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PATERSON
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2011

Research and Scholarship Day

Creating and Sharing
of New Knowledge
and Culture

Thursday • April 7

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University Research and Scholarship Day 2011

Schedule of Activities and Presentation Abstracts

Schedule at a Glance

10:30 to 12:30	Concurrent Individual and Group Presentations University Center, 168B, 171 A, 171B, Ballrooms A, B and C
12:00 to 2:30	Poster Presentations University Commons Hallway
12:30 to 1:45	College of Arts and Communication College of Education College of Humanities and Social Sciences College of Science and Health / Center for Research Cotsakos College of Business Cross Cultural Arts Festival: Africa
2:00 to 3:30	Concurrent Individual and Group Presentations University Center, 168A, 168B, 171 A, 171B, Ballrooms A, B and C
3:30 to 5:00	David and Lorraine Cheng Annual Authors Recognition Reception Office of Sponsored Programs Recognition of Awards Recipients Ballroom C

Morning Sessions

Individual and Group Oral Presentations, 10:30 to 12:50

University Commons, Room 168B

- 11:00-11:20 *Can Neckties Make You Sick? Microbial Growth on Silk vs. Polyester*
Miryam Z. Wahrman, Brian Nelson, Brianna McSweeney, Biology Department
- 11:20-11:40 *Peasants, Darwin, Nazis*
Danusha Goska, Anthropology Department
- 11:40-12:00 *Complexity of DSP Benchmark Functions in Multi-Core Environments*
Cyril S. Ku, Computer Science Department
- 12:00-12:20 *Variations on a Method for Solving Linear System with a Symmetric Banded Coefficient Matrix*
Linda Kaufman, John Fromholtz, William Landon, Computer Science Department
- 12:30-12:50 *From Cannabinoid Genomics to Medical Marijuana*
Kayode Oluyemi, Emmanuel S. Onaivi, Biology Department

University Commons, Room 171A

- 10:30-11:00 *Earnings Components and CEO Compensation: An Empirical Examination*
Avinash Arya, Accounting and Law Department

- 11:00-11:20 *The Global Compact: An Analysis of the Motivations and Outcomes of Adoption in the Spanish Context*
Jorge A. Arevalo, Marketing & Management Department
- 11:20-11:40 *Chinese Block Transactions and the Market Reaction*
Ge Zhang, Economics, Finance and Global Business Department
- 11:40-12:00 *Buyer Organization Mapping: New CRM Tool for Salespeople*
Prabakar Kothandaraman, Professional Sales Department
- 12:00-12:20 *College Students' Consumer Decision Making Process for Low-Involvement Products*
Bela Florenthal, Marketing and Management Department

University Commons, Room 171B

- 10:30-10:50 *Gendered Migrations: Experiences from South Florida*
Elena Sabogal, Women's and Gender Studies Department
- 10:50-11:10 *Print, Literacy and Islam in Nineteenth Century India*
David Lelyveld, History Department
- 11:10-11:30 *The Religious Worlds of Secular Women in Early Modern Europe*
Susan E. Dinan, History Department

University Commons, Room Ballroom A

Technology Across the Curriculum

- 10:30-10:50 *Teaching Qualitative Data Analysis Using Microsoft Word and Excel*
Sheetal Ranjan, Sociology Department
- 10:50-11:10 *Chat Tools for Accomplishing Various Group and Individual Learning Objectives*
Michelle Kowalsky, Educational Leadership and Professional Studies Department
- 11:10-11:30 *Interactive Assignments on Connect to Enhance Student Learning*
Bela Florenthal, Marketing & Management Department
- 11:30-11:50 *Virtual Teaching Environments*
Donna Potacco, Andres Salazar, Rita Ramirez-Levine, Jessica Oscanoa, Science Enrichment Center Department
- 11:50-12:10 *Transforming Tweets to Formal Academic Prose: WPU Freshmen's Innovative Writing Practice Using Digital Technologies*
Carrie Eunyoung Hong, Hilary Wilder, and Geraldine Mongillo, Educational Leadership and Professional Studies
- 12:10-12:30 *NJVID: Commercial Video Made Easy*
Sandra L. Miller, Instruction and Research Technology

University Commons, Room Ballroom B

- 11:00-11:20 *Improving Outcomes of Persons with Type 2 Diabetes through Self-Management Education*
Elizabeth J. Van Dyk, Nursing Department
- 11:20-11:40 *Relationship between Spiritual Health and Quality of Life in the Independent Elderly*
Nicole Gioia, Brandi Wilkin, Sharon Vanduyne, and Dr. Ruth Harrison, Nursing Department
- 11:40-12:00 *Trigger Hair Function and Jump Performance in Trap-jaw Ants*
Joseph C. Spagna, Edgar Valdivia, Vivin Mohan, Nicholas Canevari, Biology Department
- 12:00-12:10 *Regulation of Calcium Channels in Ataxia*
Jamie L. Weiss, Biology, and Michael J. Gonzalez, Nursing; Dr. Jamie L. Weiss, Biology Department

University Commons, Room Ballroom C

- 11:00-11:20 *Something To Say: Thoughts on Art and Politics in America*
Lily Prince, Art Department, and Richard Klin
- 11:20-11:40 *Depression: Deep Depression*
Barry Morganstern, Communication Department

Common Hour Programs, 12:30 to 1:45

Cotsakos College of Business

University Commons, Room 171A

- Dura Pharmaceuticals, Inc. vs. Broudo: Proving Causation in Federal Securities Litigation Cases.*
Valeriya Avdeev, Accounting and Law Department
- The Nexus between Global Trade and Exploitation: Implications for Worker Action*
Raza Mir, Ali Mir, Management, Faculty,, Marketing & Management Department
- Organizational Commitment and Turnover Intentions of Sales Employees through Social Media*
Matthew Lagomarsino, Russ Berrie Institute for Professional Sales Department; Dr. Raj Agnihotri, Faculty Sponsor, Russ Berrie Institute Professional Sales Department

Cross Cultural Arts Festival: Africa

University Commons, Room 171B

- Doing Research in Africa: Field Studies and Beyond*
Djanna Hill, Secondary & Middle School Education Department, Moderator
- Expanding Your Research Overseas with Grant Funding*
Lourdes Bastas, Office of Sponsored Programs Department
- Micro-Finance and the Growth of SME's in Kenya*
Muroki Mwaura, Accounting and Law Department
- Colonialism and the British Conquest of Africa*
Lawrence Mbogoni, Africana-World Studies Department
- Availability of Capital and Bank Defaults in Africa*
Andrew Nyaboga, Accounting and Law Department

Cross Cultural Arts Festival: Africa and - College of Education

University Commons, Room 208

- Sketches of Critical Teaching and Learning: A Portrait of William Paterson Univeristy Teacher Educators in Non-Western Cultures*
Darlene Russell, Secondary & Middle School Education Department; Allison Dobrick, Elementary & Early Childhood Education Department; Kelly McNeal, Secondary and Middle School Education Department

College of Humanites and Social Sciences

University Commons, Ballroom A

- Culturalization of Caste in India: Identity and Inequality in a Multicultural Age (in press, Routledge: London, August 2011)*
Balmurli Natrajan, Anthropology Department
- Unaware...But Still There: Insights Into Memory*
Bruce Diamond, Psychology Department
- Final Acts: Death, Dying, and the Choices We Make (Rutgers, 2010)*
Donna Perry, English Department
- "Paratheisms"*
Eric Steinhart, Philosophy Department

College of Science and Health, Center for Research

University Commons, Ballroom B

Mathematical Modeling of Protein Energy Landscapes: A Work in Progress

David A. Snyder, Chemistry Department

Hematopoietic Stem Cell Proliferation modeling Under the Influence of Hematopoietic Inducing Factor

Eliana Antoniou, Mathematics Department

College of Arts and Communication

University Commons, Ballroom C

Evolving Curricula: Negotiating the Cultural Change Between Music Education Theory and Practice

Carol Frierson-Campbell, Music Department

Clark Terry Archive Research: Organization and Donation of Autobiography Materials

David Demsey, Music Department

"Shuma" – A Possible Chinese Version of Soma/Haoma - A Study of Early Contacts between Indo-Iranians and Chinese

He Zhang, Art Department

Luis Cruz Azaceta: El balseiro

Alejandro Anreus, Art Department

From Virtual to Actual

Elaine Lorenz, Art Department

Blue Dream - For Jazz Big Band

David Weisberg, Music Department

Poster Presentations, 12:00 to 2:30

University Commons Hallway

Mathematical Modeling of Hematopoiesis

Rebecca Anderson and Dr. Eliana Antoniou, Mathematics Department

Crime Fighters: A Content Analysis of the Heroes of American Pop Culture

Robert Baron and Dr. Charley Flint, Sociology Department

Field & Laboratory Investigation of Fire Influenced Chlorite Weathering in an Inceptisol

Jennifer Callanan, William Frazier, Kimberly Snyder and Chad Reinertsen, Environmental Science Department

Mathematical Modeling of Cancer

Jyoti Champanerkar, Mathematics Department

ZZZ Spells GPA: How Sleep Related Habits Affect College Student Academic Performance

Mary Katheryn Dalton and Dr. William Kernan, Department of Public Health

Mediating Variables in a Transtheoretical Model Dietary Intervention Program

Jennifer Di Noia, Sociology Department

Characterization of B1500-Blind Mutants of the PhoQ Sensor Kinase of Escherichia Coli

Jennifer Fiorelli, Brandon Schwartz, and Dr. Carey Waldburger

Impact of Gathering Areas on Social Behavior in Urban Areas

John Gizzarelli and Prof. Vincent Parrillo, Sociology Department

The Correlation between Age-related Hearing Loss and the Quality of Life of Adults ages 65 and Older

Caitlin Glaser, Nicole Monar, Sandra Martin Bushey and Jessica Paventa, Communication Disorders Department, and Dr. Ruth Harrison, Nursing Department

Level of Exercise and Body Image among College Students

Rodney Hammond and Dr. William Kernan, Public Health Department

- The Impact of Parenting on Emerging Adults Substance Use*
Samantha Kopp and Luis Nuno, Sociology Department
- Victims' Construction of 'Fear' in Domestic Violence Cases*
Lauren Kuchar and Professor Sheetal Ranjan, Sociology Department
- Which Way do I go? Human Spatial Ability in a Computer based Task*
Amy E. Learmonth, Melanie Bronstein, Ashley Smith and Michelle Palmieri, Psychology Department
- An Investigation of the Visual-Spatial Skills of Children with Autism*
Nicole Magaldi and Betty Kollia, Communication Disorders
- The Effects of OTC Availability of Plan B on Teen's Contraception Decision Making*
Erika Mann and Professor Luis Nuno, Sociology Department
- Analysis of Optical Emissions from a Mercury and Argon Discharge*
Kevin Martus and Nicole Burchell, Physics Department
- Labor and Delivery and Maternal Emotions in the Postpartum Period*
Megan Morse and Dr. Ruth Harrison, Nursing Department
- Stalking Prevalence among College Students*
Katelin Moses and Dr. Sheetal Ranjan, Sociology Department
- Sample Size Weighting in Probabilistic Inference*
Natalie A. Obrecht, Psychology Department
- Eyes on the Drive: College Students and the Effects of Behind the Wheel Distraction*
Lauren J. Ramos and Dr. William Kernan, Public Health Department
- Cyber Stalking Victimization among College Age Intimate Partners*
Naima Ricks and Dr. Sheetal Ranjan, Sociology Department
- Good vibrations: An Analysis of the Changes in Vocal Performance Associated with Schizophrenia*
Duncan S. Shepard and Michael S. Gordon, Psychology
- Recovering Drug Addict's Perceptions of Paterson*
Kara Sherman and Dr. Vincent Parrillo, Sociology Department
- Special Characters Or The Layout Software Ate My Book Chapter*
Jennifer Swift-Kramer, Women's and Gender Studies Department
- The Effects of Single-Parent Households on Juvenile Delinquency*
Lauren Weisse and Dr. Sheetal Ranjan, Sociology Department
- A Study of Drunk Driving-Related to Attitudes and Behaviors*
Amanda Yarmula and Luis Nuno, Sociology Department

Afternoon Sessions

Individual and Group Oral Presentations

2:00 to 3:30

University Commons, Room 168A

- 2:00-2:20 *Service Learning Opportunities in a Diverse World: Teacher Candidates and their Self-Selected Service Learning Experiences*
Bernard C. Jones, Special Education & Counseling Department
- 2:20-2:40 *Empowering Teachers to use Fraction Definition to Help Students Construct the Concept of a Fraction Two teachers experiences*
Sandra Alon, Educational Leadership Department
- 2:40-3:00 *Creating Preschool Classroom Environments That Promote Gender Equity*
Janis Strasser, Elementary and Early Childhood Education Department

University Commons, Room 168B

- 2:00-2:20 *Counting on Gauss*
David Nacin, Mathematics Department

- 2:20-2:40 *Applications of Field Hockey and Geometry*
Ioanna Protogiannis, Mathematics Department; Dr. Amy Learmonth, Psychology Department
- 2:40-3:00 *Does the Honey Bee Waggle-dance Scent Enhance the Recruitment of Foragers to Food Sources?*
David C. Gilley, Brian Smith, Corey Stein, Biology Department

University Commons, Room 171A

- 2:00-2:20 *A Differentiated Look at Rates of Return to Education and Experience*
Martin Gritsch, Economics, Finance, and Global Business Department
- 2:20-2:40 *Building a Foundation Without Bricks and Mortar: Business Planning for Home Based and Cyber Businesses*
Stephen C. Betts, Marketing & Management Department
- 2:40-3:00 *Gaining Advantage Through Global Learning Hubs*
Robert L. Laud, Marketing & Management Department

University Commons, Room 171B

- 2:00-2:20 *"Imaginary Portugal"*
Judith Broome, English Department
- 2:20-2:40 *A reading from my new novel, "JESUSVILLE." (Publication date: May 20, 2011)*
Philip Cioffari, English Department
- 2:40-3:00 *The Demographics of Sexual Orientation*
Jacob Felson, Sociology Department
- 3:00-3:20 *Deviant Sexualities in Online Personal Ads*
Luis F. Nuno, Sociology Department

University Commons, Ballroom A

- 2:00;2:20 *The Changing Nature of Prison Contraband: Effects on the Prison Economy*
Gennifer Furst, Sociology Department
- 2:20-2:40 *Can the "Back on My Feet" Running and Life Skills Program Help Paterson, New Jersey Get Back on its Feet?*
Kamilah Bayete, Sociology Department; Gennifer Furst, Sociology Department
- 2:40-3:00 *The Simplest Chronoscope II: Reaction Time Measured by Meterstick Versus Machine*
Alberto Montare, Psychology Department
- 3:00-3:30 *The Reality of a Post-Racial America Two Years into Obama's Presidency*
Vincent N. Parrillo, Sociology Department

University Commons, Ballroom B

- 2:00-2:20 *A Phenomenological Study exploring The Perceptions and Lived Experiences Of First-Time Breastfeeding Mothers*
Karen F. Phillips, Nursing Department
- 2:20-2:40 *Application of the Logic Model in the Design of the NJ Nursing Education Collaborative to Increase Nurse Faculty*
Kem Louie, Nursing Department
- 2:40-3:00 *Autonomic Responses of Tai Chi Practitioners*
Michael Figueroa, Kinesiology Department
- 3:00-3:20 *Funding Great Ideas*
Martin B. Williams, Office of Sponsored Programs; Michelle Drame, Institutional Development

Author Bibliography and Recognition Reception, Cheng Library
Award Recipient Recognition Reception, Office of Sponsored Programs

Ballroom C
3:30 to 5:00

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Mission and Core Activities

The OSP provides assistance and support to WPU faculty and staff who seek external grant or contract support for research, teaching, service, public programs, creative endeavors, conferences and other types of projects from government agencies, grantmaking public charities, and some private and corporate foundations. The OSP concentrates its activities in three broad areas:

- ★ **Pre-Award Services:** Activities leading up to the submission of a funding request, including idea development, funder identification, proposal writing, photocopying, mailing, and more. The OSP maintains extensive databases and reference resources on funding programs and agencies, distributes information to the WPU community, provides individualized assistance to applicants to develop high quality proposals, manages the proposal review process, and obtains required signatures among other activities.
- ★ **Post-Award Services:** Activities supported after funding has been received, including contract negotiation, preparing and submitting budget or program revisions as well as funding continuation requests, report submission, and problem-solving liaison to agency grants offices and WPU administrative departments. The OSP prepares reports for the University on funding.
- ★ **Compliance:** The OSP works to insure that State, Federal and University non-financial policies, regulations and procedures related to grant and contract funding are fulfilled. The OSP provides administrative support to the Institutional Review Board for Human Subject Research.

The OSP reports to Dr. Nina Jemmott, Associate Vice President and Dean for Graduate Studies and Research in the Office of the Provost and Senior Vice President for Academic Affairs.

Staff	OSP Publications	Databases and References
<p>Martin B. Williams, Director <i>williamsm@wpunj.edu</i> 973-720-3263</p> <p>Lourdes L. Bastas, Assistant <i>Director Pre-award Services</i> 973-720-3794</p> <p>Beth Ann Bates, Program Assistant <i>Batesb@wpunj.edu</i> 973-720-2852</p> <p>Like Kurter, Graduate Ass't <i>grants@wpunj.edu</i> 973-720-3574</p> <p>Dr. Nina Jemmott, Associate Vice President and Dean</p>	<p><i>Dates, Updates and Insights (DUI)</i>, a weekly subject-based funding opportunity email</p> <p><i>The STAR Report</i>, a newsletter report on funding issues and WPU successes</p> <p><i>OSP Website</i></p>	<p>On-line Databases & Resources</p> <p><i>GrantSearch</i> <i>COS Funding Opportunities</i> <i>Grants.Gov</i> Grant Resource Center/AASCU Directories and guides on proposal development and project management.</p>
<p style="text-align: center;">WPU Grant Approval Process</p> <p>Proposals for grants, contracts or other support from local, state and federal agencies and some private or corporate foundations, require prior approval by WPU through the OSP before they can be submitted. A nearly final narrative, final draft bud-get and copy of guidelines must be submitted to the OSP with a Grant Approval Sheet at least ten days before the deadline. Applicants working with the OSP generally require less review time.</p>	<p>OSP Thursday Workshop Series, Spring 2011</p> <p>April 14 Finding and Applying for Grants: It's All About the Program</p> <p>April 28 Grant Search Tools</p> <p>May 5 Finding and Applying for Grants: It's All About the Program</p> <p>May 12 Human Subject Research by Faculty and Staff</p> <p>All sessions are during Common Hour. Contact the OSP for location.</p> <p>Custom workshops and presentations on request. See website for Summer I Schedule.</p>	
	<p>Technical Assistance Travel</p> <p>Travel support provided to attend a workshop or conference on a funding opportunity or agency, to meet with a grant program officer, or related grant-development activity.</p>	

University Research and Scholarship Day 2011

Abstracts

Sandra Alon, Department of Educational Leadership

Empowering Teachers to use Fraction Definition to Help Students Construct the Concept of a Fraction: Two Teachers Experiences

Despite the importance of having a deep facility in fraction concepts both for real life and higher level math, young students have consistently failed to develop a deep understanding of the topic. This paper suggests that one solution to the challenges facing instructors and students is to empower teachers to redesign fraction lessons to focus on a fraction defining as the lens for developing a rich understanding of fraction concepts. The validity of this approach is tested in a classroom based case-study that compares student test performance under the two pedagogical alternatives. The study finds that students instructed under the definition centric lesson outperformed their peers

This research was supported by an ART award.

Rebecca Anderson, Undergraduate Student, Department of Mathematics

Eliana Antoniou, Department of Mathematics, Faculty Sponsor

Mathematical Modeling of Hematopoiesis

The process by which hematopoietic stem cells (HSC) residing in the bone marrow differentiate into blood cells is known as hematopoiesis. In the event of hemorrhagic shock, it is crucial for the HSC to rapidly differentiate into new committed erythroid progenitor cells that will give rise to erythrocytes. Growth factors and cytokines enhance the self-renewing process of HSC and are, therefore, crucial to restoring normal levels of blood cells in the body. Hematopoietic inducing agents (HIAs), such as the cytokine erythropoietin (EPO) and granulocyte-colony stimulating factor (G-CSF) play a vital role in hematopoiesis because they are capable of inducing the proliferation of stem cells. The aim of the current study is to look at a model that was derived by Dr. Antoniou and her colleagues and study the stability analysis, as well as, determine the conditions that need to be satisfied so that the parameter values can be established. Stability analysis is typically performed on models with the smallest numbers of degree of freedom required to describe a physical phenomenon that captures the instability.

This research was supported by the US Department of Education MAST Grant to William Paterson University.

Alejandro Anreus, Department of Art

Luis Cruz Azaceta: El balseiro

Luis Cruz Azaceta is considered one of the leading contemporary painters that deal with the figure within a narrative. This narrative derives in part from his experience as a Cuban exile. At the heart of it is his personal iconography where the "balseiro" rafter is at once specifically Cuban, but also more than that. This presentation will focus on the meanings of the "balseiro" and its many variations within his visual vocabulary.

Eliana Antoniou, Department of Mathematics

Hematopoietic Stem Cell Proliferation modeling Under the Influence of Hematopoietic Inducing Factor

The process by which hematopoietic stem cells (HSC) residing in the bone marrow differentiate into blood cells is known as hematopoiesis. In the event of hemorrhagic shock, it is crucial for the HSC to rapidly differentiate into new committed erythroid progenitor cells that will give rise to erythrocytes. Growth factors and cytokines enhance the self-renewing process of HSC and are, therefore, crucial to restoring normal levels of blood cells in the body. The cytokine erythropoietin (EPO) plays a vital role in hematopoiesis because it induces the production of red blood cells in response to low oxygen levels in the body. The aim of the current paper is to mathematically model the effect of the cytokine EPO on the proliferation rate of hematopoietic stem cells at varying levels of oxygenation. The role of EPO will be analyzed by constructing a set of coupled ordinary differential equations upon which mathematical analysis will be performed. The model makes predictions of hematopoietic activity during low PO₂ levels (ranging from 2% to 20% O₂) similar to conditions observed during acute blood loss.

This work has been supported by a Center for Research grant from the College of Science and Health.

◆ **Avinash Arya, Department of Accounting and Law**

Earnings Components and CEO Compensation: An Empirical Examination

A classified income statement has up to five distinct components of earnings- income from continuing operations, special items, discontinued operations, extraordinary items, and accounting changes. This study investigates how persistence and controllability affect the stewardship role of earnings components. The results indicate that losses from continuing operations and special items, which have smaller persistence than income from continuing operations, receive a smaller weight in compensation. Below the line items (discontinued operations, extraordinary items, and accounting changes), which are largely beyond the control of the CEO, are filtered in compensation. Thus, the above and below the line dichotomy appears to be useful in separating income lacking stewardship value. Interestingly, the response coefficients on earnings components exhibit a similar pattern; the coefficients on special items are significantly positive and smaller than income from continuing operations while below the line items are insignificant. One implication of these findings is that eliminating separate line item presentation of some earnings components, proposed as part of the joint financial statement project of the FASB and IASB, may reduce the stewardship value of income statement classifications, while adding special items as a separate category may enhance it.

Jorge A. Arevalo, Department of Marketing & Management

The Global Compact: An Analysis of the Motivations and Outcomes of Adoption in the Spanish Context

In the ten years after the launch of the United Nations Global Compact (GC), there have been very few empirical assessments of the initiative in the academic literature. In this study, drawing from institutional theory and the resource-based view of the firm (RBV), we examine motivations of business participants to adopt the GC principles as well as outcomes for the adopters. Using survey data from Spain “the country reporting the highest volume of business participants in the GC,” we find that early and late adopters are motivated similarly by the perceived opportunity of achieving image gains, while late adopters are motivated more by economic gains than early adopters. The results also show that companies with more intangible resources are motivated more by image gains than those with fewer resources. Our findings also suggest that firms with more intangible resources and those participating in the Spanish Local Network have more positive outcomes than non-members.

Valeriya Avdeev, Department of Accounting and Law

Dura Pharmaceuticals, Inc. vs. Broudo: Proving Causation in Federal Securities Litigation Cases.

To recover damages in private cause of action under section 10(b) of the Securities Exchange Act of 1934 and under rule 10b-5 promulgated by the Securities and Exchange Commission, a plaintiff must plead and prove loss causation. However, loss causation is one of the most difficult elements to prove in securities fraud cases. Because loss causation is not easily defined, its concept has proved to be quite elusive. Not surprisingly, analysis of loss causation manifested confusion and uncertainty among the courts, where two distinct approaches to the concept existed prior to *Dura Pharmaceuticals, Inc. vs. Broudo*.

Robert Baron, Undergraduate Student, Department of Sociology

Charley Flint, Department of Sociology, Faculty Sponsor

Crime Fighters: A Content Analysis of the Heroes of American Pop Culture

A superhero is a fictional character of "extraordinary or superhuman powers" dedicated to protecting the public" in some strange way, the superhero is more influential than any one religion or substitute. In the most optimistic view, maybe the superhero can even unite people across ethnic, religious, and national boundaries. Fingeroth contends that one could call the never-say-die attitude the idealized version we have of ourselves and our society (Fingeroth 2004). This research attempts to answer the following questions: How have our fictionalized crime fighters changed over time? How are these superheroes depicted in popular American cinema and do they give us a sense of who we are and where we are going? Does the recent trend toward brutal violence in these films provide commentary on the desensitization of our society? Do superhero films only serve to reinforce gender and ethnicity stereotypes?

This research was supported by the Undergraduate Research Fund.

Lourdes Bastas, Office of Sponsored Programs

Expanding Your Research Overseas with Grant Funding

Finding and identifying funding resources to support projects abroad in training, research or group research and curriculum development for faculty and students. The presentation will also review current and past awards.

Kamilah Bayete, Undergraduate Student, Department of Sociology

Gennifer Furst, Department of Sociology, Faculty Sponsor

Can the "Back on My Feet" Running and Life Skills Program Help Paterson, New Jersey Get Back on its Feet?

Can Paterson, New Jersey run its way out of poverty, homelessness, and addiction? Possibly. Back on My Feet, a nonprofit organization that promotes self-sufficiency of homeless (and drug addicted) populations, engages them in running (and life skills training) as a means to build confidence, strength and self-esteem (<http://philadelphia.backonmyfeet.org/History.html>). In 2007, Anne Mahlum launched Back on My Feet in Philadelphia, PA. An avid runner, Anne routinely passed a group of homeless men on her morning runs, eventually persuading them to join her. As her running group grew, her Back on My Feet mission was born. "Running is such a beautiful metaphor for life," said Mahlum. "Life is about choosing different roads and our program teaches the importance of choosing roads filled with opportunity, hope and happiness." Since 2007, Back on My Feet has expanded to six additional cities (Baltimore; Washington, D.C.; Boston; Chicago; Dallas; Indianapolis), and will add Atlanta and Minneapolis as its newest cities later this year.

In Paterson, 22.2% of the population is below the poverty line (U.S. Census 2000). Homelessness in Paterson is a realistic fate that many have already met. Could a simple and inexpensive running program like Back on My Feet change the perspective and lives of the homeless, addicted, and hopeless in Paterson, New Jersey? In this study, using quantitative and qualitative methods, I will evaluate *Back on My Feet's* success thus far, and determine if Paterson is a viable candidate for program replication and expansion.

Stephen C. Betts, Department of Marketing & Management

Building a Foundation Without Bricks and Mortar: Business Planning for Home Based and Cyber Businesses

Business plans are frequently cited as the single most important element in small business startup success. However generic business plan guidelines seldom address the unique needs of home based and cyber (internet based) businesses. These forms of new enterprises are gaining in popularity, partially because they are facilitated by current technology and relatively easy to start. However, as with any small business start-up there is a high risk of failure in the initial stages of the growth of the enterprise. One way to address this risk is to modify the approach to writing a business plan to facilitate and reflect the unique characteristics of home based and cyber businesses.

The objective of this study is to present prescriptions for tailoring traditional business plans for home based and cyber businesses. Among the prescriptions are a short term focus, an emphasis on cash flow instead of attracting capital, special attention to the dynamic nature of the marketplace and importance of establishing a niche. By addressing the specific concerns and perspectives of home based and cyber businesses, the business plan can help maximize the probability of success for those interested in undertaking such enterprise.

This presentation is based on an article that won the Bright Idea in Management Award, 2010, given by the New Jersey Policy Research Organization (NJPRO)

Judith Broome, Department of English

"Imaginary Portugal"

The best-known reference to Portugal in 18th-century English literature is Henry Fielding's *The Journal of a Voyage to Lisbon* (1755), an account of a trip undertaken to alleviate his gout and general poor health. From this short account, however, we learn very little about Portugal; Fielding's Journal ends with his arrival in Lisbon, which he describes as "the nastiest city in the world, tho' at the same time one of the most populous" (107). The topic of this presentation is to examine the idea of Portugal in the British imagination: the Portugal imagined by writers, travelers, and potential travelers.

Portugal was not traditionally included in the Grand Tour undertaken by wealthy young men to "finish" their education by visiting the antiquities of classical Italy and Greece. Although accessible by sea, Portugal, at the lower end of the Iberian Peninsula, was geographically out of the way, and did not possess the antiquities that were ostensibly the focus of the Grand Tour; nevertheless, the relationship between England and Portugal was close during this period, and there was a high level of commercial exchange. The main accounts of Portugal come from individual travel narratives, often highly opinionated and idiosyncratic, and present a wide variety of viewpoints: Sir William Dalrymple's *Travels through Spain and Portugal*, in 1774, and those by Joseph Baretti, Robert Southey, William Beckford, are a few examples, as well as Janet Schwa's, *A Lady of Quality*, a journal of a trip that went from Scotland to the West Indies, to North Carolina, and then to Portugal.

This paper will examine the ideas about the culture, geography, climate, religion, race, and sexuality of Portugal through the writings of contemporary travelers. While Italy, for example, was considered everything England was not "the home of

devious Jesuits, a Catholic haven; highly passionate, even violent, peoples” what did the English imagine when they thought of Portugal?

This project was supported by the Summer Stipend from the College of Humanities and Social Sciences.

Jennifer Callanan, Department of Environmental Science

Co-Presenters: William Frazier, Kimberly Snyder and Chad Reinertsen, Undergraduate Students, Department of Environmental Science

Field & Laboratory Investigation of Fire Influenced Chlorite Weathering in an Inceptisol

Soil was analyzed for clay mineral alteration and textural modifications following a 2009 prescribed burn of a brush pile at the Double N Farm in Warren County, New Jersey. Weathered chlorite and increased clay sized particles were observed in soils sampled underneath the burn pile 3 months post-burn at depths below 30cm, just above a restrictive lithic bedrock layer. It was suggested that alteration of chlorite was a result of changing pH, due to the input of ash, in water pooling at the restrictive layer. These results led to the development of a laboratory study to model chlorite weathering at depth under post-fire conditions. Clay alteration, texture, and pH of laboratory soil were analyzed over a 3 month period, following ash and rainwater treatment to simulate field conditions during the 2009-2010 field study period. Preliminary results indicate significant variation in mean pH values in control and ash-treated soil 1 week and 3 months post-treatment. It is expected that chlorite will exhibit increased weathering, as a result of modified pH due to ash and rain water input, corollary to previous field results.

This project was supported by the College of Science & Health Student Worker Funds and the US Department of Education funded MAST Project.

Jyoti Champanerkar, Department of Mathematics

Mathematical Modeling of Cancer

Cancer cells can be thought of as competitors for resources in the normal tissue where they harbor and also as preying upon the normal host tissue. We investigate the behavior of cancer cells as described in ecology by modified predator-prey systems. We use differential equations to model this behavior and numerically solve them for various values of parameters.

This work has been supported by a Center for Research grant from the College of Science and Health.

Philip Cioffari, Department of English

A reading from my new novel, "JESUSVILLE." (Publication date: May 20, 2011

Readings from the forthcoming novel "JESUSVILLE."

This research was supported by an ART award.

Mary Katheryn Dalton, Undergraduate Student, Department of Public Health

William Kernan, Department of Department of Public Health, Faculty Sponsor

ZZZ Spells GPA: How Sleep Related Habits Affect College Student Academic Performance

Background: College students do not sleep consistent hours each night over the course of a week. This is influenced by several factors, including all night “cram sessions” and sleeping in on weekends. It is believed that sleep related habits impact academic performance. Sleepiness, sleep deprivation, weekend sleep shift, and sleep disorders have all been found to have a negative impact on undergraduate GPA 1, 2, 3, 4. The purpose of this study was to examine the relationship between sleep-related behavior and academic performance among college students.

Methods: Thirty William Paterson University students were given a voluntary, anonymous, fifteen-item survey asking about their sleep habits, stimulant usage, and GPA.

Results: Sleeping habits had a measurable relationship to academic performance. Students who slept between seven and nine hours a night reported GPAs an average of .20 higher than other students on a 4.0 scale. Students who reported using stimulants to stay awake during the day reported GPAs averaging .06 higher than students who did not. Students who reported napping at least once a week reported GPAs averaging .07 higher than students who did not nap, although a weak negative correlation was found between GPA and frequency of naps.

Conclusion: There are many ways in which sleep-related behaviors affect academic performance, such as total hours slept, frequency of naps, and stimulant usage. It is better to get enough sleep at night than to rely on frequent napping or stimulant usage to stay alert.

David Demsey, Department of Music

Clark Terry Archive Research: Organization and Donation of Autobiography Materials

This past summer's journey to the home of legendary trumpeter/NEA Jazz Master/ Grammy Lifetime Achievement Award winner Clark Terry was directly involved with his forthcoming, long-awaited autobiography, "Clark: The Life and Music of Clark Terry" (U. of California Press, to be released in fall 2011). I assisted with editing this book, and contributed one of the three introductions, along with Quincy Jones and Bill Cosby. Although the final version of the book runs about 300 pages, the original manuscript ran over 570 pages. My job last summer was to locate, organize and accept this priceless original manuscript, containing a wealth of first-person material that was cut from the book. Along with this "rediscovered" manuscript, I also located and duplicated over 1000 pages of notes, interview transcripts, all organized by subject, which will create a one-of-a-kind research center in the Clark Terry Archive on our campus.

Bruce Diamond, Department of Psychology

Unaware...But Still There: Insights Into Memory

Remembering people, places, events and information on a moment-by-moment basis is taken for granted by most of us. Until, of course, the capacity to remember is compromised. Individuals who suffer brain injury and dysfunction due to trauma, vascular insult, disease, or pathological aging can experience difficulty in remembering information. These memories are part of the fabric of who we are, who we were and perhaps who and what we want to be. The loss of these memories can, for some, represent the loss of themselves and their identity. Dr. Diamond's research works from these theoretical and applied contexts to better understand how memory works and does not work, examining its underlying mechanisms and exploring ways to improve or recover memories. In fact, there are memories of which we are unaware...but they are still there....somewhere!

This research was supported by the University of Manchester, UK (ORS Award) and Kessler Institute for Rehabilitation, NJ.

Susan E. Dinan, Department of History

The Religious Worlds of Secular Women in Early Modern Europe

I am contributing an article to entitled "Secular Women in the Catholic Church" to The Ashgate Companion to Women and Gender in Early Modern Europe. My earlier research has examined women in unenclosed communities who worked as teachers and nurses in France. This project is much broader in scope and allows me to compare the religious lives of women in different parts of Europe, especially Italy, Spain, and France. I focus on prayer, confraternities, and non-cloistered communities through which women from different social backgrounds could express their spirituality.

This research was supported by an ART award.

Jennifer Di Noia, Department of Sociology

Mediating Variables in a Transtheoretical Model Dietary Intervention Program

This study identified mediators of a Transtheoretical Model (TTM) intervention to increase fruit and vegetable consumption among economically disadvantaged African American adolescents (N = 549). Single- and multiple-mediator models were used to determine whether pros, cons, self-efficacy, and stages of change satisfied four conclusions necessary for establishing mediation of intervention effects on youths' dietary behavior. All four conclusions were satisfied for stages of change and pros in the single-mediator models and for stages in the multiple-mediator model. Stages mediated 31% of the intervention effect, and pros mediated 7% of the intervention effect in the single-mediator models. In the multiple-mediator model, stages accounted for 72% of the intervention effect. Findings add to the limited data on mediating variables in TTM dietary intervention programs. Replication studies are needed before it can be concluded that stages of change and pros are consistent mediators of TTM intervention program effects.

This work was supported with funding from the National Cancer Institute (CA 97849).

Jacob Felson, Department of Sociology

The Demographics of Sexual Orientation

In recent years, the US has made great strides toward equality with respect to sexual orientation. Americans' attitudes about homosexuality have gradually become more tolerant (Loftus, 2001). Sodomy laws have been repealed or struck down by the courts (Butler, 2005). Discrimination on the basis of sexual orientation is outlawed in an increasing number of states, and health benefits for domestic partners are offered to the employees of an increasing number of large companies (Butler, 2005). The question animating this research project is to examine (to the extent possible with available data) whether homosexuals

who grew up in the recent, more accepting era are more distinctive with respect to their attitudes and lifestyles than their counterparts who grew up in less tolerant times. More specifically, has there been divergence with respect to attitudes and lifestyles between the sexual "majority" and sexual minorities?

This research was supported by an ART award.

Michael Figueroa, Department of Kinesiology

Autonomic Responses of Tai Chi Practitioners

Analysis of heart rate variability (HRV) provides a non-invasive measure of the cardiovascular control system, which is influenced by the parasympathetic and sympathetic nervous systems. Decreased parasympathetic and increased sympathetic tone have been shown to result in decreased HRV, blood pressure variability (BPV), increased hypertension, cardiovascular complications leading to myocardial infarctions (MI) and increased mortality in post MI patients. As a result, measurements of autonomic activity can provide insight into cardiovascular function and risk factors associated with decreased cardiovascular health. Tai Chi Chuan (TCC) is an internal martial art that has existed since approximately the 14th century A.D. and is known for its gentle, rhythmic movement patterns that are practiced at a slow tempo and include a meditative component. The popularity of this art has increased over the years, more for its physical conditioning than for its martial applications. Tai Chi has been the subject of many research studies of motor control, psychological anxiety and cardiovascular function. With regards to autonomic physiology, several authors have examined the acute effects of TCC, as well as, after several weeks of training. As such, it was the focus of this study to examine the autonomic responses of experienced Tai Chi Chuan (TCC) practitioners and non-trained (NT) individuals at rest and during two phases of stressors. The aim of this study was to examine whether or not TCC can be used as an effective form of exercise that can elicit cardioprotective adaptations to the ANS. Accordingly, the hypotheses were that long-term practice of Tai Chi Chuan would produce: 1. Increased parasympathetic modulation at rest; 2. Less parasympathetic withdrawal during a stressor; 3. Decreased sympathetic modulation at rest and during a stressor; 4. Greater BRS as represented by the alpha index at rest and during a stressor; and 5. Decreased myocardial oxygen consumption as represented by the Rate Pressure Product (RPP). This study was cross-sectional in design and measured several autonomic parameters between two groups of subjects: Tai Chi Trained (TCC) and Non-Trained (NT). Data on twenty-six subjects were collected during this study. The experimental group (TCC) consisted of 13 subjects (males=6, females=7). The control group (NT) also consisted of 13 subjects (males=6, females=7). To measure within-subject and between-subject differences, 2 x 2 ANOVAs were performed on the values of HFRRnu, LFRRnu, sympathovagal balance (LF/HF), LFSBP, alpha-index, SBP, HR, and RPP during three conditions of testing (rest, isometric grip, standing). Analysis confirmed 4 out of 5 hypotheses. The TCC group demonstrated increased parasympathetic and decreased sympathetic modulation at rest, decreased parasympathetic withdrawal and a decreased sympathetic modulation during the stressors. Myocardial efficiency was also confirmed as represented by attenuated rate pressure products in the TCC group.

Jennifer Fiorelli and Brandon Schwartz, Undergraduate Students, Department of Biology

Carey Waldburger, Faculty Sponsor, Department of Biology

Characterization of B1500-Blind Mutants of the PhoQ Sensor Kinase of Escherichia Coli

PhoP-PhoQ is a two-component signaling system that controls many cellular activities and virulence in *Escherichia coli* and *Salmonella enterica*. PhoQ is a transmembrane sensor that monitors the environment for various signals and transmits this information to PhoP, a cytoplasmic transcriptional regulator that then modulates bacterial gene expression in response to the extracellular conditions. PhoQ has been shown to directly interact with and transmit information regarding extracellular signals that include divalent cation concentration and pH. Additionally, the system can be regulated by two small membrane peptides (B1500 and MgrB) that are encoded in the *E. coli* genome. Expression of B1500 is controlled by a second two-component system (EvgS-EvgA) whose primary function is in responding to low external pH. Expression of B1500 leads to activation of the PhoQ-PhoP signaling system. Expression of MgrB is controlled by the PhoQ-PhoP system itself and its presence represses PhoQ-PhoP signaling. Thus, MgrB likely serves a modulating role via a feedback loop. In both cases, the peptide is thought to act via a direct interaction with the PhoQ sensor domain

In previous work, we described the isolation of two mutants of PhoQ that respond normally to extracellular Mg²⁺ but are defective in activation by B1500, indicating amino acids with specific roles in B1500-mediated signaling. One of these is a leucine to proline substitution at residue 87 (LP87), which lies in the extracellular sensor domain. The second is a leucine to proline substitution at residue 224 (LP224), which lies in the intracellular linker that connects the sensor domain and the intracellular transmitter domain (domain that transmits information to PhoP via a phosphorylation mechanism). The most likely roles for Leucine-87 and Leucine-224 are in peptide recognition and transduction of the signal, respectively. Here we show, using a bacterial two-hybrid system, that the LP87 mutation disrupts the B1500-PhoQ interaction while the LP224 mutation does not; results that are both consistent with the proposed roles. We also show that the LP87 mutation renders PhoQ

blind to MgrB in addition to B1500, suggesting that there is an overlap in the docking site used by these two peptides, and surprisingly, that the LP224 mutation causes MgrB to *activate* PhoQ-PhoP signaling rather than *repress* it.

Bela Florenthal, Department of Marketing and Management

College Students' Consumer Decision Making Process for Low-Involvement Products

Fast food companies compete for a market share of the college student segment. On college campuses across the United States students typically have multiple fast food alternatives. These are relatively inexpensive and readily available items that satisfy students' hunger and affiliation in social settings. Being frequent, repeat purchases, fast food alternatives are usually evaluated with minimal effort. Heuristics of low involvement purchases of college students were examined in the context of fast food alternatives and compared to studies of other product categories and segments. A sample from a private Midwestern University was used. The insights gained in this study correspond well to other studies on heuristics of low-involvement purchases. Managerial implications are provided to help brand managers evaluate the effectiveness of their programs when targeting students on college campuses.

This research was supported by a Research & Travel Incentive Award.

Bela Florenthal, Department of Marketing & Management

Interactive Assignments on Connect to Enhance Student Learning

Connect interface has been designed by McGraw-Hill and I successfully adopted it in my marketing management classes for undergraduate students. There are some advantages of this interface to the Blackboard cartridges used by many textbook publishers. One of them is the interactive assignments that can be done in class using laptops, lab classes, or assigned as homework. They are applied in nature (e.g., case based) and are well integrated into the course material. Some assignments are based on video cases. The assignments have different levels of challenge. Some are more straightforward and some need higher-level skills of analysis and interpretation. Discussions become more meaningful after students have practiced these assignments. Also, each type of assignment has three versions, which allows instructors to use one version as an example in class and others as assigned homework. One future application for the interactive assignments is to enhance the on-line courses in business classes. Discussion boards can be a good complementary avenue to the interactive assignments. McGraw-Hill adds new textbooks to Connect interface every year because of the increasing demand from instructors to use it in various courses. In addition, McGraw-Hill plans to integrate Connect into Blackboard next year to simplify the log in process, which will allow instructors to use Blackboard features with Connect features.

This research was supported by a Research & Travel Incentive Award.

Carol Frierson-Campbell, Department of Music

Evolving curricula: Negotiating the Cultural Change Between Music Education Theory and Practice.

"If theory and research are to have any practical significance for schools, the assumption of a (professionally) directed curriculum that mediates between a theory and a practice is a convenient, and some would say necessary, starting point" (Westbury, 2002, p. 150). Following conversations between three music teachers enrolled in a master's degree program and the professor who serves as their thesis advisor, this paper represents an interrogation of the process of building such a curriculum.

For practitioners, the role of research is often not as clearly defined as that of applied and pedagogical studies (Dorfman & Lipscomb, 2005). In the United States, training at the bachelor's level for music educators is quite similar among degree-granting institutions whether the eventual goal is teaching in K-12 schools or in higher education. Graduate training, however, varies greatly depending on the goals of the student and the focus of the institution. Students whose professional goal is excellence in the classroom or rehearsal hall may study performance or pedagogy, while those whose professional goals involve university teaching most often study research. This seems inconsistent, given the profession's call for combining theory with practice.

By illuminating how the author's perspectives as professor and scholar intersect with those of evolving practitioner/researchers, this paper explores this issue. The specific representational method is autoethnography, "an autobiographical genre of writing and research that displays multiple layers of consciousness, connecting the personal to the cultural" (Ellis & Bochner, 2000, p. 739). The data were collected from conversations between the professor and the teachers as students fulfilled course requirements and completed their master's theses, and from the professor's personal reflections on this process. The findings concur with Labaree (2005), who acknowledged a cultural change "from normative to analytical, from personal to intellectual, from the particular to the universal, and from the experiential to the theoretical" among teachers who become

researchers. The results of this ongoing study suggest that the research component of the master's degree may be one vehicle toward creating professionally directed curricula that reflect both theory and practice.

Gennifer Furst, Department of Sociology

The Changing Nature of Prison Contraband: Effects on the Prison Economy

The underground prison economy has traditionally been based on items such as cigarettes, illegal drugs, coffee, and food. Newly prohibited items such as cigarettes, once a mainstay of prison life, as well as increasingly miniaturized technology such as cell phones, have not only created new challenges for successful interdiction, but they have also changed the nature of the prison economy. In turn, the continually evolving prison economy shapes a large part of prison culture. Inmates and the prison community have to adapt how they go about acquiring goods and services in this new landscape. The new prison economy and the reactions of both inmates and staff will be discussed.

This research was supported by an ART award.

David C. Gilley, Department of Biology

Co-Presenters: Brian Smith and Corey Stein Undergraduate Students, Department of Biology

Does the Honey Bee Waggle-dance Scent Enhance the Recruitment of Foragers to Food Sources?

The waggle dance of honey bee (*Apis mellifera* L.) foragers is a message that conveys to nest mates the location of a profitable food source, and it is a paradigm for understanding communication and language among social invertebrates. My colleagues and I recently discovered that waggle-dancing bees produce and release into the air a blend of chemicals that appear to function as a foraging pheromone (Gilley et al., in review). To fully understand the role of this pheromone in honey bee foraging we need to determine the mechanism by which the pheromone increases foraging activity. One likely mechanism of action is that the pheromone increases foraging activity by enhancing recruitment of naive foragers. This hypothesis was investigated by training bees from an observation hive to a feeder station, marking all experienced foragers at the feeder station, and then video-recording the recruitment behavior of experienced foragers within the hive following introduction of the pheromone (or solvent as a control) into the hive. Preliminary results provide support for the hypothesis in that the number waggle dances increased in response to the pheromone but not in response to the solvent.

This research was supported by an ART award and a Center for Research grant from the College of Science and Health.

John Gizzarelli, Undergraduate Student, Department of Sociology

Vincent Parrillo, Department of Sociology, Faculty Sponsor

Impact of Gathering Areas on Social Behavior in Urban Areas

The topic that my research will focus on is, what public spaces in Paterson are used the most by citizens; what makes them popular among the residents, and why certain places are ignored within the city. The approach method that will be used is observational research, in order to gauge the frequency in which a space is used, and what design features are popular with people. Another possible approach that I will be using is interviews from people who frequent the given area, and get their view on why an area is popular or unpopular.

My motivation for choosing this topic is out of intellectual curiosity, because what makes a space popular in an urban environment. This question is fascinating to me, as it deals with peoples daily habits and motivation for continuing to frequent a given area. Also what type of research and planning goes into creating such spaces; and do the spaces become popular due to good design or are people drawn to these places because they serve as an unintentional social gathering place; or is it a combination of both aspects.

Caitlin Glaser, Nicole Monar, Sandra Martin Bushey and Jessica Paventa, Undergraduate Students, Department of Communication Disorders

Ruth Harrison, Department of Nursing, Faculty Sponsor

The Correlation between Age-related Hearing Loss and the Quality of Life of Adults ages 65 and Older

Hearing impairment is a generic term regarding any abnormal or reduced hearing sensitivity; it is also known as hearing loss. The term presbycusis has been used to define the gradual loss of hearing that occurs in a majority of individuals as they age. In the elderly community 30 to 35 percent of adults between ages 65 and 75 years have a hearing impairment. Studies suggest that hearing loss may have an impact on the quality of life as well as depression, anxiety, and functional status. The present research conducted represents the correlation between hearing impairment and the hearing-dependent quality of life. There were a total of 36 participants in this study, which 31 were female and 5 were male and whose ages ranged from

67 to 95 years of age. Each participant was asked to answer the HHIE-S questionnaire, which is a 10-item version of the Hearing Handicap Inventory for the Elderly-Screening. Although there was no significance found with the correlation between hearing impairment and the quality of life, there was significance found correlating hearing impairment and hearing aid recommendation. Further research including exhaustive audiological evaluation should be conducted to evaluate the actual correlation between hearing impairment and the hearing-dependent quality of life.

Nicole Gioia, Brandi Wilkin and Sharon Vanduyne, Undergraduate Students Department of Nursing

Ruth Harrison, Department of Nursing, Faculty Sponsor

Relationship between Spiritual Health and Quality of Life in the Independent Elderly

This study involves surveying the elderly at Cedar Crest facility to see if spirituality relates to quality of life. Many people believe that being spiritual has a positive outcome on quality of life. Each person has a different view on what spirituality means to them. By doing this study we will discover if being spiritual makes a difference on an individual's quality of life.

This will be done by the use of instruments called, Quality of Life Index (QLI) and the Harrison Spiritual Health Scale. These instruments will be used to assess the elderly, male and female, spirituality and its effect on of quality of life. The Quality of Life Index measures contentment and significance of different aspects of life. Harrison Spiritual Health Scale measures spiritual health, which follows Betty Neuman's Systems Model. Betty Neuman's Systems Model is also used as the theoretical framework for this study. Neuman's model was used because of its holistic approach. It very closely shows the relationship with an individual and the environment, which in turn can relate to quality of life.

The study involves asking willing participants and volunteers to fill out a self administered survey. These surveys are the QLI and the Harrison Spiritual Health Scale. The out come of the surveys will hopefully be what the thesis statement of this study; spiritual health will be correlated positively with quality of life.

Danusha Goska, Department of Anthropology

Peasants, Darwin, Nazis

"Peasants Darwin Nazis" is a popular version of one chapter of my 2010 book, "Bieganski." It addresses the mass immigration of Eastern and Southern Europeans and East Asians to the US, 1880-1924, that is, Poles, Lithuanians, Hungarians, Slovaks, Italians, Greeks, Chinese, Japanese, and that immigration's impact on scientific racism, and Nazism.

Martin Gritsch, Department of Economics, Finance, and Global Business

A Differentiated Look at Rates of Return to Education and Experience

In the estimation of the impact of various factors on wages, two of the most prominent and best studied factors are formal education and job market experience. Typically, individuals with more education and more experience exhibit higher mean wages. Follow-up studies have examined issues such as the impact of gender, race, or the type of school attended on the rate of return to education and experience. However, an aspect that has not received much attention is whether it matters in which country an individual's education and experience were obtained. A priori, one may think that education and training that were acquired in a country other than the United States are valued less in the U.S. job market because part of the education an individual obtains may be country-specific. It could also be, however, that the education in some foreign countries is superior to the typical education in the U.S. which may translate into higher wages. Using data from the 2008 American Community Survey, I find that the rate of return is greater for education that was obtained in the U.S. than for education obtained in a foreign country. However, if the estimation allows for different rates of return to U.S. education between immigrants and natives, there is little difference to immigrants between the rates of return to education from their source countries and education from the U.S. These results are robust to the inclusion of factors such as gender, race, and English language skills.

Rodney Hammond, Undergraduate Student, Department of Public Health

William Kernan, Department of Public Health, Faculty Sponsor

Level of Exercise and Body Image among College Students

BACKGROUND: Fitness, exercise and physical activity are terms used interchangeably by college students. Body image is the subjective concept of the physical appearance and the internal representation of a person's outer appearance. Many college students have a distorted body image, in part due to the way the media and celebrities rigidly promote a thin body image. The purpose of this study was to discover the relationship between the level of fitness and body image among a group of college students.

METHOD: Thirty-six William Paterson University students were given a voluntary, anonymous 12 question survey asking about fitness-related behaviors and body image perception.

RESULTS: There was a relation between compulsive exercising and body image among college students. Seventy-two percent of students who reported exercising frequently report enhanced body satisfaction. Twenty-seven percent of students who reported not exercising at all had a lower body image. Seventy-seven percent of student reported that not being fit is unattractive, while fifty-five percent of students reported that being fit is attractive.

CONCLUSION: The relationship expected to emerge between compulsive exercising and body image among college students was not seen in this study. However there was still a relationship. Students who exercised frequently had a higher body image. Students think the not being fit is unattractive.

Djanna Hill, Department of Secondary & Middle School Education

Doing Research in Africa: Field Studies and Beyond

The purpose of this panel presentation is to highlight research funding sources and the essence of current scholarship relating to Africa. Each panelist will focus on the significance of her or his research project in or about Africa including correlates in the African Diaspora. (Panel Moderator)

Carrie Eunyoung Hong, Hilary Wilder and Geraldine Mongillo, Department of Educational Leadership and Professional Studies

Transforming Tweets to Formal Academic Prose: WPU Freshmen's Innovative Writing Practice Using Digital Technologies

Recent literacy research suggests that students' interest in digital writing is an instructional advantage if students can play active roles in producing information, rather than merely being consumers of information. New technologies such as smart phones or micro-blogging via common cell phones may afford even greater authentic and meaningful writing for these students, providing an inexpensive, anytime and anywhere medium for jotting down notes. This study explores how Twitter, an anytime/anywhere writing technology, promotes the process of traditional writing, such as drafting, revising, editing, and publishing expository text for a specific purpose, by freshmen at William Paterson University. It also examines how the use of technologies changes students' perceptions of new literacies in academic context. Two of the authors taught a joint course of First Year Seminar and Basic Reading in which the same group of students enrolled. Students in First Year Seminar used Twitter every week to input their ideas and thoughts about their experiences of the first year at the university with the goal of collaboratively combining these into a Freshman Survival Guide in Basic Reading at the end of the semester. The preliminary findings indicate that Twitter as a technology tool helps students generate ideas that turned into a formal written text by going through a series of traditional writing processes. In addition it appears that the nature of their writing development is affected by authenticity, collaboration, effective writing instruction, and instructional support of technology use in academic context.

This research was supported by an ART award.

Bernard C. Jones, Department of Special Education & Counseling

Service Learning Opportunities in a Diverse World: Teacher Candidates and their Self-Selected Service Learning Experiences

As colleges of education prepare their teacher candidates in the areas of content knowledge, application and classroom management, it is the area of dispositions that has come under fire. In preparing teachers to teach in a global society colleges and universities are using disposition data to profile their candidates (Singh & Stoloff, 2008). Thus, colleges of education are making efforts to assess the attitudes of its candidates towards the different academic abilities, religious background, sexual orientation, ethnicity and even gender (Rinaldo et al., 2009; Unruh & McCord, 2010). This study examines 40 different teacher candidates self-selected service learning credit opportunities as they prepare for student teaching in urban settings.

Linda Kaufman, Department of Computer Science

Co-Presenters: John Fromholtz and William Landon, Undergraduate Students, Department of Computer Science
Variations on a Method for Solving Linear System with a Symmetric Banded Coefficient Matrix

In high school algebra classes, students routinely solve linear systems with 2 or 3 variables. But in scientific problems one can meet linear systems with thousands of variables and if there is any structure to the coefficient matrix, it pays to take advantage of that structure.

Several years ago the faculty member in charge of this group determined an algorithm for solving a system of equations where the coefficient matrix was banded (large blocks of zeroes in the upper right and lower left hand corner) symmetric, but not necessarily positive definite. Such a matrix might arise in problems defined on a grid where you have nearest neighbor connections. We will present two variations on the basic algorithm. The first involves block calculations to be used when the bandwidth is large where it pays to take advantage of the architecture of the machine to decrease disk accesses. The second variation considers working from both the top left and bottom right of the matrix simultaneously and chooses that variable to be next eliminated which will locally minimize either the operation count or the element growth in the transformations.

This research was funded by National Science Foundation (0611574).

Samantha Kopp, Undergraduate Student, Department of Sociology

Luis Nuno, Department of Sociology, Faculty Sponsor

The Impact of Parenting on Emerging Adults Substance Use

Does the use of current parental socialization methods, by both parents, have a strong influence on the frequency of alcohol and marijuana use for college students who live at home and away from home? The parenting methods, of monitoring and closeness, have been proven to have a strong impact on adolescent substance use, while less is known about its link to college students' use. I propose to evaluate the strength that current parenting methods have on the use of alcohol and marijuana among both college residents and commuters. I intend to analyze 200 students through survey research from William Paterson University and East Stroudsburg University. My results will confirm whether certain parenting methods have a strong impact on the frequency of marijuana and alcohol use for both residents and commuters.

This research was supported by the Undergraduate Research Fund.

Prabakar Kothandaraman, Department of Professional Sales

Buyer Organization Mapping: New CRM Tool for Salespeople

Perhaps the most important yet underutilized resources in customer relationship management are salespeople. Drawing upon literature from social network theory, personal selling, sales management, and industrial buying behavior, buyer organization (BOM) is proposed as new tool for salespeople to improve customer relationship management. An argument is presented for training salespeople in systematic development of buyer organization maps, and for rewarding them for these potentially high-value CRM activities. BOM's theoretical construct development, processes, measurement, and analysis are discussed. Finally, the potential contribution of BOM to theory and practice is presented.

Cyril S. Ku, Department of Computer Science

Complexity of DSP Benchmark Functions in Multi-Core Environments

This research is to investigate the complexity of digital signal processing (DSP) benchmark programs in different multi-core architectures. Program complexity such as the cyclomatic complexity (CC) measurement was introduced in 1976 and has since been applied extensively in software engineering to calibrate and measure the complexity of programs. The CC measurement has been modified to incorporate nested loops in addition to sequential loops and branches at the instruction level of the benchmark program. However, the modified measurement was designed for DSP processors in a single processor configuration. In this research, the effectiveness of this modified complexity measurement as it applies to DSP benchmark functions in multi-core environments is examined. Multi-core has become an efficient computer architecture using parallel processing technology which in recent years, has been applied to DSP processors. In order to study the performance to DSP benchmark functions in the multi-core environment, the current complexity measurement needs to be investigated for its effectiveness in different multi-core architectures and perhaps a new measurement needs to be designed to truly measure the complexity of the benchmark functions in multi-core configurations. This presentation will discuss the preliminary investigation and results.

This research was supported by an ART award.

Lauren Kuchar, Undergraduate Student, Department of Sociology

Sheetal Ranjan, Department of Sociology, Faculty Sponsor

Victims' Construction of 'Fear' in Domestic Violence Cases

Domestic violence is a pattern of intimidation, coercion and violence; the sum of all the past acts and the promises of future acts that achieve power and control over a partner. This pattern often increases in frequency and severity over time. Violence can be verbal, physical, emotional, sexual, sexual coercion and reproductive control, economic or psychological. An abused person can be any age, race, class, culture, religion or occupation of any sexual orientation. One of the most important element of this power and control dynamic is the perception of 'fear' as experienced by the victim. This research proposal will

examine: (1) How does the victim's perception of fear in domestic violence cases differ? (2) Is there any relationship between 'fear' and type of violence, age, race, education and socio-economic status? I propose to use a qualitative indirect method of analysis to prevent re-victimization of the victim. I will conduct content analysis of case material from the Domestic Violence Unit of the prosecutor's office. I will supplement this analysis with focus group and/or individual interviews with social workers and advocates who work with victims of domestic violence.

This research was supported by Professor Sheetal Ranjan.

Matthew Lagomarsino, Undergraduate Student, Department of Russ Berrie Institute for Professional Sales

Raj Agnihotri, Department of Russ Berrie Institute Professional Sales, Faculty Sponsor

Organizational Commitment and Turnover Intentions of Sales Employees through Social Media

The sales team has an essential role within an organization. They have a fundamental understanding of their organization's product and understand feedback from the consumer. Comprehensively, they are building relationships with the consumer and they are the face of the company. Yet, one of the biggest problems businesses face are retaining sales employees. The cost of an employee leaving is exceedingly high. Organizations invest one third or more of the Sales person's salary in software, company culture, and product training. Previous research by Chen and Francesco (2000) has indicated that demographic variables do pose an effect on an employee's turnover intention (TI) and organizational commitment (OC). These results were founded through questionnaires. However, there has not been research done through social media. More and more people use social media (SM) each day giving managers and owners of businesses the opportunity to available information (public). "Today about 2 billion people access the Web regularly" (Powell 2011, p. 56).

With the emergence of SM, obtainable data will be collected through Linked-In and Facebook. The research starts by searching for any sales person who has a public profile on Linked-in. From here, data is collected such as gender, number of connections, work period, previous jobs, and so on. Once this data is collected, the search proceeds to Facebook to find more information on this sales person such as number of friends and education. Subsequently, all data is processed through a spreadsheet for statistical calculation. The outcome is to find a link between OC, TI, through all of the variables collected through SM.

Robert L. Laud, Department of Marketing & Management

Gaining Advantage Through Global Learning Hubs

Large organizations and small emerging firms alike gravitate towards mature and highly competitive global cities when expanding their borders. Understanding how these growing organizations actually exploit global cities will provide valuable strategic insights and add to the competitiveness of those entities. We have uncovered interesting and counterintuitive findings regarding those companies that seek global cities that come with strong competition and high cost. Although the search for new markets makes intuitive sense, the vast number of companies we studied showed very low sales, few purchases and only a small number of local competitors in the selected global city. We suggest that the motivations to establish a presence in a global city may be fundamentally different than those found in previous research.

This research was supported by Baruch College CUNY Weisman Center for International Business

Amy E. Learmonth, Department of Psychology

Co-Presenters: Melanie Bronstein, Ashley Smith and Michelle Palmieri, Undergraduate Students, Department of Psychology

Which Way do I go? Human Spatial Ability in a Computer based Task

This study addresses two systems involved in spatial navigation: directional learning and place learning. Place learning refers to the use of multiple distal landmarks. Directional learning is a less sophisticated system where one learns to move in a specific direction to find a desired object, but that location is more loosely specified. Recent studies indicate that the rats often use the directional learning strategy as compared to place learning (Akers & Hamilton, 2007). The current study is designed to be a variant of the rat experiments using a computer analog of the standard experimental space. Participants are asked to choose among twelve possible target locations within the circle that moves around on the screen. In the directional learning condition the target location remains the same relative to the circle. In the place learning condition the target location is stationary on the screen, rendering the circle useless as a location cue. Thus, in the place learning condition the only way to find the target is to use the pictures around the edge of the screen. Initial analyses indicated a significant difference in the number of correct trials between the two conditions $t(57)=9.84, p<.01$. The participants in the directional learning condition outperformed participants in the place learning condition. In order to look more closely at performance across the groups the 32 test trials were divided into 4 blocks of 8 trials. A repeated measures ANOVA found an interaction of block and condition ($p<.01$).

This research was supported by an ART award.

David Lelyveld, Department of History

Print, Literacy and Islam in Nineteenth Century India

As a young man, before he came to prominence as an educational leader, religious reformer and political spokesman for a significant section of South Asian Muslims, Sayyid Ahmad Khan (1817-1898) devoted himself to historical research and the preparation and publication of critical editions of Indo-Muslim historical texts. My present effort will be to ask questions about the physical appearance of these printed texts in relationship to their manuscript sources. How was "the art of the books" transformed by the processes of turning them into printed texts, and what do these transformations say about the authority of the text and its accessibility, perhaps, to new ways of reading and new reading publics. The paper will examine a series of documents and texts that Sayyid Ahmad produced over his long career, shifting from manuscript to lithography to type, from decorated formats to plain ones. These changes in format and technology went along with changes in prose style, ideological focus and public activities, such as the creation of voluntary associations and, most of all, the Aligarh College. Type made Urdu look somewhat more like English on the printed page in the late nineteenth century. Sayyid Ahmad's preference for moveable type over lithography was exceptional. Urdu publishing had overwhelmingly moved in the opposite direction since the introduction of lithography.

This research was supported by an ART award.

Elaine Lorenz, Department of Art

From Virtual to Actual

The presentation will demonstrate and explore the process of creating a physical sculpture from a computer-designed concept. Beginning with the computer generated and machine-carved forms this presentation will show the various steps necessary to hand finish the 58 foot high sculpture.

Kem Louie, Department of Nursing

Application of the Logic Model in the Design of the NJ Nursing Education Collaborative to Increase Nurse Faculty

The goal of the presentation is to discuss the Robert Wood Johnson Foundation-funded four year grant, the New Jersey Nursing Initiative Faculty Preparation Program, to increase nurse faculty in New Jersey. The project's goal is to cultivate a cadre of masters-prepared nurses who are prepared to teach in New Jersey based nursing programs and are committed to pursue a career in New Jersey nursing education.

The lead organization, WPUNJ is part of a four state college/university collaborative in partnership with the graduate nursing programs at Kean University, Richard Stockton College and The College of New Jersey. Currently, nationwide and in NJ, there is a nurse faculty shortage as a result of several reasons: retirement of "baby boomer" nurse faculty, salary disparities between nurse faculty and other disciplines and less desire for nurses to consider nurse faculty as a career option. Currently, there are 14 RWJF Nurse Faculty Scholars enrolled full-time coursework in the four state colleges/universities. The Logic Model is utilized in describing, planning and implementing this successful partnership.

This project was supported by the Robert Wood Johnson Foundation.

Nicole Magaldi and Betty Kollia, Department of Communication Disorders

An Investigation of the Visual-Spatial Skills of Children with Autism

Children with autism typically have severe communication difficulties. However, visual-spatial skills are a relative strength for them. As such, treatment methods usually employ visual / pictorial supports. Our study examines how the level of pictorial iconicity impacts the children's ability to recognize pictures and whether children with autism rely more heavily on color, shape or size when matching pictures.

Nine children with autism participated in a matching task (i.e. puzzle) whereby they were asked to complete a puzzle where the puzzle piece differed from the board with regard to size, shape and color. Results indicated that children with autism relied most on the feature of shape with color being the second most likely feature.

Three children participated in a matching task whereby they were asked to "match" an object to one of three pictures. One picture symbol was a True Object Based Icon (highest level of iconicity), one was a square photograph of the object (middle level of iconicity), and one was a square line drawing of the object (lowest level of iconicity). The three children evidenced very different profiles with one showing a strong preference for the line drawing, one showing a clear preference for the photograph, and one showing a clear preference for the TOBI.

All results will be discussed in the context of treatment approaches commonly used with children with autism.

This research was supported by an ART award.

Erika Mann, Undergraduate Student, Department of Sociology

Luis Nuno, Department of Sociology, Faculty Sponsor

The Effects of OTC Availability of Plan B on Teen's Contraception Decision Making

Every year within the United States, there are approximately 800,000 teen pregnancies, almost all of which are unplanned, which sets the pregnancy rate at the highest of any developed nation. Plan B, is a method of preventing pregnancy after sexual intercourse when other birth control methods have failed. It is an important contraceptive option to woman of all ages that could decrease many unplanned pregnancies that lead to abortions. Critics cite potential risks of OTC distribution including increased pregnancy, increased promiscuity and STD transmission. Advocates suggest that OTC availability would decrease pregnancies and subsequent abortions.

My research will focus on the OTC status of Plan B, and more specifically asking the question, "What is the impact of the over the counter availability of the Plan B pill on teens' and young adults' contraceptive decision making?" I hypothesize that teens that are single and less educated will rely on Plan B more than their peers who are in committed relationships and who have obtained more education. Data will be collected through self-administered surveys over the Internet, providing me with a more candid response from participants, aiming at a broader range of participants than past research has included.

This research was supported by the Undergraduate Research Fund.

Kevin Martus, Department of Physics

Co-Presenter: Nicole Burchell, Undergraduate Student

Analysis of Optical Emissions from a Mercury and Argon Discharge

Plasmas generated at atmospheric pressure have numerous potential industry applications such as plasma processing, ozone generation, pollution control, and sterilization of biological samples. One major application that utilizes plasma discharge is lighting. Fluorescent lighting is a gas discharge that contains a buffer gas and mercury vapor. New variations of discharge sources have been studied to produce alternatives to the environmentally unfriendly mercury containing lamps. Reported herein is the analysis of the optical emissions from a light source that contains Argon and Mercury gas using a low-resolution optical spectrograph. The optical emission spectrum is corrected for instrumental effects such as wavelength shift and the detection system's sensitivity. The operating parameters of the spectrograph were analyzed and the optimal conditions were determined to produce the highest resolution while maintaining a reasonable count rate.

This research was supported by the ART program, the College of Science and Health Student Worker Funds, and The Research Corporation for the Advancement of Science.

Lawrence Mbogoni, Department of Africana-World Studies

Colonialism and the British Conquest of Africa

It is estimated that in 1878 only ten percent of the African continent was under European colonial rule. However, by 1900 the entire continent had been partitioned, conquered and brought under the direct rule of various European powers. One of these was Britain which, together with France, had the lion's share of African colonial possessions. The book examines the British conquest of their African empire which, it is argued, was not only driven by a racist ideology but consequently resulted in high casualty rates because of the use of what at the time amounted to weapons of mass destruction.

Sandra L. Miller, Department of Instruction and Research Technology

NJVID: Commercial Video Made Easy

NJVID, New Jersey's digital video and portal repository, has come a long way since its inception in 2007. Initially funded by an IMLS grant, NJVID began with its first collection of locally owned video from educational institutions, historical societies, and museums. Now, NJVID is offering its second collection of commercial videos. Making commercial video easily accessible for higher education institutions was a big undertaking, but a very worthwhile one. Using Shibboleth authentication and authorization, WPUNJ can easily access and view its collections of commercial video without having to pay exorbitant prices for technical resources and support. Come view how this works.

In addition, its important to provide end users with services that will enhance their teaching and learning. We offer an annotation tool that enables professors and students to annotate the video and store their annotations to be shared with others as well as create playlists for others to view.

Our next collection will be Learning-on-Demand. How can we help support institutions to easily put up their captured lectures? What happens when iTunes space runs out? How can we upload more than YouTube's 10 minutes worth of video?

Come find out more about the possibilities that creating a community-wide digital repository offers William Paterson University faculty and students.

This project was supported by a National Leadership grant from the Institute for Museum and Library Science.

Raza Mir, Department of Marketing & Management

Ali Mir, Department of Management

The Nexus between Global Trade and Exploitation: Implications for Worker Action

In this paper, we make a case for the broadening of the concept of workplace rights to include macro phenomena such as international governance. Popular protests against international institutions like the WTO raise several important issues for workplace rights. We argue that the global regime of intellectual property rights (IPRs) now constitutes an "institution," in its representation to the world as a "truth." We uncover historical and theoretical ways in which such an institutional (and ideological) representation can be challenged. Mainstream organizational theory has become implicated in this institutionalization of IPRs. A counter-theory can help dispossessed workers make sense of IPRs, and legitimize their protests against them.

This research was supported by an ART award.

Alberto Montare, Department of Psychology

The Simplest Chronoscope II: Reaction Time Measured by Meterstick Versus Machine

Visual simple reaction time (SRT) scores measured in 31 college students of both sexes by use of the simplest chronoscope methodology (meterstick SRT) were compared to scores obtained by use of an electromechanical multi-choice reaction timer (machine SRT). After testing four separate hypotheses it was theorized that differential visual information processing occurred such that the dorsal visual stream subserved meterstick SRT; whereas the ventral visual stream subserved machine SRT.

This research was supported by an ART award.

Barry Morganstern, Department of Communication

Depression: Deep Depression

Depression: Deep Depression is a short film that depicts the recurring nature of depression and bemoans weaknesses in medical treatment for depression. Filmed partially in Colombia, S.A.

Megan Morse, Undergraduate Student, Department of Nursing

Ruth Harrison, Department of Nursing, Faculty Sponsor

Labor and Delivery and Maternal Emotions in the Postpartum Period

The goal of my study is to determine if the type of labor and delivery a woman experiences correlates with the prevalence of postpartum depression. I believe that women who experience minimal interventions during the labor and delivery process have a lower incidence of experiencing postpartum depression.

This is a qualitative study in which I will communicate with women who have given birth in the last 10 years. I will ask each woman to describe the emotions/feelings that they experienced during the postpartum period. Next, I will ask the women to describe their experience during labor and delivery in detail, including interventions performed, and describe how they felt during the process of laboring and delivering.

I would collect information through the use of interviews and narratives written by each woman. By examining the interviews/narratives, I hope to identify patterns that may indicate a correlation between the labor and delivery experience and the incidence of postpartum depression.

I am currently performing my study and hope to have some preliminary results by the end of March. If my hypothesis is correct, this study could enlighten healthcare professionals about what unnecessary medical interventions can do to a woman's psyche, and could assist in changing the way medical interventions are used during the labor and delivery process.

Katelin Moses, Undergraduate Student, Department of Sociology

Sheetal Ranjan, Department of Sociology, Faculty Sponsor

Stalking Prevalence among College Students

Stalking seems to thrive in the confided spaces of college campuses and is seen as harassment in student conduct codes and police policies (Campbell & Longo 2010; Truman & Mustaine 2009). Several studies of stalking among university students have shown relatively high prevalence rates; thus the stalking literature has suggested that the prevalence rate is higher in college students than the general population to (Bjorklund et al. 2010). This study examines the victims, offenders, relationship contexts, and severity of stalking among college age students.

This research was supported by the Undergraduate Research Fund.

Muroki Mwaura, Department of Accounting and Law

Micro-Finance and the Growth of SME's in Kenya

The Micro-finance institutions in Kenya have had a marked impact on the growth of SME's in both the urban and rural settings in Kenya. Closely following the footsteps of Ahmed Yusuf of Bangladesh Micro-finance institutions have found that the non-bankable population represents a lucrative source of revenue. Evidence from across the globe, indicates that the non-bankable population is as committed to servicing their loans as the standard bankable population. In this discussion, we will have a brief overview of the Microfinance sector in Kenya.

David Nacin, Department of Mathematics

Counting on Gauss

In non-commutative algebra, we often study the solution sets to equations over odd and unusual mathematical structures. In this talk, we'll discuss the absolute best case scenario: when the equation is only quadratic and when the ring is only the common integers. We'll present some of the historic methods Carl Fredrick Gauss created for investigating this and explain the importance of the finite fields in his arguments.

This research was supported by an ART award.

Balmurli Natrajan, Department of Anthropology

Culturalization of Caste in India: Identity and Inequality in a Multicultural Age (in press, Routledge: London, August 2011)

In India, caste groups ensure their durability in an era of multiculturalism by officially representing caste as cultural difference or ethnicity rather than as unequal descent-based relations. Challenging dominant social theories of caste, this book addresses questions of how caste survives the system that gave rise to it and adapts to new demands of capitalism and democracy. Arguing that there exists a new casteism in India akin to a new racism in the USA, built less on biology and descent and more on purported cultural differences and their rights to exist, the book presents an extended critique and a search for an alternative view of caste and anti-casteist politics.

This project was supported by an ART award as well as summer funding from the College of Humanities and Social Sciences. Financial and institutional support was also rendered by the American Institute for Indian Studies Junior Fellowship, University of Iowa's T. Anne Cleary Dissertation Fellowship, and summer travel funds from Iowa State University.

Luis F. Nuno, Department of Sociology

Deviant Sexualities in Online Personal Ads

An issue that received substantial public discussion is the use online advertisements for sex, such as those that appear on Craigslist, for finding and meeting people who share similar wants and needs. Current sociological research focuses on online dating sites like Match.com, Lavalife, and EHarmony to explore how fantasies become commercialized and commodified in the pursuit of profit. A second line of research drawing a more criminological angle explores the emerging phenomenon of cyberbullying. My research builds upon these traditions, but charts new territory in the sociology of deviance to examine the world of deviant sexualities displayed in online personal ads so as to better understand how people define their sexualized self and others in the process of setting up a meeting in physical space defined by potentially unequal power relations.

In the discourse about the new technologies there exists an emphasis on the liberating possibilities that the instantaneous electronic communications offer. Even in this more interconnected world of the twenty-first century public safety remains

the responsibility of the state, yet the new technologies force us to redefine our collective perceptions of public and personal safety. My review of recent research asks how the new technologies affect individual's understandings of personal space, dating, and desire. How do the new technologies nurture the pursuit of sexual desire? Does the pursuit of pleasure force us to reconceptualize our measure of personal safety? I analyze the social worlds of subcultures characterized by deviant sexualities constructed through Internet personal ads.

Andrew Nyaboga, Department of Accounting and Law

Availability of Capital and Bank Defaults in Africa

Expanding and accessing financial resources can play an important role in poverty reduction in Africa. The availability of credit can facilitate income and increase some opportunities. The poverty stricken areas will be able to build capital and hence improve their standard of living. Despite all these the countries of Africa have not been able to replicate what has been done in other developing countries. This paper will address some of impediments associated availability of credit i.e. Loan defaults and poor management.

Natalie A. Obrecht, Department of Psychology

Sample Size Weighting in Probabilistic Inference

Although sample size is an important factor, it is unclear to what extent laypeople consider it when making inferences from data. Here I show that people's treatment of sample size is best modeled by a curvilinear weighting function with decreasing sensitivity to changes among larger values. This functional form is well fit by a power function and was found across two different judgment tasks. High numerate participants consistently show greater sensitivity to sample size than lower numerates, however, they still underweight sample size relative to normative standards. Low numerates' sensitivity is increased by additionally providing raw data with statistical summaries.

Travel support was provided by the College of Humanities and Social Sciences and the Department of Psychology, and this research was partially supported by an NSF graduate fellowship.

Kayode Oluyemi and Emmanuel S. Onaivi, Department of Biology

From Cannabinoid Genomics to Medical Marijuana

Marijuana remains one of the most widely used illicit drugs, among teenagers and pregnant women, with consequences associated with health risks. Medical marijuana has been a patient driven phenomenon despite centuries of marijuana use for recreation and medical conditions. However it has been discovered that the human body and brain has an endocannabinoid system (ECS) making its own natural marijuana-like substances are called endocannabinoids (eCBs). These advances in marijuana-cannabinoid research are providing the scientific bases for medical marijuana. Cannabinoids are the active constituents in marijuana, and the ECS consists of the cannabinoid receptors (CB1-Rs and CB2-Rs), eCBs, and the synthesizing and degradation enzymes of eCBs. Physical and genetic localization of the CNR1 and CNR2 genes have been mapped to human chromosome 6 and 1 respectively. Chromosomal hot spots and epigenomic factors are likely associated with reward preferences and variations in CBR genes that have been associated with human disorders including drug dependency, obesity and depression. The data from our collaborative studies using multidisciplinary approaches indicate the polymorphic nature of CB1 and CB2 genomic structure, their subtype specificities and their variants that confer vulnerabilities to neuropsychiatric disorders. Therefore, the components of the endocannabinoid system are major targets for medical marijuana in health and disease.

This research was supported by an ART award. Dr. Onaivi is a Guest Scientist at NIDA - part of the National Institutes of Health (NIH).

Vincent N. Parrillo, Department of Sociology

The Reality of a Post-Racial America Two Years into Obama's Presidency

Begins with the euphoria of Obama's election, an explanation of the social changes since the 1960s that made his election possible, the changes in public opinion about race relations before his candidacy and one year into his term, and concludes with a realistic assessment of race relations today, and was initially presented to the EU diplomatic corps and press at the U.S. Embassy in Brussels on April 29, 2010. The Embassy URL on this presentation is <http://www.uspolicy.be/Forum/Forum.asp>.

This research is related to a grant from the Belgian Science Foundation.

Donna Perry, Department of English

Final Acts: Death, Dying, and the Choices We Make (Rutgers, 2010)

Contributors to the collection include patients, caretakers, physicians, journalists, educators, hospital administrators, psychologists, and a poet, all of whom write personally about end-of-life issues. The presentation will include an introduction to the many voices in the book and information about documents necessary to ensure that we exert some control over end-of-life care.

Karen F. Phillips, Department of Nursing

A Phenomenological Study exploring The Perceptions and Lived Experiences Of First-Time Breastfeeding Mothers

Purpose: The purpose of the current qualitative, phenomenological, hermeneutic study was to explore the perceptions and lived experiences of 19 first-time breastfeeding mothers of the influence of breastfeeding education, anticipatory guidance, and postpartum lactation support on breastfeeding continuation rates from birth to 6 weeks postpartum.

Study Design and Methods: Nineteen English-speaking women, ages 21 to 40 breastfeeding for the first time, participated in semi-structured interviews with open-ended questions that explored their breastfeeding experience. Participants were interviewed 24 to 48 hours after birth and 4 weeks postpartum until common themes emerged. At 6 weeks, mothers were contacted to determine breastfeeding status and elicit final thoughts.

Results: An in-depth analysis of the narrative interviews revealed 10 major themes and 30 subthemes. The major themes elicited were a) all mothers believed breastfeeding was best for baby, b) early influences on breastfeeding significant, c) idealistic versus realistic image of breastfeeding, d) breastfeeding support crucial to breastfeeding continuation, e) strategies enabling breastfeeding success, f) breastfeeding had difficult beginnings, g) length of stay positively influenced breastfeeding, h) pumping a viable option, i) successful breastfeeding attributed to certain personal traits, and j) comprehensive approach to breastfeeding increased potential for success.

Clinical Implications: The findings from the study assisted in the development of a model, BREASTS, to improve breastfeeding continuation rates. The meanings derived from the themes in this study provide leaders, maternal child healthcare professionals, and breastfeeding women additional insights into the breastfeeding experience as well as strategies that promote and barriers that impeded breastfeeding success.

Donna Potacco, Andres Salazar, Rita Ramirez-Levine, Jessica Oscanoa, Science Enrichment Center, College of Science & Health

Virtual Teaching Environments

Technology has given rise to a generation of students who were nurtured in a world of media multi-tasking. Based on the immense impact technology has wrought on education in the past, "Technology will continue to have--a significant impact on higher education. Nearly two-thirds (63%) of survey respondents from both the public and private sectors say that technology innovation will have a major influence on teaching methodologies over the next five years" (The Economist Intelligence Unit, 2008, p.5). These innovations have the capacity to develop the skill-sets of our future workforce and facilitate students' ability to compete in the global marketplace. This presentation will review projected trends in technology and demonstrate some of their applications. It will further illustrate how the Science Enrichment Center's Virtual Academic Support Program has met the demand of our distance learner, working, handicapped, and/or part-time student populations.

Lily Prince, Department of Art, and Richard Klin

Something To Say: Thoughts on Art and Politics in America

Prof. Prince will show 14 of her photographs of portraits of artists, whose work is political, published in "Something To Say" by writer Richard Klin. Leapfrog Press will be publishing our collaboration in April 2011. The book will be available.

Ioanna Protoiannis, Undergraduate Student, Department of Mathematics

Amy Learmonth, Department of Psychology, Faculty Sponsor

Applications of Field Hockey and Geometry

There is a strong relationship between performance in sports and mathematics. In this presentation, I will examine the relationship between mathematics, specifically understanding of geometry and geometric principles, and performance in field hockey drills. I observed students between the grades 2nd – 6th in field hockey practice over several sessions. I was looking for their ability to apply what they know about geometry to field hockey. Ability in mathematics was assessed through the

standard teaching guidelines for each grade. The use of the mathematical principles in the field hockey drills was directly observed. Different geometric concepts were directly related to different scenarios on the field hockey field.

Lauren J. Ramos, Undergraduate Student, Department of Public Health

William Kernan, Department of Public Health, Faculty Sponsor

Eyes on the Drive: College Students and the Effects of Behind the Wheel Distraction

BACKGROUND: College students are highly affected by motor vehicle accidents. Approximately one in every four motor vehicle crashes is attributed to driver inattentiveness or distractedness. Driver distraction is defined as any activity that diverts a driver's attention from the task of operating the vehicle, including the use of electronic devices such as a cell phones, GPS navigation systems, iPods, and adjusting in vehicle equipment audio equipment. Driver distraction also includes non-electronic distraction such as outside persons, events and things, passengers and conversations, eating, drinking, and reaching for objects in the vehicle.

As technology advances, so do the means by which drivers become distracted behind the wheel. Distractions, whether electronic or non-electronic, can keep a driver's eyes off the road resulting in less attentive drivers.

METHODS: Thirty-one William Paterson University students enrolled in Basic Microbiology responded to a voluntary and anonymous 12-question survey concerning their driving habits.

RESULTS: Many students reported positive attitudes toward safer driving behaviors. A majority of students reported that they would allow a passenger to change the music while they drive. Many students also reported that they would allow a passenger to answer their text messages or phone calls as they drive. Sixty percent of students, however, were unaware of state regulations regarding Bluetooth headset usage.

CONCLUSION: Many college students are aware of safe driving behaviors and are willing to make positive changes in their driving practices, such as assigning a designated texter. More than half however are unaware of protective state regulations.

Sheetal Ranjan, Department of Sociology

Teaching Qualitative Data Analysis Using Microsoft Word and Excel

I have been teaching qualitative data analysis for a few years now and have found ways to use Microsoft Word and Excel to teach students basic analysis of Qualitative Data. In this process students get to use some of the more advanced features of Microsoft Word and Excel. I find this method of teaching qualitative data analysis serves a few purposes: (1) familiarizes students with the use of Word and Excel software which they are likely to encounter in the real-world work environment; (2) allows students to think creatively about databases and data analysis; (3) exposes them to the notion that data is data and there are various ways to make sense of it. In this presentation I hope to share some of the ways I have taught students to use these programs in the Qualitative Research methods Class that I teach. Students enjoy the learning experience. Sometimes they are challenged and other times they are fascinated as they start seeing patterns in their data and write up the results of their analysis.

Naima Ricks, Undergraduate Student, Department of Sociology

Sheetal Ranjan, Department of Sociology, Faculty Sponsor

Cyber Stalking Victimization among College Age Intimate Partners

Stalking is a crime that involves unwanted and repeated pursuit and includes a variety of frightening, threatening, harassing, and potentially dangerous behaviors on more than one occasion. (Patton, Nobels, Fox, 2010). Cyber stalking is a new form of stalking that has emerged from today's technologies. The BJS special report statistics indicate that about half (46 percent) of stalking victims experienced at least one unwanted contact per week, and 11 percent of victims said that they had been stalked for five years or more. Approximately 1 in 4 stalking victims reported some form of cyberstalking, such as e-mail (83 percent) or instant messaging (35 percent). This research study examines cyber stalking and monitoring behaviors among college age intimate partners.

This research was supported by the Undergraduate Research Fund.

Darlene Russell, Department of Secondary & Middle School Education, Allison Dobrick, Department of Elementary & Early Childhood Education, and Kelly McNeal, Secondary and Middle School Education

Sketches of Critical Teaching and Learning: A Portrait of William Paterson University Teacher Educators in Non-Western Cultures

This panel discussion will highlight the cross-cultural experiences of three William Paterson University College of Education professors who spent time teaching and learning in non-Western countries. The goal of this discussion is to share insights on issues in American and international education that we gained while interacting meaningfully with students, teachers, and scholars in their native lands. Spanning multiple continents, languages, and perspectives, our collective experiences are "sketches" that together form a "portrait" of the exciting impact on teaching and learning that cross-cultural educational experiences can provide.

Elena Sabogal, Department of Women's and Gender Studies

Gendered Migrations: Experiences from South Florida

Today a significant number of women are immigrating to the U.S. from Latin America. Political and economic factors have contributed to the brain drain of middle class professionals, who come seeking better futures for themselves and their families. Studies in international migration show that oftentimes women follow as male dependents. However, depending on the country of origin, women also seek to immigrate for various reasons. Some have arrived seeking asylum, others were able to obtain professional visas, while many who did not have the opportunity to immigrate legally come without work permits or "validated" degrees that would allow them to expand their careers in the U.S. This article seeks to understand patterns of female and male migration to South Florida. What are the key political, economic and socio-cultural factors that propel this migration and what are the social networks available to them to integrate into South Florida society?

This presentation is based on data collected as part of a study on Immigrant Transnationalism and Modes of Incorporation funded by the National Science Foundation. The survey was administered by the Institute of Public Opinion Research (IPOR) at Florida International University to a randomly selected group of over 1,250 immigrants from Broward and Miami-Dade counties during the summer and fall of 2008.

This research was supported by the National Science Foundation and publications were supported by the College of Humanities and Social Sciences.

Duncan S. Shepard, Undergraduate Student, Department of Psychology

Michael S. Gordon, Department of Psychology, Faculty Sponsor

Good vibrations: An Analysis of the Changes in Vocal Performance Associated with Schizophrenia

Several prominent musicians, including Brian Wilson of The Beach Boys, Peter Green of Fleetwood Mac, and Alexander "Skip" Spence of Moby Grape, have manifested schizophrenia amidst their artistic success. This psychological disorder affected them with hallucinations and delusions of grandeur, among other notable symptoms, and may be associated with some of the changes in their vocal performance style over the years. For Wilson and Spence, these symptoms started in 1966 and were fully manifested by early 1967. Peter Green's symptoms started to become clear in 1968 and were fully manifested by 1969. This research analyzes vocal recordings from these artists, and their peers without psychological illness, demonstrating how paranoid schizophrenia interacts with vocal and musical expression. Samples taken from the early, middle, and latter parts of their lives were used to isolate specific changes over time in vocal expression – including formant transitions, pitch, intensity range and dynamics, vocal turbulence, and other variables. Results suggest how some of the powerful mechanisms from schizophrenia may manifest in personal artistic and vocal expression.

Kara Sherman, Undergraduate Student, Department of Sociology

Vincent Parrillo, Department of Department of Sociology, Faculty Sponsor

Recovering Drug Addict's Perceptions of Paterson

I am beginning to research what recovering drug addict's perceptions are of Paterson. I would like to investigate recovering drug addict's perceptions about the city of Paterson for my own growth on the subject, as well as an immense interest in the topic. Will they view Paterson in a positive way or a negative way? I'd like to explore what factors affect their perceptions and knowledge about the city. My first hypothesis is, do people who travel to Paterson on a regular basis have a more positive perception of Paterson than those who do not? My null hypothesis is, most people who travel into Paterson on a regular basis do not have a positive perception of the city. I am conducting interviews at the Paterson Counseling Center and at a local Narcotics Anonymous Meeting. I'd love the opportunity to present my findings this April.

David A. Snyder, Department of Chemistry

Mathematical Modeling of Protein Energy Landscapes: A Work in Progress

As molecular machines, proteins need to fold into particular conformations and flex along specific modes of motion in order to function. Homology modeling, an important methodology in the study of protein conformation, takes advantage of the

fact that related proteins have similar structures. However, the paradigm of homology modeling does not apply directly to the study of protein flexibility and dynamics as related proteins can differ in their modes of motion in functionally important ways. Research in the Snyder group seeks to use information already gleaned in the refinement of homology models for protein conformation to fit multi-harmonic models of protein energy landscapes. The description of a protein energy landscape using an appropriate multi-harmonic model will allow for rapid calculation of thermodynamic parameters quantifying protein flexibility as well as for rapid molecular dynamic simulations that illustrate how particular proteins flex along specific modes of motion.

Besides work on mathematical modeling of protein energy landscapes, the Snyder research group has continued to expand the functionality and accessibility of Covariance NMR. We have recently released a MATLAB toolbox (largely compatible with OCTAVE) implementing all key covariance NMR techniques. Current research in the Snyder research group relating to covariance NMR includes the use of doubly indirect covariance NMR (and related techniques) to track chemical reactions occurring in complex mixtures as well as to identify specific protein-ligand interactions in solutions containing multiple proteins and a whole library of potential ligands.

This research was supported by an ART award, a Center for Research grant from the College of Science and Health, and a College Cottrell grant from The Research Corporation for Science Advancement

Joseph C. Spagna, Department of Biology

Co-Presenters: Edgar Valdivia and Vivin Mohan, Undergraduate Students, and Nicholas Canevari, Post-baccalaureate Student, Department of Biology

Trigger Hair Function and Jump Performance in Trap-jaw Ants

Ants in the genus *Odontomachus* have oversized, extremely forceful jaws. They use them both to attack prey, and to jump. By firing the jaws against hard substrates, the ants can launch themselves into the air and away from danger. The jaws have forward-projecting, innervated hairs that have long been thought to help stimulate firing of the jaws. However, having observed that jaw-strikes often occur without direct stimulation of these 'trigger hairs,' we set out to test whether these hairs were used as 'range finders' to optimize jump performance in the ants. Data were collected from four colonies of *Odontomachus brunneus* via high-speed video taken at 1000 frames/second. Ants jumped by either against the ground, or against a wooden wedge. Initial velocity and jump angle were calculated for each jump. These were used as proxies for jump distance, because many jumps exceeded the range of the cameras used. Three treatments were done on the trigger hairs of the ants' jaws: an ablation of the trigger-hairs using microscissors, a sham ablation where the ants' hairs were manipulated but not removed, and a negative control (no treatment). Ants were able to perform both types of jump (ground and wedge) regardless of presence of trigger hairs, and ANOVA analysis revealed no significant differences in performance for either jump type. We conclude that the trap-jaw mechanism is robust to interference with the trigger hairs, and the role of the hairs may be strongly modulated by other modes of stimulation.

This research was supported by an ART award, a Center for Research grant from the College of Science and Health, and E. Valdivia's participation was funded by the US Department of Education MAST Grant to William Paterson University.

Eric Steinhart, Department of Philosophy

"Paratheisms"

We live in a remarkable age: for the first time in many centuries, the great Western monotheistic religions are being challenged, both by science and by one another. Some writers suggest that these traditional monotheisms are breaking up. The Western philosophical tradition contains many "paratheisms," systems of religious or metaphysical thought which are non-theistic but are more or less similar to theism.

Janis Strasser, Department of Elementary and Early Childhood Education

Creating Preschool Classroom Environments That Promote Gender Equity

Based on research for a recent book chapter in *Perspectives on Gender in Early Childhood* (2011), this presentation will highlight how early childhood teachers can create classroom environments that promote gender equity. Educators must be aware of how young children, influenced by the media and societal trends, often fall into play scenarios that perpetuate gender stereotypes. By intentionally designing environments that welcome girls and boys in specific ways, teachers can help children to grow and develop as individuals.

Jennifer Swift-Kramer, Department of Women's and Gender Studies

Special Characters Or The Layout Software Ate My Book Chapter

James Bond in World and Popular Culture: The Films are Not Enough was undertaken by three librarians as a publishing experiment. Inspired by the notion that today's popular culture is tomorrow's history, they attempted to collect 40 essays in one book that would encompass the full range of popular media devoted to or inspired by Ian Fleming's fictional character. They did not foresee the complications that would arise, from life-threatening emergency surgery to bedeviling word processors. The result was a 515-page, eighty-dollar hardcover mistake that had to be re-edited for reissue, but at what cost? My chapter (number twenty-six) can be the poster child for the vagaries of a publishing environment still caught between printed paper and cloud computing. One original paragraph, its editorial rewrite, its first edition appearance and its author's rewrite for reissue will be presented, with commentaries from the head editor and the proofreader.

Elizabeth J. Van Dyk, Department of Nursing

Improving Outcomes of Persons with Type 2 Diabetes through Self-Management Education

Type 2 diabetes has significant morbidity and mortality rates as well as considerable financial, psychological and social implications for those affected. Diabetic Self-Management Education (DSME) incorporates evidence-based standards for controlling this disease while taking into account the needs, goals, and life experiences of each individual. A total of 11 indigent clients with Type 2 diabetes from a medically underserved clinic participated in a pilot evidenced-based practice DSME program. In the group education program a visual poster was used to stimulate and guide discussions on the diabetic disease process, healthy eating, exercise, and goal setting. Data interpretation was accomplished using an integrative approach using qualitative and quantitative. This pilot project demonstrated that future studies utilizing DSME programs in a similar setting are feasible. Replication of this EBP project should be conducted with a larger sample size and over a longer period of time so that statistical significance could be determined. Prospective investigators should focus on clinics that serve indigent clients because there is a great need to improve the outcomes of this population, especially among those with Type 2 diabetes.

Miryam Z. Wahrman, Department of Biology

Co-Presenters: Brian Nelson and Brianna McSweeney, Undergraduate Students, Department of Biology
Can Neckties Make You Sick? Microbial Growth on Silk vs. Polyester

Physicians and other medical personnel frequently wear neckties and other garments that harbor microorganisms and could serve as vectors for transmission of disease. The goals of this project were to study resident flora found in samples of silk and polyester obtained from neckties, as well as to elucidate differences in microbial growth on the two types of textiles. In addition, we tested the effectiveness of different approaches to decontaminate the textiles. 1.5 cm² swatches cut from silk and polyester neckties were cultured on tryptic soy agar (TSA), and bacterial growth was observed. Silk samples appear to support bacterial growth throughout the fabric, with a film of bacteria and colonies emerging from the surface, as well as around the perimeter of the fabric. Polyester samples showed bacterial growth around the perimeter of the swatch, with little growth on its surface. Gram staining of bacteria grown from silk swatches revealed resident flora to be gram positive cocci and rods, consistent with staphylococcus or bacillus species, respectively. Polyester samples harbored only gram positive rods. Spore staining of silk cultures revealed dense vegetative rods, cocci, and some spores. Spore staining of polyester showed only vegetative rods and spores. Penicillin/streptomycin treatment reduced or eliminated bacterial growth from silk, but not from polyester. Treatment with 70% ethanol reduced or eliminated bacterial growth from polyester but not from silk. 3% hydrogen peroxide treatment eliminated resident flora growth from all samples, and appears to inhibit recontamination by exogenous bacteria (E. coli) in most samples. Untreated textiles that were contaminated with E. coli all showed bacterial growth on TSA. Gram staining of cultures from the colonies revealed gram negative rods, consistent with E. coli, suggesting that E. coli may out-compete the resident flora found on both silk and polyester samples. The results of this project have implications for hygiene policies related to wearing and use of fabrics, and approaches to decontamination of textiles, in health care facilities.

This research was supported by an ART award and Support for Student Research Assistants, from College of Science and Health

David Weisberg, Department of Music

Blue Dream - For Jazz Big Band

In this composition for jazz big band, elements of the blues are combined with various musical styles in the jazz idiom. I will play excerpts from the work and discuss some of the compositional methods involved in its creation. The excerpts were created using software purchased with the grant, and I will briefly describe aspects of that process as well.

This project was supported by the College of Arts and Communication.

Jamie L. Weiss, Department of Biology

Co-Presenter: Michael J. Gonzalez, Undergraduate Student, Department of Nursing
Regulation of Calcium Channels in Ataxia

Mutations in voltage-gated Ca²⁺ channels (Cav) implicated in ataxia have been linked to G- Protein Coupled Receptor signaling but little is known about how the regulation of these channels is impaired leading to channel dysfunction in ataxic disease. Research of this nature will further our understanding of how alterations in the signaling pathways regulating P/Q channels (Cav2.1) can cause ataxia. We have created ataxic Cav2.1 subunit cDNAs corresponding to human mutations that cause ataxia focusing on those linked to Episodic Ataxia-type 2 and Spinocerebellar Ataxia-type 6. These mutant cDNAs are expressed in both heterologous-systems and neuronal cells. Molecular/cell biological and electrophysiological methods are used to examine ataxic channel dysfunction. The hopeful outcome of this work is that it can lead to the identification of novel protein targets in the pathway regulating P/Q channels for chemical screens that would lead to novel drugs used for the treatment of ataxia. New drugs that help re-establish normal channel regulation could restore efficient neuromuscular transmission in patients with ataxia. We aim to understand the physiology of the ataxic calcium channel dysfunction and how this causes ataxia. Although this is a basic science research project, it may help to identify innovative pharmacological targets for therapeutic intervention.

This is related to a Research & Travel Incentive Award and by a Center for Research grant from the College of Science and Health.

Lauren Weisse, Department of Sociology

Sheetal Ranjan, Department of Sociology, Faculty Sponsor
The Effects of Single-Parent Households on Juvenile Delinquency

It is estimated that 28% of adolescents in the United States live in single-parent households. This study seeks to identify the effects of single-parent households on the behaviors and actions on the children raised in these types of households. The purpose of this study is to examine if being raised in a single-parent household is related to higher rates of delinquency compared to being raised in a two-parent household.

This research was supported by the Undergraduate Research Fund.

Martin B. Williams, Department of Office of Sponsored Programs, and Michelle Dramé, Executive Director of Development

Funding Great Ideas

Institutional Advancement and the Office of Sponsored Programs will discuss the resources and services they offer to support faculty and staff in obtaining funding for projects, research, scholarships, public service, cultural events, and other types of activities. The discussion will include current challenges and opportunities related to obtaining funding and how working together will increase the likelihood of obtaining funding as well as the amount available to support activities.

Amanda Yarmula, Undergraduate Student, Department of Sociology

Luis Nuno, Department of Sociology, Faculty Sponsor
A Study of Drunk Driving-Related to Attitudes and Behaviors

This research paper studies the effects of an individual's behaviors and attitudes on drunk driving. The purpose of this study was to see if there is a connection between an individual choosing drinking and driving based on their attitudes and behaviors. The study was done on a college campus because alcohol impaired driving is the leading cause of death among college students. The variables that were measured in this study are behaviors, attitudes, gender, age and drunk driving. The participants in the study were 100 students (50 males, 50 females) ages 17 and up. Participants completed a survey to measure the variables. After all my data was collected it was analyzed and measured the variables to explain the finding and to find if my hypothesis was accurate which is Males have higher pro-risk behaviors and attitudes than females causing them to be more likely to drink and drive.

This research was supported by the Undergraduate Research Fund.

◆ **Ge Zhang, Department of Economics, Finance and Global Business**

Chinese Block Transactions and the Market Reaction

This paper examines block transactions in the Chinese equity market. We find that most of the block transactions are traded at prices at or below the closing price of the regular continuous auction market, and more than half are traded at or below the lowest price of the day. Consistent with the price pattern indicating that the block transactions are seller-initiated, the overall market reaction is negative. However, we find a different market reaction to block transactions when the buyer is represented by China International Capital Corporation (CICC), the number one investment bank in China which counts many foreign institutional investors as its clients. The positive reaction is consistent with the buyer-certification hypothesis, that is, the fact that some smart institutional buyers enter block trade indicates the buyer's assessment of undervaluation.

He Zhang, Department of Art

"Shuma" – A Possible Chinese Version of Soma/Haoma - A Study of Early Contacts between Indo-Iranians and Chinese

This presentation is a short version of an investigation on a Chinese term "shuma" 疏麻 used in a poem by Qu Yuan 屈原 (342-278 BCE) and its possible relationship with the Indo-Iranian term of soma or haoma, and a consideration of the likelihood that as early as Western Zhou dynasty (1046-771 BCE) and at least by the time of Qu Yuan (4th-3rd century BCE), the Indo-Iranian rituals and beliefs associated with the term soma/haoma had already spread to the northwest, central, and even south of China. Although there was no known written evidence for this term shuma in early Zhou time, archaeological discoveries show evidence of the knowledge and use of special plants by people in the north and northwest of China; and much literature of the late Zhou dynasty (771-221 BCE) includes descriptions of active interactions between those people and the Chinese of the Central Plain. And finally, Qu Yuan's poem uses this exact term to suggest a connection between the southern Chinese Chu culture and northwestern non-Chinese cultures.

