture shifts in their seat, facial expressions, such as frowning, tensing the mouth, or smiling, head nods or shakes, and one-hand gestures or activity, such as drumming fingers or playing with their pencil. There was no significant difference in the overall number of NVBs for easier versus more difficult material. However, my results showed that the type of NVB did vary as a function of the material's difficulty, showing fewer head and one-hand NVBs for difficult material. In sum, this study provides support for the idea that NVBs do provide information about students' level of understanding, which may be useful for teachers in the classroom.

**Presentation Type and Session:** Poster V

**Does Your Finger Length Predict Your Longevity?**

**Vincenzo Piraino**, Psychology

Faculty Mentor: Professor Howard Reid, Psychology

The present study is investigating the relationship between adult index and ring finger (2D:4D) length and longevity. Men are generally found to have a greater 2D:4D ratio (relatively shorter index than ring finger) than women. Previous research findings suggest that greater 2D:4D ratios occur due to the male fetus being exposed to higher levels of testosterone in utero. Research has also reported that women with 2D:4D ratios that are more commonly found in men (i.e., more uneven) tend to exhibit masculine characteristics. The reverse has also been reported; those men with 2D:4D ratios that are more commonly found in women (i.e., more even) have been found to exhibit feminine characteristics. As women tend to have a greater life expectancy than men, we predict that those males who reach old age will have 2D:4D ratios that are more similar to those commonly found in women (i.e., index and ring fingers of approximately the same length). If so, this will indicate that feminine 2D:4D ratios are a significant predictor of increased longevity in older males. Participants have been recruited from a variety of BSC classes as well as local retirement homes and the data are currently being analyzed.

**Presentation Type and Session:** Poster I

### **The Effect of Men's Height On Women's Perceptions of Attractiveness**

**Caitlin Brady, Kristy Breukelman, Nicole Davis, Lyndsey Marsh, Colleen Montreuil, and Brittney Stokes**, PSY 450:

Research Methods in Psychology

Faculty Mentor: Professor Jill Norvilitis, Psychology

The present study examined the effects of men's height on women's dating preferences. One hundred and seventy-one participants were questioned by researchers about two different men, similar in appearance and description, but differing in height. It was found that women were generally more willing to date a taller man than a shorter man, and taller women regarded height as more important in choosing a date than shorter women. There was also a correlation between women's height and their perceived attractiveness of the men based on their height, but this was not significant.

**Presentation Type and Session:** Poster VI

### **Emotion Appraisal and Peer Nominations In Children With Attention Deficit-Hyperactivity Disorder**

**Novella Curtis**, Psychology

Faculty Mentor: Professor Jill Norvilitis, Psychology

Previous research supports a relationship between ADHD and emotion appraisal as well as ADHD and peer interactions, but has looked at these variables as separate relationships. Previous researchers also found that children with ADHD are more likely to fall into the rejected or neglected categories on peer nomination scales. Children with ADHD either actively start fights or arguments or withdraw from social interactions. As a result they receive low scores on peer nomination scales. This study investigated social interactions through peer nominations and emotion appraisal among children with symptoms of ADHD. Results showed a significant relationship between ADHD symptoms and deficits in both emotion appraisal and peer relationships. The teachers' responses showed that as ADHD symptoms increase emotion appraisal and peer relationship decreased. The children's surveys did not support this relationship. This relationship is important because research has already shown that children with ADHD have issues with emotion appraisal and peer interactions, which can lead to long-term developmental effects.

**Presentation Type and Session:** Poster VI

### **The European Union Charter of Fundamental Rights: A Question of Distinction?**

**Yolanda Rondon**, Political Science

Faculty Mentor: Professor Laurie Buonanno, Political Science and Dr. Sandra Washington, Director, McNair Scholars Program

The European Union Charter of Fundamental Rights (Charter)

and the United States Bill of Rights aim to solidify shared common beliefs on social, political, economic, and civil rights. The normative view when discussing human rights is that these rights protect all regardless of ethnicity, gender, nationality, race and religion. In spite of this social struggles continue and what may be considered a violation of human rights by one nation, may not by another. The Charter is seen by many observers as a document that will strengthen fundamental rights in the EU, and, bring the EU closer in its journey toward political union. This is an intriguing hypothesis given that US Bill of Rights did not originally apply to the states. U.S. Supreme Court cases gradually extended the protections found in the Bill of Rights to the states through selective incorporation through the 14th Amendment's due process clause. This paper finds that the Charter merely consolidates pre-existing human rights law in Europe: namely, the European Convention on Human Rights and the European Social Charter. However, there was still a need to increase transparency throughout the European Union concerning the application and interpretation of fundamental rights. My research offers a comparative analysis of the Charter and US Bill of Rights; and analyzes the reasoning behind the need for the EU Charter, the potential impact of the EU Charter on European Citizens and examines which judicial body will adjudicate the EU Charter.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **Eyewitness Memory For Same-Sex Versus Different-Sex People Arguing**

**Kristy Breukelman, Amanda Bahr, Morgan Morningstar, Nicole Pezone, Carnita Hill, Joshua Lons, Amy Crowley, Sierra Johnston, Jeffrey Melvin, Sami Belanger, Sarah Ackerman, Brittany Smetanka, Watoii Rabii, Nicole Davis, Moje Omoruan, Novella Curtis, Amanda Ciminelli, Angela Griffith, Jennifer Gans, Ashley Mabry, Hetal Patel and Geraldine Erokwu**, Psychology Club

Faculty Mentor: Professor Stephani Foraker, Psychology

In the present study, eyewitness memory is tested among college students in regards to their recall accuracy, perception of the aggressor's sex, and whether aggression perception will increase over time with stereotypical gender biases. Four arguments were staged, consisting of different aggressors either with same sex or different sex groups. Participants who witnessed the verbal fight were asked to answer a survey of the event 75 minutes later along with a follow up survey a week after the event. Consistent with previous research, we predict that memory accuracy for general information will be about the same, but should deteriorate for verbatim information on the second memory test, and participants capability to accurately recognize and recall the arguers and argument will be lower for same sex pairs and higher for different sex pairs. Expanding upon this research, we also predict that in congruence with gender typical stereotypes, males will be perceived as more aggressive than females and this tendency will increase over time. We also predict that we will

find a relationship with participant's sex and their association to the sex of the alleged perpetrator showing that females will view female arguers more favorably than male arguers and vice versa for males.

**Presentation Type and Session:** Poster VI

### **The Five Wars of Globalization and International Crime: A Lack of Uniform Laws and Uncooperative Agencies**

**Henry Zomerfeld**, PSC 330W: American Foreign Policy  
Faculty Mentor: Professor Kyeonghi Baek, Political Science

The five Wars of Globalization include our wars against drugs, arms and human trafficking, along with money laundering and intellectual property. These have been problems in the United State and around the World. The purpose of this research is to examine each of the five Wars, with a focus on drug and arms trafficking. These will be analyzed to determine how each problem affects human and national security and to research how many countries attempt to combat this problem. I hypothesize that In order to effectively combat these five wars, nations will have to move forward towards a more uniform legal standard on these issues. This argues that the lack of cooperation among Law Enforcement Agencies has prevented sovereign nations from combating these issues effectively. Furthermore, this research examines the following issues: how strict the laws on these crimes are here in the U.S. and compares them to other bordering countries; How lucrative each crime is in the U.S.; and, how much money is spent on the criminal justice system to combat these crimes. North and South America including commonwealth provinces and islands in the immediate area will be examined. All in all, I argue that the lack of uniform laws and cooperative government agencies are the fundamental, core solutions to five global wars.

**Presentation Type and Session:** Poster VII

### **Gender and Recall of Stereotypically Masculine and Feminine Images Among Adults**

**Brittney Stokes, Colleen Montreuil, Lyndsey Marsh, Nicole Davis, Kristy Breukelman** and **Caitlin Brady**, PSY 450: Research Methods in Psychology  
Faculty Mentor: Professor Jill Norvilitis, Psychology

Experimenters tested 304 participants (153 male, 151 female) to examine whether each gender would remember images that pertained more to their specific gender. Participants were then given the Bem Sex Role Inventory to find out how masculine or feminine they were and if their results correlated with the images they remembered most. Results show that males remembered more masculine images and women remembered more feminine images. In regards to the BSRI, when gender was statistically controlled, more masculine participants recalled more masculine images and

more feminine participants recalled more feminine images.

**Presentation Type and Session:** Poster VI

### **The Importance of Measuring Up: Osteometric Methods of Sorting Commingled Human Skeletal Remains**

**Dana Arnold**, Anthropology  
Faculty Mentor: Professor Julie Wieczkowski, Anthropology

In my research I am testing several osteometric methods of sorting commingled human skeletal remains that have been previously developed by forensic anthropologists. These tests are being carried out on the skeletal collection owned by Buffalo State College's Anthropology Department. The methods I am employing are designed to distinguish between individuals based on bone size, as well as determine their sex and racial affinity. These sorting methods rely on the statistical analysis of standardized measurements that I am taking on the bones using either an osteometric board, sliding calipers, or spreading calipers. When I have completed my data collection I will analyze the data using the same statistical models utilized by the original researchers. The end goal of this research is to compare and contrast the results obtained through my using osteometric methods of analysis with the basic demographic information that is already known about the individuals within the collection. Through this comparison I will also observe the accuracy of previously tested and published methods of osteometric methods when they are applied to skeletal remains that may or may not be similar to the original test sample. These results will be presented at the Student Research and Creativity Celebration.

**Presentation Type and Session:** Poster VIII

### **Impulsivity, Sensation Seeking and Cognitive Irrationalities Among College Student Gamblers**

**Brittany Smetanka**, Psychology  
Faculty Mentor: Professor Michael MacLean, Psychology

The prevalence of gambling and gambling-related problems has been rising in recent years and estimates have shown college students may be the most at risk. Impulsivity and sensation seeking, though often viewed as being synonymous, are two rather distinct risk factors that may be differentially predictive of different gambling outcomes. While sensation seeking is expected to predict the preferred type of gambling, impulsivity is expected to predict gambling-related problems. In addition, cognitive irrationalities, such as the gambler's fallacy will also be examined as a risk factor for problematic gambling because these beliefs increase the likelihood of making unwise gambling decisions. These irrationalities have been found to be common among gamblers but the link to pathological gambling has not been tested. In addition, there is expected to be an interaction between impulsivity and



cognitive irrationalities demonstrating that those high on both will be at an especially high risk. These findings may lead to a better understanding of why gamblers choose certain types of gambling activities and why some do not stop despite negative consequences. The study is currently awaiting IRB approval and questionnaires will be distributed to students taking psychology classes at Buffalo State College.

**Presentation Type and Session:** Poster I

### **Individuating Information and Its Effect On Stereotype Activation and Use When Meeting New People**

**Rhudwan Nihlawi**, Psychology

Faculty Mentor: Professor Jennifer Hunt, Psychology

Previous research has shown that individuating information, which refers to knowledge of the unique attributes and characteristics that an individual possesses, can reduce explicit stereotype use. That is, individuals are less likely to use stereotypes in deliberate judgments if they have personal information about a target. There has been relatively little research about the effects of individuating information on stereotype activation, which refers to heightened cognitive accessibility of stereotypes. The purpose of this study was to determine the effects that individuating information has on both stereotype activation and use. 75 participants were either given stereotype consistent, stereotype inconsistent, or neutral individuating information about an African American man. Participants completed the Go/No-Go Association Task to measure stereotype activation and rated the target on a list of attributes to measure stereotype use. The results showed no significant differences in stereotype activation across different individuating information conditions. Explicitly, participants judged the stereotype consistent target as more athletic and streetwise, which are both attributes related to the African American stereotype. In contrast, the stereotype inconsistent target was rated as more intelligent, showing use of the counter stereotypic individuating information. This pattern suggests that individuating information reduces explicit stereotyping while having no immediate effect on stereotype activation.

**Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **Influence of Race, Gender, and Conduct On College Students' Perception and Expectations**

**Nicole Davis**, Psychology

Faculty Mentor: Professor Jill Norvilitis, Psychology

The present study seeks to examine the influence of race, gender, and conduct on college students' perception and expectations of school aged children. Female and male participants will be recruited and asked to complete a questionnaire and assess 12 student

cases. Each student case includes a photograph, a brief summary describing grade grades and classroom conduct, and a questionnaire which asks the participant to rate the student using a Likert-type scale on perceived learning-related behaviors and expected academic performance. Researchers expect to find a significant interaction between race, gender, and behavior on behavioral perceptions and academic expectations using a 3 X 2 MANOVA. Significant results would indicate the importance of race and gender and whether conduct mediates the influence of race and gender on adults' perceptions and academic expectations. The influence of race, gender and conduct on perceptions and expectations and how this may affect students' future academic achievement will be explored.

**Presentation Type and Session:** Poster III

### **An International Drug Committee: Collaborative Drug Policy Making Proposed**

**Jodie Justice** and **Dayana Castillo**, PSC 330W: American Foreign Policy

Faculty Mentor: Professor Kyeonghi Baek, Political Science

There is no dispute that more can be done to enhance cooperation among Canada, Mexico, Colombia, and the United States when it comes a battle against drug trafficking. Should the United States lessen its restrictive drug policies so that Mexico and Colombia can benefit? Should Colombia and Mexico take more preventative measures to stop the drug trafficking? In this paper, we propose that an international drug committee, modeled after the North American Free Trade Agreement (or NAFTA), would allow these countries an opportunity to compromise and resolve the issues pertaining to the illegal distribution and consumption of drugs. While understanding that some governments and semi-sovereign organizations may not want to stop or prevent the illegal drug market as it benefits them economically, a proposed committee would allow both sides to discuss compromises and solutions. We argue that discussions among all involved parties in the proposed committee can enhance and improve the issues that face the illegal drug trafficking market.

**Presentation Type and Session:** Poster VI

### **Intrusive Parenting Effects On Self-Efficacy In College Students**

**Kayli Knapp**, Psychology

Faculty Mentor: Professor Michael MacLean, Psychology

Numerous media accounts have indicated that intrusive parenting (coined "Helicopter parenting") is becoming more common among parents of college students. However, there is actually little existing research on the prevalence of this type of parental behavior or its effects on children beyond high school.

Research on high school students suggests intrusive parenting coupled with psychological control leads children to feel as though they are incompetent and incapable of completing tasks independent of their parents. Recent advances in technology have enabled parents who were controlling and intrusive while the child was home to carry out these behaviors even though the child is away at college. It is possible that intrusive parenting may have larger effects for college students because it is further outside the norm and it is occurring at a stage when most children are establishing greater autonomy from parents. The hypothesis of this study is that college students who perceive their parents as intrusive and psychologically controlling will have lower self efficacy and more academic stress. An estimated 250 participants will be recruited for this study. If the hypothesis is supported than this will suggest intrusive parenting affects children even after they go to college and should be studied further.

**Presentation Type and Session:** Poster VI

### **Like a Hole In the Head: The Creation of a Projectile Trauma Collection For Forensic Anthropology**

**Raymond Wilson**, Forensic Anthropology

Faculty Mentors: Professor Julie Wieczkowski, Anthropology and Professor Gregory Wadsworth, Biology

I created a collection of long bones and skulls that exhibit forensic markings. These bones will be used as a teaching aid for future semesters of ANT 325, Forensic Anthropology. I acquired animal bones from local slaughterhouses, then boiled the bones so they can be used for several years. I marked the bones using a variety of firearms (i.e. rifles, pistols, shotguns). The bones exhibit typical projectile markings that may be seen by a forensic anthropologist working in the criminal justice field. This presentation will allow students and faculty to observe pieces from the forensic teaching collection and ask questions about its construction.

**Presentation Type and Session:** Poster VII

### **Making Connections: Indigenous Peoples, the Earth, and Holistic Resource Management**

**Christine Krolewicz**, HON 400: All College Honors Colloquium

Faculty Mentors: Professor Dennis Gaffin, Anthropology and Professor Andrea Guiati, Director, All College Honors Program

The lifestyles of many modern societies imply that humans are somehow above nature, in control of it, rather than a part of it. This perspective is in stark contrast to historical indigenous ways of life, which recognize the physical, psychological, and spiritual connections that humans have with the earth. This study, inspired by three weeks spent studying abroad on an Australian ecotour, will explore how traditional indigenous knowledge and lifeways can be used to create a new perspective on resource management for the modern world. Therefore, the research will focus on the native Aboriginal peoples of Australia, who have demonstrated

how indigenous peoples in general inherently practice a more holistic approach to resource management. This study will also incorporate how the creation stories, myths, and rock art of the Australian Aboriginals, as well as their totemic kinship system and knowledge and use of plants, contribute to their deep connection to and respect for the environment. Specifically, the objectives of this research are to (1) understand indigenous thought with regards to indigenous peoples' connections to the environment, (2) define "holistic resource management" and "sustainability," (3) depict how indigenous peoples, especially those in Australia, exemplify these terms, and (4) explore how a holistic approach to the environment, using inspiration from indigenous peoples, could benefit modern societies. Ultimately, this study will look deeply into the beliefs and practices of another culture while examining different approaches to managing the earth's resources.

**Presentation Type and Session:** Poster I

### **Nuclear Terrorism: Any Effective Way To Prevent It?**

**Jesse Montes**, PSC 330W: American Foreign Policy

Faculty Mentor: Professor Kyeonghi Baek, Political Science

Nuclear Terrorism has been a growing danger and threat throughout the world today. Since the attacks of September 11th 2001, the fear of terrorist organizations possessing nuclear weapons or the material to build them has significantly grown. Terrorist organizations have been found in many countries throughout the world but are well know in the Middle East, for example Al Qaeda. Amongst these Middle Eastern counties, Iran in particular has been a growing concern for many. With recent news of Iran's intention to reactivate their nuclear plants and facilities, many are beginning to worry that terrorists will have a greater chance of getting their hands on such nuclear material. I plan on examining the types of sanctions and military action the United States and NATO will use in order to punish counties, such as Iran, from possessing nuclear material and reduce the risk of nuclear weapons from falling into the wrong hands.

**Presentation Type and Session:** Poster VII

### **Of Mice and Men: The Evolutionary Progression of Humans As Illustrated By Mickey Mouse**

**Dianne Maerz**, Hospitality Administration

Faculty Mentor: Professor Julie Wieczkowski, Anthropology

The study of human evolution illustrates our origins and where we, as humans, came from. This presentation looks at human evolution from a new perspective, as illustrated by the evolution of Mickey Mouse. The evolution of Mickey Mouse is the same as that of humans in two ways. First, both humans and Mickey evolved via natural selection and second, each followed a similar path of evolution. Natural selection can be summed up by the acronym VISTA that stands for variation, inheritance, selection, time and

adaptation. This study examines how each of these aspects of natural selection can be seen in the evolution of both Mickey Mouse and humans. This study also looks at the basic path of human evolution, beginning with the last common ancestor with chimpanzees and bonobos and ending with modern *Homo sapiens*, and shows how Mickey Mouse follows this same path. This study shows that if you can understand the evolution of Mickey Mouse, than you can also recall and understand our own origins as humans.

### **Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **The Orry B. Heath Collection: A Community Partnership**

**Jessica Stabell**, Anthropology, **Joshua Mauro**, Anthropology, **Joseph Dudek**, Anthropology, and **Lindsey Higgins**, Geography  
Faculty Mentor: Professor Lisa Marie Anselmi, Anthropology

This artifact identification and cataloging project is being conducted in conjunction with the McClurg Museum in Westfield, New York. The artifact set of approximately 2,500 pieces was assembled by Orry B. Heath and transferred to the Chautauqua County Historical Society as part of Heath's estate. The collection will be identified, sourced, measured, and cataloged for the purpose of constructing and opening an exhibit at the McClurg Museum in 2011 supplemented by an online database. Most of the artifacts in the collection are stone tools that were crafted by hand over a period of time covering roughly 11,000 years. The majority of the pieces are from the western New York State area. This project is a community partnership between Buffalo State College and the Chautauqua County Historical Society. The College's Anthropology department is providing these services free of charge. A student team, led by Dr. Lisa Marie Anselmi, is assisting in order to gain hands on experience in cataloging as well as analyzing artifacts.

**Presentation Type and Session:** Poster VII

### **Perceived Homophobia On Campus: The Impact of Attitudes Toward Violence, Discrimination, Community Engagement, and Demographic Characteristics**

**Chantale Onesi-Gonzalez**, Sociology

Faculty Mentor: Professor Ron Stewart, Sociology

With the recent uptick in sexual orientation violence in Western New York, there is a need to examine the attitudes and opinions of college students. This research investigates students' perception of homophobia and whether or not it is a serious problem on campus. Using data collected through use of a non-probability quota sampling technique, the impact of both objective and subjective characteristics will be explored. Six hypotheses will be tested to determine which set of characteristics are the most important in explaining the variation in the dependent variable. Students' attitudes toward violence in the residence halls, prejudice and

discrimination on campus, and Buffalo State College's engagement in the surrounding community are the subjective indicators whereas age, gender, and race are the objective factors examined. Univariate (frequency distributions tables), bivariate (chi square and Pearson correlations), and multivariate (multiple regression) statistical procedures will be employed to assess the impact of the six independent variables. The findings report hypotheses both supported and not supported by the data. Policy implications and suggestions for future research will be presented.

### **Presentation Type and Session:**

Oral – Humanities and Social Sciences

### **Population Control In China**

**Tedouesz Kordela** and **Alvin Kemp**, SOC 208: Sociology of Contemporary China

Faculty Mentor: Professor Zhang Jie, Sociology

We would like to submit a poster. The topic of this poster will be Chinese family planning programs and their effect on the people of China. The project will focus on the controversial one-child policies of China and the countries struggle for population control. We will look at historical view of China's population control and Show the effect that these policies are having on Chinese families today. Research would be largely ascertained from books and documentaries. In this poster we will examine what caused China to adopt these policies, as well as who envisioned and design them. We intend the posters focus however, to be on the effects of this long running policy. After thirty years of implementing the worlds most aggressive and effective family planning programs, the implications of the program are becoming more and more apparent. With one hundred and twenty boys being born for every hundred girls more than seventy million young men will be without a mate. This generation of only children is said to be spoiled giving rise to the nickname "little emperors." As China's population moves toward one with no brothers, sisters, aunts, uncles, cousins, nieces, or nephews a new family model is emerging. A society with family ties striped to such a minimum has never existed in the history of this planet. The focus of our poster will be the effects of this social system.

**Presentation Type and Session:** Poster VII

### **Questioning Cinderella: Factors Related To the Idealization of Princesses**

**Amanda Ciminelli**, Psychology and **Holly Nowak**, 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. The idealization of princesses may have broader social effects that influence how women are perceived in society. In this study, we are assessing several factors that may be related to the idealization of princesses. Also, we are examining whether men relate to princes and how that affects their views and behaviors.

We have formulated several hypotheses. First, women who idealize princesses may have higher levels of benevolent and hostile sexism and be more accepting of people who have paternalistic attitudes towards them. Second, women who idealize princesses may engage in self-objectification and develop abnormal eating patterns. Third, women who idealize princesses may believe they are superior to others and therefore show social dominance and more prejudice toward stigmatized groups. Fourth, women who idealize princesses and men who see women as princesses may expect more traditional romantic relationships. To collect our data we are giving out a survey using our own scales about prince and princess idealization as well as published scales for the other factors. Our results are being presented in a poster format.

**Presentation Type and Session:** Poster VI

### **The Reality of a Modern Tibet**

**Mario Burks, Adam Holley, and Jinfang Chen**, SOC 208:  
Sociology of Contemporary China

Faculty Mentor: Professor Zhang Jie, Sociology

The effects of modernization on Tibet as China grows as a superpower are numerous and far reaching, in addition to being dictated implicitly by which internal group is being addressed. When looking at the standard of living for the majority of Tibetans, we can see that modernization has allowed for increased opportunities in terms of career and home settlement options when compared to the standard of living in Tibet from the Qing dynasty up to the exodus of the 14th Dalai Lama. While most Tibetans were divided into either the monastic order or manual careers such as farming prior to this rapid modernization, modern technology such as the Qingzang railway and the expansion of business within Tibet now provide Tibetans with these alternate lifestyle opportunities. However, the destruction of ethnic Tibetan buildings and cultural locations in order to make room for such modern advances, as well as the restrictions placed upon Tibetan cultural practices such as the public display of the Tibetan flag, show several of the negative influences of such rapid modernization. Despite managing to resist modernization for so long, Tibet now falls within the ever-expanding world order that must suffer concessions in exchange for the benefits of modernization.

**Presentation Type and Session:** Poster VIII

### **Risperidone and Morphine Together Produce Analgesia and Dyskinesia In Rats**

**Justin Kraft**, Psychology, **Matthew Evrard**, Psychology, **Brian Kline**, Psychology, and **Melissa Young**, Psychology

Faculty Mentor: Professor Jean DiPirro, Psychology

Previous research suggests that, in mice, the atypical neuroleptic risperidone enhances the analgesia produced by the opiate morphine. However, this research failed to examine the motor side effects induced by risperidone, which could diminish its utility as

a pain treatment. The present study was designed to examine the usefulness of risperidone as an analgesic adjuvant to morphine with consideration of motor side effects. Male Long-Evans (hooded) rats, injected with both risperidone and morphine, were tested for analgesia and dyskinesia (i.e., vacuous chewing, ptosis, and abnormal posture). Analgesia was assessed using two algesiometric assays: one that is more sensitive to motor disturbance (i.e., hot plate test) and one that is less sensitive to motor disturbance (i.e., hot water tail-flick test) in order to increase our confidence that drug-induced changes in the behavioral endpoint measured in each algesiometric test reflected an actual change in the rat's analgesia, not a change in motor capability. We found that risperidone enhanced morphine-induced analgesia as measured using both algesiometric tests. However, because we also found that the combination of risperidone and morphine produced significant levels of dyskinesia, we suggest caution in the use of risperidone as an analgesic adjuvant to morphine.

**Presentation Type and Session:** Poster III

### **The Role of ADHD Symptomatology, Parenting, and Peer Functioning In Social Adjustment of College Students**

**Watoii Rabii**, Psychology and Sociology

Faculty Mentor: Professor Jill Norvilitis, Psychology

ADHD symptoms were previously thought to remit prior to adolescence. Research indicates the contrary. Hoza (2007) and Diamantoupolu(2007) highlight various areas such as peer functioning, parent functioning, family functioning, and academic and executive functioning that are adversely affected in children with symptoms of ADHD. The goal of the present study was to examine how deficits in peer functioning are related to ADHD symptomatology in college students. The following hypotheses were tested: 1) Deficits in peer functioning are correlated with deficits in parent functioning during childhood. 2) Deficits in peer functioning in early childhood are related to peer functioning and social adjustment in college. Further, the study examined the relative importance of ADHD symptoms, parenting, and peer functioning in youth in predicting social adjustment and peer relationships in college. The results of this study confirmed the relationship between parenting and early peer relationships and college adjustment, but the role of ADHD symptomatology is unclear.

**Presentation Type and Session:** Poster III

### **Role of Environment Familiarity In Rat Defensive Response To a Cat Scent**

**Vincenzo Piraino**, Psychology

Faculty Mentor: Professor Jean DiPirro, Psychology

This research was designed to investigate, in rats, whether exposure to a predator stimulus (i.e., cat scent) is experienced as more threatening in a familiar "safe" site or in a less familiar site



of unknown safety. Previous research in our lab found that a rat's defensive response to a predator stimulus was more extreme when the stimulus was presented in the rat's home cage than in a less familiar non-home open field of different dimensions. However, it was unclear whether this finding could be attributed to the difference in the familiarity of the exposure site or to the size of the apparatus. In this study, we predicted that rats exposed to a cat scent in the home cage would show a greater magnitude of defensive response compared to those rats exposed to a cat scent in the less familiar non-home cage, when the size of the testing cage was the same. Behavioral and neurochemical endpoints were collected to determine rat defensive response. Results showed that cat-scent exposure in a less familiar site produced greater defensive behavior than did exposure in a familiar site. However, cat-scent exposure induced increases in blood glucose (an indirect measure of stress) regardless of exposure site.

**Presentation Type and Session:** Poster III

### **Stress, Self-Esteem, and Sports Participation**

**Brandon Kawa** and **Amanda Barker**, SOC 208: Sociology of Contemporary China

Faculty Mentor: Professor Zhang Jie, Sociology

The purpose of this study will be to test the hypothesis that excess stress levels from the participation in sports can have a negative effect on students' grades. We believe that although competitive sports activity can play a pivotal role in the development and maturity of a student in various ways, it may also cause undue stress and pressure on the student to perform on the field and that may negatively impact their grades. Effects will be measured on both team sports participants and individual sports participants. Self esteem also will be measured because we hypothesize that low self esteem would compound stress levels and lead to lower grades especially when the low self esteem is a function of being a member of the sports team. We are not inferring that participating in sports is detrimental to a student; it serves many purposes including building relationships, practicing self-discipline, getting exercise, and others. We are only looking to see if sports can cause excess stress and negatively impact self esteem in students and harmfully affect grade point average. A confidential questionnaire will be administered to collect and analyze results.

**Presentation Type and Session:** Poster VIII

### **Study of Laterization In Several Primate Species**

**Katie Rozek**, Psychology

Faculty Mentor: Professor Julie Wieczkowski, Anthropology

Hand preference in humans is believed to be closely related to the parts of the brain that involve speech. By studying lateralization in primates, a better understanding of human evolution may be

achieved. Chimpanzees, both wild and captive, have demonstrated a hand preference both while eating and completing tasks. There is more specialized lateralization in higher-level complexity. In this research, I propose to spend six weeks studying a variety of non-human primates species (prosimians, New World monkeys, Old World monkeys, and apes) housed at the Buffalo Zoo. In addition, I will look at behavioral, sex, and age differences in handedness. I hypothesize there will be greater lateralization in great apes who are more genetically similar to humans than monkeys and prosimians, however hand-preference may exist among these other primate species. I also hypothesize that there will be age differences in lateralization, with sub-adults showing less handedness than adults. If it were possible for humans to evolve and develop a need for handedness, it is likely great apes can do the same. By observing handedness in great apes, monkeys, and prosimians, a correlation in hand-preference is expected to exist and demonstrate significant findings to help us understand where lateralization came from.

**Presentation Type and Session:** Poster VIII

### **The Times They Are a' Changing; Examining Millennial Foreign Relations Between the United States and Russia**

**William Delaney**, Political Science

Faculty Mentor: Professor Kyeonghi Baek, Political Science

The post-Cold War relationship between the United States and Russia is at a vital crossroads. Which road each country decides to take will have long lasting effects not only on the people of these nations but on the rest of the world as well. The current state of international politics is not only facilitating but calling for multilateral cooperation between the U.S. and Russia. Cumulative effects of key demographic shifts combined with economic and social conditions have created an ideal set of circumstances for the executive leadership to exercise their foreign policy power in ways their predecessors were never able to. Empirical analysis of twenty years of demographic statistics in conjunction with small-N analysis of existing research on globalization, post-communism, economics, U.S.-Russian relations, religion and democratization among others has constituted the breadth of my research. My findings show that the current conditions between these countries, as a result of their collective Cold War experiences and recent global events, can promote a comprehensive and multilaterally cooperative alliance between these two nations. I expect that the enduring effects of globalization supplemented by the penetration of mass media have elevated public consciousness, thus promoting and illustrating the positive effects of democratization. In addressing a breadth of topical developments, my analysis will make evident the importance of a positive and cooperative U.S.-Russian relationship in the new millennium.

**Presentation Type and Session:** Poster VII

## What the UK: A Comparative Analysis of British and US Public Administration

**Thomas Morris-Davies**, Political Science, **Sophie Fish**, Political Science, and **Craig Foster**, Political Science

Faculty Mentors: Professor Patrick McGovern, Political Science, Professor Laurie Buonanno, Political Science, and Professor Keith Henderson, Political Science

This poster provides a comparative analysis of the public administrative systems of the United States and United Kingdom. While the US and UK share much in the way of political values, the nature of their servicing public need is very different. This research project looks at each country's public administration system through a comparative framework highlighting ideology, regime type, institutional arrangements, and citizen expectations. While the U.S. view of democracy favors citizen input and thus results in a decentralized, pluralistic administrative state, the U.K. traditionally has focused on policy and program output for citizens. Such a focus has led to a more highly centralized administrative state, not necessarily concerned with citizen input. Such views tend to support George Tsebelis' argument that pluralist systems such as the US have stable governments but instable regimes (See US National Elections 2000 and 2004) while centralized, parliamentary systems such as the UK have less stable governments but stable regimes. Data for this comparative analysis are being collected by students during their public administration internships at the state and federal levels in the Spring 2010.

**Presentation Type and Session:** Poster VII

## What's Love Got To Do With It? Analysis of College Relationships

**Jenelle Jones**, HON 400: All College Honors Colloquium

Faculty Mentor: Professor Andrea Guiati, Director, All College Honors Program

All of the past presidents have done it and there are tons of heartfelt love stories about it--marrying your college sweetheart. However, college relationships aren't as common as one thinks. "Bitch Is The New Black" is a highly publicized book written by Helena Andrews, an ivy-league educated, single, black female that discusses the difficulties faced by young, successful African American women and their search for love. This paper will analyze the importance of relationships amongst college students ages 18-24. More importantly, this paper will focus on African American college students and their views on monogamy and love. Data are being collected through a survey amongst African American college students in the Buffalo community, Buffalo State College, and University at Buffalo.

**Presentation Type and Session:**

Oral – Humanities

## When Words Fall Short: A Comparison of Mental Repetition, Visualization, and Gesturing In Memory Retention

**Max Ostrov**, Psychology

Faculty Mentor: Professor Stephani Foraker, Psychology

In this paper we will compare and discuss three memorization strategies in the learning and retention of nonassociated word pairs, in which the participants will learn a list of word pairs using one of the following strategies: Mental repetition, visualization + repetition, and gesturing + repetition. Participants will then be asked to provide the second word of each pair when the first is given on a post (immediately after the learning phase) and follow-up test (2 days later). We have yet to perform the testing, but we predict that both the visualization and gesturing groups will outperform the repetition group, and that the gesturing group should outperform the others unless it is deemed too difficult or unnatural, in which case a cognitive overload may be the result, causing an impedance to memory rather than a facilitation.

**Presentation Type and Session:** Poster VI

## Work and Family Issues of Correctional Officers

**Jennifer Molfese**, Psychology

Faculty Mentor: Professor Robert Delprino, Psychology

The purpose of this study was to examine the influence that a career as a correctional officer may have on the family life of the officer. The stress experienced by officers on the job may have a negative spillover effect on their personal and family relationships. Though the use of a structured questionnaire, I was able to identify from the officer's perspective the issues and concerns they have related to how the job spills over into their family life. In addition I was able to explore the number of family roles the officers have, and how their family relationships serve as a buffer from stress experienced on the job. Finally the questionnaires offered some insight as to how the organization can assist officers and their family members. The preliminary results showed that a majority of the participants are juggling at least two major family roles were they are in a committed relationship and have childcare or elder care responsibilities. There are also some overall themes that have been identified, such as the difficulty that the officer faces when trying to keep their job and family separate. It was also found that although the job often requires the officer to miss many family functions their significant other is still there to listen and be supportive of them. It was surprising that many of the officers reported no work-family conflicts, and if there were any they were resolved within the family. This maybe because the officers do not view the organization as offering any support to address work and family issues.

**Presentation Type and Session:** Poster VII

### **Working During College: Its Effects On Stress Level, Academic Achievement and Stimulant Use**

**Theresa Kruczynski**, Psychology

Faculty Mentor: Professor Michael MacLean, Psychology

According to the U.S. Bureau of Labor Statistics, approximately fifty percent of college students have jobs. Despite this high percentage, there is little research on how having a job while going to college affects academic achievement. While there is not much research on how jobs affect the schoolwork of college students, there is some research in this area on high school students. Some of the research found jobs to have negative effects on schoolwork. In particular, it appears that the number of hours worked per week is an especially important predictor of negative impact. However, it is not known how well this research generalizes to college students or whether other previously unexamined work-related variables might play a role. The purpose of my study is to find out how work-related variables are related to stress levels and to academic achievement among college students. In addition, a recent study suggested that stimulant use is prevalent among college students. My study will examine whether work-related demands and the resulting stress are related to higher rates of stimulant use and stimulant-related problems. My study evaluates a number of work-related factors, such as how often a student works, the type of job a student has, when a student generally works, the difficulty level of the job, the stress level of the job, and how much the job conflicts with academic demands through a questionnaire administered to the participants.

**Presentation Type and Session:** Poster I