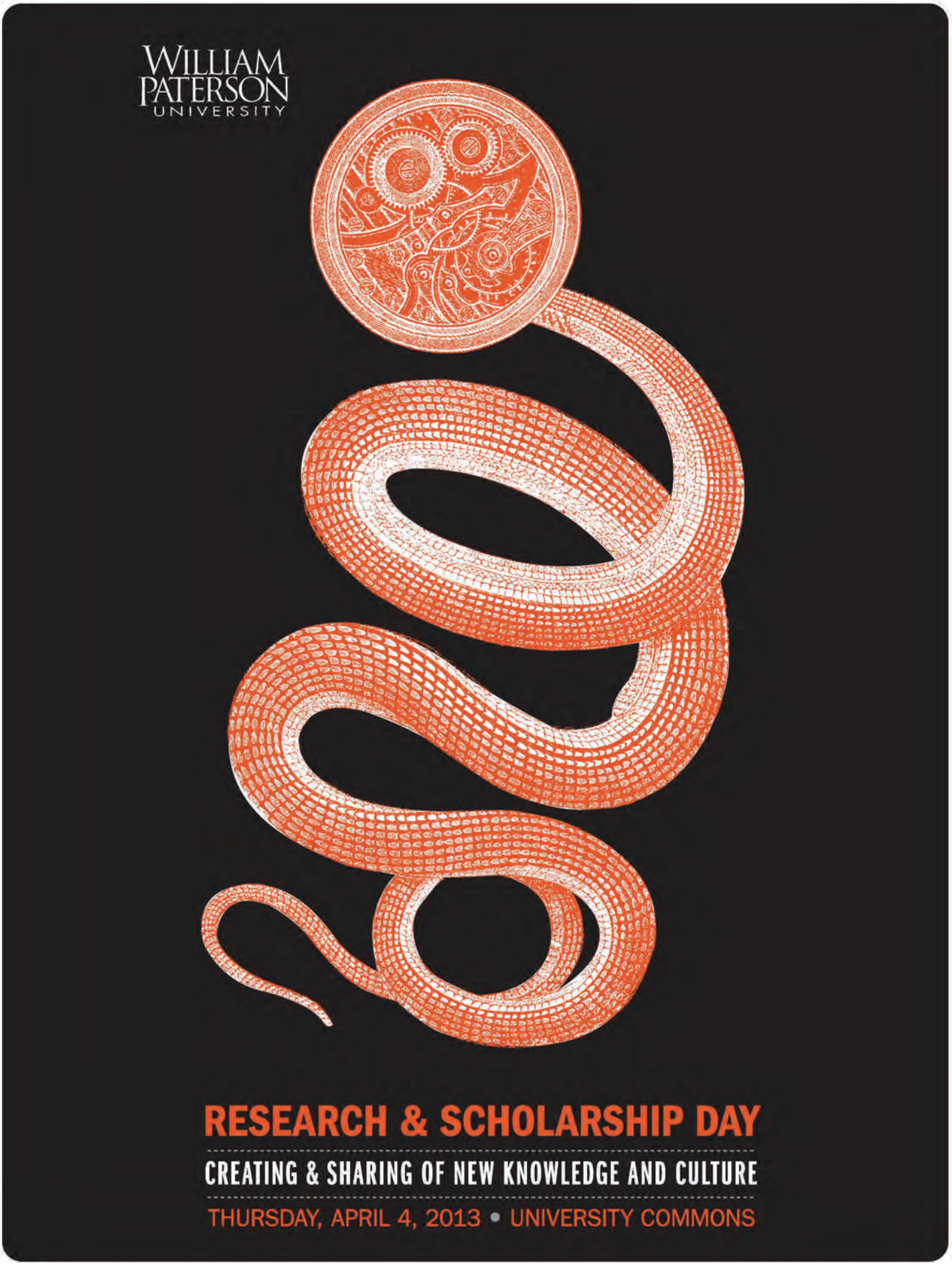

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The Faculty Senate Research and Scholarship Council would like to acknowledge and thank

Tom Uhlein, Art Department

for creating this year's poster

University Research and Scholarship Day 2013

Thursday, April 4

Schedule of Activities and Presentation Abstracts

Schedule at a Glance

11:00 to 12:15	Concurrent Individual and Group Presentations University Commons, 168A, 168B, 171A, 171B, Ballrooms A and B
12:30 to 1:45	Cotsakos College of Education University Commons, Ballroom A
	College of Science and Health / Center for Research University Commons, Ballroom B
	Cross –Cultural Arts Festival University Commons, Ballroom C
	Technology Across the Curriculum University Commons, Room 168A
	College of Arts and Communication University Commons, Room 171A
	Cotsakos College of Business University Commons, Room 171B
	College of Humanities and Social Sciences Atrium, Faculty Lounge, Room 126 (Lunch provided, 12:00)
	Living Writers Series, English Department Cheng Library Auditorium
12:30 to 2:00	Poster Presentations University Commons Hallway
2:00 to 3:15	Concurrent Individual and Group Presentations University Commons, 168A, 168B, 171A, 171B
3:30 to 5:00	David and Lorraine Cheng Authors Recognition Reception Office of Sponsored Programs Recognition of Awards Recipients University Commons, Ballroom C

Schedule

Morning Sessions

Individual and Group Oral Presentations *11:00 to 12:15*

University Commons, 168A — Computer Science

Platform for Performance Evaluation of 4G LTE Benchmark on Multi-Core DSP
Eduardo Avila, Beata Zaluska, Erh-Wen Hu, Marvin Kiss, and Bogong Su, Computer Science

Collaborative Agile Multi-Dimensional Unified Process
Cyril S. Ku, Computer Science

Performance Prediction of Multi-Core DSP Processor using Statistic Approach
Beata Zaluska, Eduardo Avila, Erh-Wen Hu, Cyril S. Ku, and Bogong Su, Computer Science

University Commons, 168B — Film

A CINEMA OF DISCONTENT, Film Censorship in Iran
Jamsheed Akrami, Communication

Social Media Use in the Bronx: New Research and Innovations in the Study of YouTube's Digital Neighborhood
Matt Crick, Communication

Fly First & Fight Afterward: The Life of Col. Clarence D. Chamberlin
William Tooma, English

University Commons, 171A — Research and Assessment

Assessing Higher Education Quality across Institutions
Theresa Cruz Paul, Career Development and Advisement Center, Dr. Corbin Campbell, Teachers College Columbia University

Sample Representativeness Affects Whether Judgments are Influenced by Base Rate or Sample Size
Natalie Obrecht, Psychology, Dana Chesney, University of Notre Dame

Value-added Teacher Evaluation - A Trojan Horse: Principals' Attitudes towards Teacher Empowerment
Kevin J Walsh, Educational Leadership and Professional Studies

Perception of Family Values in a Bi-Communal Island: Evidence from the European Values Survey Data
Deniz Yucel, Sociology

University Commons, 171B — Life Sciences

Modeling Sampling Distributions of Similarity Measures
Jyoti Champanerkar, Mathematics

Sol-gel -- a pathway to pursue in synthesis of nano layered compounds?
Mihaela Jitianu, Darren Gunness, Chemistry, Doreen E. Aboagye, Lehman College - CUNY, and Andrei Jitianu, Lehman College - CUNY

Systematic review of the role transition of novice nurse faculty
Kem Louie, Nursing

Evolution of Jaw-Morphology and Kinematics in Ponerine Trap-Jaw Ants
Joseph Spagna and Robert Sutherland, Biology

University Commons, Ballroom A — English and History Honors

Conflict and Liberal Arts Pedagogy up to (and beyond) the First World War: How the Presentation of War Changed in Western Culture, Moderated by Brian O'Broin, English

How Attitudes to War Changed in Western Literature after World War One
Jacqueline DeSanto, Sigma Tau Delta (English Honors Society)

The Teaching of War in the Modern American Classroom
Lori Hoffman, (English Honors Society)

How Conflict Globalized in the Wake of the Napoleonic Wars
Richard Siegler, Phi Alpha Theta (History Honors Society)

Civilian Involvement in and Reaction to the Battle of Gettysburg
Lindsey Freedman, Phi Alpha Theta (History Honors Society)

University Commons, Ballroom B — Marketing and Management

Cultural Differences in Information Technology Settings: Impacts on Creativity and Knowledge-sharing
Cesar Perez-Alvarez and Mahmoud Watad, Marketing and Management Sciences

Strategic Asset Seeking and Institutional Distance: Examining Emerging Market Multinationals' Ownership Strategy in Cross-Border Mergers & Acquisitions
Mike Chen-ho Chao, Marketing and Management Sciences

The Impact of Organic Processes on Group Creativity in Distributed Environments
Cesar Perez-Alvarez and Mahmoud Watad, Marketing and Management Sciences

Liabilities of Informality and the Competitive Advantages of Formality in the Informal Economy
Sharon Simmons, Marketing and Management Sciences

Common Hour Programs *12:30 to 1:45*

College and Committee Sponsored Individual and Group Presentations

College of Humanities and Social Sciences

Atrium Faculty Lounge (Room 126)

Understanding Asia, A Panel Moderated by Kara Rabbitt

Pei-Wen (Winnie) Ma, Psychology
Ming Jian, Languages and Cultures
Benjamin Vilhauer, Philosophy
Theodore Cook, History

Living Writers Series, Program in Writing and Rhetoric, English Department

Cheng Library Auditorium

Song of Magsaysay: A Fiction Reading and Discussion
John Parras, English

Technology Across the Curriculum (TAC) Committee

University Commons, 168A

Reading and Writing to Learn in College: Promoting Literacy and Technology in First Year Seminar, Moderated by Carrie Eunyoung Hong, Educational Leadership and Professional Studies

Examining the Use of IPads in the ELL Classroom: A Design-Based Study
David Fuentes, Elementary and Early Childhood Education

How to Help College Students Utilize LinkedIn to Promote Their Professional Identity
Bela Florenthal, Marketing and Management Sciences

Can Cell Phones Facilitate Test Taking: A Pilot Study
Loretta C. Mclaughlin-Vignier, Communication

Integrating Technology in our Classrooms
Deniz Yucel, Sociology

College of Art and Communication

University Commons, 171A

Inquiry in Music Education: Concepts and Methods for the Beginning Researcher
Carol Frierson-Campbell, Music

River Thames – great wall of china 2012 the Olympics
Charles Magistro, Art

A Great Experience in the Olympic Fine Arts 2012 in London
Zhiyuan Cong, Art

Finca GiraSol: The Green House
Barry Morgenstern, Communication

Collaborative exhibition with 3D software and 3D Printing
Michael Rees, Art

Cotsakos College of Business

University Commons, 171B

A Quest for Clean Development Mechanisms and CSR: The Similarities Found in Diverse Regions of the World
John O'Gorman, Economics, Finance and Global Business, Cynthia Buchelli, Accounting and Law, Christian Campos, Marketing and Management Sciences, Cheire Lozaw, Marketing and Management Sciences, and Jordany Rodriguez, Economics, Finance and Global Business

Popularity in Clean Development Mechanisms: The Case for Asia and Major Players of CDM Investment
Adrian Wilson, Accounting and Law, Aneta Veselinovski, Marketing and Management Sciences, Carolina Monroy, Marketing and Management Sciences, and Olga Druzhbina, Accounting and Law

South America CDM and Innovation: What Developed Nations Can Take Away from Sustainability Initiatives in Developing Nations.
Amir Rahmoun, Marketing and Management Sciences, Lin Zhang, Marketing and Management Sciences, Matthew McDonough, Marketing and Management Sciences, Naser Nassar, Marketing and Management Sciences, and Dorothy Hartley, Accounting and Law

Clean Development Mechanism: A view from North America, Central America and the Caribbean
Dilma Monastario, Accounting and Law, Melissa Strong, Marketing and Management Sciences, Maureen Lerner, Accounting and Law, Neel Jani, Economics, Finance and Global Business, and Michael Salocha, Marketing and Management Sciences

College of Education

University Commons, Ballroom A

An Examination of the Questioning Behaviors Used by Effective Elementary Mathematics and Literacy Teachers
Geraldine Mongillo, Rochelle Kaplan, Educational Leadership and Professional Studies, and Dorothy Feola, College of Education

The Cultural Transformation of a Small Urban Community: A Community Study IRB 2013-302
Ronald Verdicchio, Elementary and Early Childhood Education and affiliated with Anthropology, Eman Al-Jayeh, Communication Disorders, Jean Gervais, Education, Kelly Ginart, Education and English, Sara Johnson, Education and English; Amani Kattaya, Education and Sociology, Paige Rainville, Education and Spanish, and Rita Vander Stad, Mathematics

Center for Research, College of Science and Health

University Commons, Ballroom B

Understanding Behavioral Pathology Using Rodent Models,
Moderated by Betty Kollia, Communication Disorders

Welcome
Kenneth Wolf, College of Science and Health

Neurobiology of Drug Addiction and the Cannabinoid System
Emmanuel S. Onaivi, Biology

Autism and high tolerance to pain: understanding the biological mechanism using an animal model
Jeung Woon Lee, Diane Asmar, Annabelle Beltran, Jennifer Fiorelli, and Christina Demirjian, Biology

Examining the Role of NCS-1 in the Regulation of Nitric Oxide Levels: Implications for Autistic Spectrum Disorder
Jamie L. Weiss, Ama Berko, Walter Barr, Jasmine N. Wood, Michael Gonzales, Biology

Cross-Cultural Arts Festival: North and East Asia

University Commons, Ballroom C

Korean Wave (Hallyu): From The Land of the Morning Calm to the Bustling Cultural Hub, Moderated by Kyung-Hyan (Angie) Yoo

Learning about Korea with Google Earth
Heejung An, Elementary and Early Childhood Education

Korea's Economic Growth and Democratization
Min Hee Go, Political Science

Hallyu and Globalizing Korea
Keumjae Park, Sociology

IT in Korea
Kyung-Hyan Yoo, Communication

Poster Presentations — University Commons Hallway

Exercise and Stress among College Students
Carlos Arante, Shanice Coy, and Kala Mccutcheon, Nursing

Masters' Theses on the Increase: A New Look at Accessibility and Preservation
Jane Bambrick, Cheng Library

The Relationship between Alcohol Consumption and Academic Performance Among College Students
Karissa Barongan, Emily Hacker, Darren Nadarajah, Sarah Keating, and Julie Bui, Nursing

The Office of Sponsored Programs: Resources and Services
Lourdes Bastas, Office of Sponsored Programs

Trunk Inertial Estimates of a Pregnant Female
Valarie DiMartino, Alex Calleros, and Jason Wicke, Kinesiology

Falling Stars: Acoustic Influences on Meteor Detection
Darlene Edewaard and Michael Gordon, Psychology

The Relationship between Perceived Stress and Eating Behaviors in College Students
Leena George, Yasmin Shaikh, Amanda Segda, and Nesmah Ahmed, Nursing

Verbal Intelligence as a Predictor of False Memory
Stephanie Guevara, Psychology

The Effect of Cold Atmospheric Pressure Plasma on Tail Regeneration of Tadpoles Xenopus Laevis
Joyce June, Adonis Rivie, Jaishri Menon, and Kevin Martus, Physics

Using Multiple Strategies for Community-Based Needs Assessment Based on the Strategic Prevention Framework (SPF)
William D. Kernan, Vanesa Apaza, Nichole Kershaw, and Stephanie Rudalf, Public Health

College Students and Stress: The Impacts of Relationship Stress on Male and Female College Students
William D. Kernan and Nichole Kershaw, Public Health

When is it Actually Place Learning?
Amy E. Learmonth, Samiyah Brown, Nicole Caltabellotta, Alejandra Jimenez, and Derek Voyticki, Psychology

Competing cues and the development of landmark use
Amy Learmonth, Nicole Caltabellotta, Alejandra Jimenez, Samiyah Brown, and Derek Voyticki, Psychology

Structural and Chemical Alteration to Chlorite As Influenced by Rain-Soil-Ash Interactions
Alexandra Lucas, Kevin Johnson and Jennifer Callanan, Environmental Science

Programmed Cell Death by Reactive Oxygen Species in Tail of Tadpole, Xenopus laevis
William J. Manzo and Jaishri Menon, Biology

Using DNase to improve the reliability of PCR detection of microbes
Kendall Martin and Ammar Ali, Biology

College Student Sleep and Academic Performance
Olivia Matthews, Andrea Recinos, Diana Scalici, Rudensa Doda, and Noelis Peralta, Nursing

Abstract Title: Running performance and gait kinematics of a sand-adapted arachnid, Galeodes granti
Omar Mayorga and Joseph Spagna, Biology

Enhancing emotion recognition in a child with autism spectrum disorder: an intervention using The Transporters
Corrine McCarthy, Psychology

Intergroup Interaction, Racism, and Racial Anxiety
Billy Mercedes, Natalie Obrecht, and Thomas Heinzen, Psychology

Dominican Republic Medical Mission Trip 2013
Heather Miller, Nursing

Visible light sensitive Nitrogen-doped Titanium dioxide based composites. Synthesis and photocatalytic applications
Amanda Muraca, Michael Stamper, Chemistry, Naphtali O'Connor, Lehman College – CUNY, Ravnit Kaur-Bhatia, Lehman College – CUNY, and Andrei Jitianu, Lehman College – CUNY

Kinetics of a Fastball and Curveball Pitch
Neeraja Nannapaneni, Alan Hsieh and Jason Wicke, Kinesiology

A Re-analysis of Fire-Impacted Soil in Northwest NJ
Elena Noonan, Kevin Johnson and Jennifer Callanan, Environmental Science

Self-efficacy and Health Promoting Lifestyles in University Students
Amante Pascua, Nicole Seerattan, Natasha Abella, and Richie Him, Nursing

The Relationship between Exercise and Self-esteem in Undergraduate Students
Lena Qasem, Nataliya Podlozhnyuk, Julia Dickson, and Ogechukwu Adinde, Nursing

Interaction of Bacteria with Spider Silks
Khushnuma Sabavala, Melissa Gallo, Joseph Spagna, and Miryam Wahrman, Biology

The Effects of Stress on Eating Habits
Amanda Schaefer, Nicole Fittizzi, Cassandra Jung, Danielle Kramer, and Emily Miller, Nursing

The Relationship Among Empathy, Social Anxiety, and Public Self-Consciousness
Brandon Sinisi, Psychology

Genotypic Diversity in Native and Restored New Jersey Populations of Ammophila breviligulata (American Beachgrass)
David Slaymaker and Michael Peek, Biology

Music of the Body: An Investigation of Skull Resonance and its Influence on Musical Preferences
Jitwipar Suwangbutra, Psychology

Preliminary Observations of Hydroxyl Radical and Molecular Nitrogen Emissions from an Atmospheric Pressure Plasma Jet
Jake Taubner, Joyce June and Kevin Martus, Physics

Affective Auditory Speech with Spectral Distortions
Rachelle Tobias, Michael Gordon and Johanna Ancheta, Psychology

Refining the Role of Secondary Special Education Teachers: Teacher Leaders
Manina Urgolo Huckvale, Special Education and Counseling

RIM Shot: Using assessment data to Revise, Improve and Modify library instruction
Nancy J. Weiner and Kathy Malanga, Cheng Library

Inertial Changes While Running at Different Body Weights
Shaun Woerner, Tracy Krulikowsky, Jason Wicke, and Michael Figueroa, Kinesiology

Sleep Quality and its Effects on Life Satisfaction Among Undergraduate College Students.
Erica Young, Gina Munkcasy and Nao Maeda, Nursing

Afternoon Sessions *2:00 to 3:15*

Individual and Group Oral Presentations

University Commons, 168A **Accounting and Marketing**

A Survey of Investments in Low-Profit Limited Liability Companies: Are Non-profit Organizations Taking Advantage of L3Cs for the purposes of Making Safe Program-Related Investments?
Valeriya Avdeev and Hannah Wong, Accounting and Law

Lucky Rolls, Leaps of Faith and Hunches: Luck, Faith and Intuition in Decision Making
Stephen C. Betts, Marketing and Management Sciences

Collaboration and Partnership in the Context of Indian CSR: The Global Compact Local Network and The I4d Project
Jorge A. Arevalo, Marketing and Management Sciences

The Influence of Trust and Interdependence on Specific Investments in Buyer-Seller Relationships
Prabakar Kothandaraman, Professional Sales

University Commons, 168B **Sociology and Philosophy**

The Collegiate Recovery Community at William Paterson University: A Program Evaluation
Kamilah Bayete, Sociology

Improving the Summer Camp Food Environment: Results of a Pilot Study in a Residential Camp Serving Economically Disadvantaged Youths
Jennifer Di Noia, Sociology, and Lynne Orr, Career Development and Advisement Center

Buddhism and Free Will
Marie Friquegnon, Philosophy

University Commons, 171A **Biology, Chemistry and Kinesiology**

Does the waggle-dance scent enhance the recruitment of forager bees to food sources?
David C. Gilley, Biology

Applications of Covariance NMR and Extensions to the FindCore Algorithm: Key results of the Snyder Research Group in 2012-2013
David A. Snyder, Chemistry

Growth, Adherence and Transfer of Bacteria on Textiles
Miryam Z. Wahrman, Khushnuma Sabavala, Henry Raab, and Shalaka Paranjpe, Biology

University Commons, 171B **Kinesiology**

The Relationship between the Postprandial Lipemic Response and Lipid Composition in Persons with Spinal Cord Injury
Racine R. Emmons, Kinesiology

Aerobic Conditioning in Simulated Reduced-Gravity Environments
Michael A. Figueroa, Peter DiStephano, Chris Poole, and James Manning, Kinesiology

Validation of ACSM Metabolic Equations in an Anti-Gravity Environment: A Pilot Study
Natalie Santillo, Patricia Escamilla, Michael A. Figueroa, Jason Wicke, and James Manning, Kinesiology

Research and Scholarship Day 2013

Abstracts[1]

Jamsheed Akrami, Communication
A CINEMA OF DISCONTENT, Film Censorship in Iran

The international success of Iranian cinema over the past decades may have veiled the fact that Iranian filmmakers work under extremely harsh circumstances rarely seen in other national cinemas. Filmmaking in Iran is subject to tight government controls and strict censorship codes ranging from banning any criticism of the regime to highly restrictive Islamic codes on representation of women and their interactions with men. The imposed codes have undermined the creativity of the filmmakers and their ability to tackle pressing social issues.

A *Cinema of Discontent* explores the censorship codes and their adverse impact on Iranian films. In addition to dozens of clips from mainstream and art-house films, it features insightful interviews with 12 Iranian filmmakers, including internationally-acclaimed writer/directors Jafar Panahi, Bahman Ghobadi, and the Oscar-winning Asghar Farhadi (A Separation) who comment on how they cope with the codes and their efforts in circumventing them.

A Cinema of Discontent completes Jamsheed Akrami's trilogy on Iranian cinema, which also includes The Lost Cinema, on political filmmaking under the Shah, and Friendly Persuasion, on Iranian cinema after the 1979 revolution. The films were screened in international film festivals and enjoyed theatrical run and television screenings in US and Canada.

Dr. Akrami has been frequently interviewed on national and international media outlets NPR, CNN, BBC, VOA, Indiewire, Sundance Channel, IFC, USA TODAY, New York Times, Washington Post, Los Angeles Times, San Francisco Chronicle, Dallas Morning News, Chicago Tribune, Denver Post, Daily News, Christian Science Monitor, Guardian, and Irish Times.

This project was supported by Assigned Released Time for Research (ART).

Carlos Arante, Undergraduate Student, Nursing

Co-Presenters: Shanice Coy and Kala Mccutcheon, Undergraduate Students; Faculty Sponsor: Nadine Aktan, Nursing

Exercise and Stress among College Students

The purpose of this study is to discuss the various causes and effects that stress has on college freshmen and sophomore Students and to study whether exercise enhances/helps these Students with their stress in school. It is expected that college Students who perform in physical activity will have lower levels of perceived stress. The participants were approximately 100 freshmen and sophomore Students who attend William Paterson University. They completed the International Physical Activity Questionnaire (IPAQ) and the Perceived Stress Scale. Data was analyzed using the independent T-test.

Jorge A. Arevalo, Marketing and Management Sciences
Collaboration and Partnership in the Context of Indian CSR: The Global Compact Local Network and The I4d Project

The recent emergence of sustainability partnerships and the activities and commitments of some prominent global actors has not received enough empirical attention in the academic literature. In this chapter, we examine the collaborative dynamic of a relatively new initiative - the Investors for Development Project (I4D).

[1]Unless otherwise noted, presenters are WPU faculty.

Specifically, we investigate how its partners i.e. Northern Governments, United Nations Economic and Social Commission Asia Pacific, the UN Global Compact, and the wider community in the CSR field have fueled the promotion and awareness of sustainable and responsible business in Asian economies. We find that financial and leadership commitments play an important role in shaping the sustainability efforts among Global Compact participants in Asian nations. In particular, we observe how the aims of this project have, to some extent, addressed some of the reported challenges of implementing CSR among the Indian business sector. We further find that the I4D model, conceptualized in this study as an inclusive partnership of global actors, does offer a platform for collaboration and networking opportunities among various stakeholders genuinely concerned for sustainable development in the South. We offer a discussion on the potential of this initiative, and make calls for more strategic insights that can move the scientific research in this field forward.

This project was supported by Assigned Released Time for Research (ART).

Valeriya Avdeev, Accounting and Law

Co-Presenter: Hannah Wong, Accounting and Law

A Survey of Investments in Low-Profit Limited Liability Companies: Are Non-profit Organizations Taking Advantage of L3Cs for the purposes of Making Safe Program-Related Investments?

Traditionally, investing in PRIs has been a risky business. If not done correctly, private foundations would face a very real threat of losing their tax-exempt status and being charged with penalty taxes. In order to safely invest in PRIs, private foundations would almost always need to apply for a costly and time-consuming Private Letter Rulings from the Internal Revenue Service. However, this was the reality prior to the creation of a low-profit limited liability company, or L3C. With the use of L3Cs, it is believed that non-profit organizations can safely make program-related investments without the need for obtaining a Private Letter Ruling from the Internal Revenue Service. Our paper will empirically examine if non-profit organizations are truly taking advantage of L3Cs to make program-related investments and whether L3Cs are truly a practical solution for non-profit organizations to successfully invest in such socially-conscious businesses.

This project was supported by Assigned Released Time for Research (ART).

Eduardo Avila, Undergraduate Student, Computer Science

Co-Presenters: Beata Zaluska, Undergraduate Student, Erh-Wen Hu, Marvin Kiss, and Faculty Sponsor Bogong Su, Computer Science

Platform for Performance Evaluation of 4G LTE Benchmark on Multi-Core DSP

The cellular and mobile broadband market has increased tremendously over the last decade and the number of subscribers has almost doubly exploded in recent years. The 4G LTE (Fourth Generation Long Term Evolution) networks have become the new standard in the industry. Many new DSP (Digital Signal Processing) processors and software for 4G LTE networks have come up. As a result, performance evaluation and prediction of new DSP processors have become an important issue.

Since last summer we have started a new research project to study the performance of the newest DSP processor, a multi-core DSP processor from TI (Texas Instruments) which has eight cores, using a new 4G LTE PHY benchmark. As the first step to establish a platform based on TI 8-core DSP processor for our research, we installed an evaluation module; profiled the new benchmark and tested its input data; measured the performance of the new benchmark on a single core of the evaluation module; rewrote multi-thread code of the new benchmark; and studied the cooperative mechanism of that multi-core DSP processor.

This project was supported by Assigned Released Time for Research (ART) and the Student Worker Program, College of Science and Health.

Jane Bambrick, David and Lorraine Cheng Library
Masters' Theses on the Increase: A New Look at Accessibility and Preservation

There is currently a trend in the growth and development of masters' programs offered by colleges and universities in New Jersey. Many require theses, yet the policies and procedures of the schools vary in terms of the acquisition and storage of these documents. The Internet has provided an avenue to digitize theses with relative ease. This is an excellent venue for Graduate Students to research their topics and later share with fellow scholars. After considerable study and deliberation, William Paterson University decided to partner with ProQuest to insure the accessibility and preservation of Students' theses.

Karissa Barongan, Undergraduate Student, Nursing
Co-Presenters: Emily Hacker, Darren Nadarajah, Sarah Keating, Julie Bui, and Jamie Costa, Undergraduate Students; Faculty Sponsor: Lizy Mathew, Nursing
The Relationship between Alcohol Consumption and Academic Performance Among College Students

This is a quantitative correlational study and the purpose is to determine if there is a correlation between alcohol consumption and GPA. "Drinking causes significant reductions in academic performance, particularly for the highest-performing Students" (Carrell et al., 2011). In order to gather the quantitative data for this study, a survey entitled "The Student Alcohol Questionnaire" was distributed to seventy-five William Paterson University Students. The survey included alcohol and academic performance, which was based on GPA in college Students. The questionnaires were distributed the first of February and were completed by February 15. The results of the study will be analyzed in the next few weeks and reported.

Kamilah Bayete, Undergraduate Student, Sociology
Faculty Sponsor: Charley Flint, Sociology
The Collegiate Recovery Community at William Paterson University: A Program Evaluation

Substance abuse is a major problem on the campuses of United States colleges and universities. In the last ten years, there has been a trend of implementing Collegiate Recovery Communities (CRCs) on these campuses to provide support to the college Student dealing with substance abuse. These CRCs provide access to fundamentals such as room and board, academic support, recovery counseling/coaching, group therapy, and fellowship and service opportunities. The Collegiate Recovery Community at William Paterson University was established in 2010 for this reason.

For my internship project, I conducted a program evaluation of the CRC at WPU. I sought to answer the following questions: (1) Who does the CRC at WPU serve? (2) How well does the CRC at WPU execute its program according to the CRC Vision (keep Students in recovery and enrolled in school)? and (3) How well does the CRC at WPU execute its program according to the Salzer Model of Social Support?

Stephen C. Betts, Marketing and Management Sciences
Lucky Rolls, Leaps of Faith and Hunches: Luck, Faith and Intuition in Decision Making

Organizational decisions often involve leaps of faith and are based on the 'hunches' or intuition of decision makers. Frequently the most successful individuals and organizations are those that take a risk that pays off. Other successful individuals and organizations are more prone to using intuition, and are disproportionately lucky in having things work out well. However organizations use a variety of decision processes, some of which avoid leaps of faith and reliance on luck, and take a measured approach to minimizing risk.

In this presentation I will argue that that intuitive decision processes allow decision makers to avoid being overly risk averse and actually reduces risk by allowing tacit knowledge and implicit processes to positively influence both decisions and their implementation. I will examine how luck and faith fit into models of decision making. Included are intuitive decision making and four other models - rational, behavioral, political and

'garbage can'. I will conclude with suggestions of how luck, faith and intuition can be used for better decision making.

This project was supported by Assigned Released Time for Research (ART)

Jyoti Champanerkar, Mathematics
Modeling Sampling Distributions of Similarity Measures

Similarity measures are numerical measures that quantify the extent of similarity between two populations. Distance based similarity measures are used in pattern-recognition, for identifying semantic similarities, and even for comparing probability distribution functions. Although similarity measures are used commonly by scientists in many disciplines, very little information is available about the sampling distributions of these measures. As a result, decisions are often made using point estimates. In this presentation, we illustrate how sampling distributions can be estimated for different measures.

This project was supported by a grant from the Center for Research, College of Science and Health, William Paterson.

Mike Chen-ho Chao, Marketing and Management Sciences
Strategic Asset Seeking and Institutional Distance: Examining Emerging Market Multinationals' Ownership Strategy in Cross-Border Mergers & Acquisitions

Researchers suggest that due to the limited opportunities to acquire strategic assets in their home market, emerging market multinational corporations (EMNCs) utilize a series of cross-border mergers and acquisitions (M&As) to accelerate their internationalization process. Less is known about EMNCs' international strategy, particularly how target market economies and institutional environments influence EMNCs' ownership strategy in their cross-border M&As. The current study focuses on EMNCs originating from nine major emerging economies and examines their choices between full and partial ownership in cross-border M&As. We find that driven by their strategic asset seeking motives, EMNCs tend to take on full ownership when the target markets are developed economies. Further, formal institutional distance, indicating learning opportunities, is positively related to the likelihood of EMNCs' full ownership position, whereas informal institutional distance is not significantly related to EMNCs' ownership strategy.

Zhiyuan Cong, Art
A Great Experience in the Olympic Fine Arts 2012 in London

My work PARADISE was selected by the Organization Committee for the Olympic Fine Arts 2012 (London), which was exhibited in the Barbican Centre, London from August 1st to August 7th 2012. This exhibition was very successful. More then 500 works from 73 different countries in the exhibition.

"Borrowing from the of the Chinese Han human figure stone relief, which used simple and vigorous to express masculine power, my work aims to portray an indispensable part of American life, namely, the sport of basketball. From the images in both paintings and prints, I hope people will see the dynamics, the rhythm, the quick pace and life in our modern society."

I was invited to attend the Opening Ceremony in the evening, August 1st, 2012. I also received an interview by Chinese TV in London this night. The experience was great in the for the Olympic Fine Arts 2012 in London.

After the Opening Gala, we were able to go out and explore London and Paris Museums.
During nine days in London and five days in Paris, I visited almost all of the famous museums and art exhibition.

This project was supported by the College of Arts and Communication 2012 Summer Research and Creative Activities.

Matt Crick, Communication
Social Media Use in the Bronx: New Research and Innovations in the Study of YouTube's Digital Neighborhood

YouTube has surpassed other social media platforms on a massive scale in application and influence, and has recently begun to impact the way people seek out and use information, learn about the world, and share their own unique perspective often with an international audience. However, this ubiquitous form of social media is perhaps the least scholarly researched form of social media, particularly when it comes to so-called underrepresented and under researched populations. Generally speaking, formalized social-media theoretical tools and systematic measurement have been lacking as well. YouTube exemplifies the tension between an empowered user and powerful commerce-driven creators in the battle for media control and demands scholarly analysis.

Theresa Cruz Paul, Career Development and Advisement Center
Co-Presenter: Dr. Corbin Campbell, Professor, Teachers College Columbia University
Assessing Higher Education Quality across Institutions

This research agenda aims to create alternative, innovative, and comprehensive measures of educational quality (academic rigor, teaching quality, learning outcomes) across institutions that could contribute to public understanding of college and university quality. The current ways of measuring educational quality across institutions (testing, surveys, accreditation, performance metrics) have had unintended consequences, such as grade inflation, mission creep, the manipulation of institutional data, and the focus on collecting information that is easily quantifiable (graduation rates, for example) rather than less easily quantifiable indicators of educational quality. Higher education stakeholders need to see educational quality from multiple vantage points that get to the heart of the educational enterprise of institutions in order to make improved decisions.

Valarie DiMartino, Kinesiology
Co-Presenters: Alex Calleros, Graduate Student, and Faculty Sponsor Jason Wicke, Kinesiology
Trunk Inertial Estimates of a Pregnant Female

Body models are key to accurately analyzing motions of the human body from a biomechanical perspective. General models used are based on the male body causing inaccuracy in female segment evaluation. This pilot study was designed to test the volume function of the Wicke trunk model's sensitivity for estimating the pregnant trunk volume. The model cross sectional area estimates were compared to a 3D body scan on one female at 17, 23, 33 and 35 weeks of pregnancy. Overall, the volume function of the Wicke model accurately depicts (within 5% error) changes of a pregnant trunk. Testing on a greater sample size will further ensure accuracy.

Jennifer Di Noia, Sociology
Co-Presenter: Lynne Orr, Career Development
Improving the Summer Camp Food Environment: Results of a Pilot Study in a Residential Camp Serving Economically Disadvantaged Youths

Conducted in a residential summer camp serving economically disadvantaged youths, this quasi-experimental study examined changes in fruit and vegetable (FV) intake following implementation of strategies to improve the number and variety of FVs served, counselor FV modeling/intake and social support for child FV consumption, and child FV norms (i.e., perceived peer intake, attitudes towards eating FVs, and perceived peer attitudes towards eating FVs). Data from successive groups of youths attending the camp in three 11-day sessions (N = 311) were examined with analysis of covariance. The strategies consisted of food service changes, nutrition education lessons with tailored follow-up newsletters for counselors and nutrition education lessons for older youths (i.e., aged 11 to 13 years) during which participants developed advertisements to persuade younger youths (i.e., aged 7 to 10 years) to eat FVs. Improvements were found in the number and variety of FVs served, counselor informational and instrumental support for consumption, and in older youths who received

the nutrition education lessons, perceived peer attitudes towards eating FVs and FV intake. Improving the number and variety of FVs, counselor informational and instrumental dietary social support and child FV norms in the summer camp setting can induce higher FV intake among economically disadvantaged adolescents in this setting.

This project was supported by the Research Center for the Humanities and Social Sciences at WPUNJ.

Darlene Edewaard, Undergraduate Student, Psychology

Co-Presenter and Faculty Sponsor: Michael Gordon, Psychology

Falling Stars: Acoustic Influences on Meteor Detection

As particles enter the earth's atmosphere they produce a burst of electromagnetic energy, including visible and radio-wave emissions. Consequently, just as meteors can be detected visually in the night sky they can be "heard" using radio telescopes. The current project investigated the potential influence of these audio signals on meteor detection. Anecdotally, and in related research, it has been found that auditory signals can enhance or even alter visual perception of objects. The current project examined the specific effects of accompanying auditory signals on the detection of meteors. Meteors present an interesting case of audiovisual integration in that detection paradigms often entail extended vigilance and extremely brief, yet brilliant astronomical events. Experiments specifically investigated how auditory signals that varied in spectra influenced changes in visual magnitude and duration judgments of meteors. In addition, the time of the acoustic cues vary relative to the visual events. Results are described in terms of audiovisual integration and the relation of perceptual mechanisms to meteor detection.

Racine R. Emmons, Kinesiology

The Relationship between the Postprandial Lipemic Response and Lipid Composition in Persons with Spinal Cord Injury

PURPOSE: To determine the influence of lipid concentration, lipid particle size, and total abdominal fat (TAF), on postprandial lipemic response (PPLr) in men with spinal cord injury (SCI).

METHODS: Thirty-five men with SCI (17 paraplegia, 18 tetraplegia) and 18 able-bodied (AB) men participated. Following a 10-hour fast, blood was drawn for a complete lipid panel, apolipoprotein (apo) A1 and B concentrations, and low-density lipoprotein (LDL) and high-density lipoprotein (HDL) particle sizes. A high-fat milkshake was consumed (~1.3 g fat/kg) and blood was drawn at 2, 4, and 6 hours to determine PPLr, [triglyceride area under the curve (AUC)]. TAF was measured by abdominal ultrasonography. Differences between groups for blood markers were determined by independent sample t-tests. Pearson correlation coefficients determined the relationship among PPLr and lipids, and TAF.

RESULTS: There were no significant differences in fasting TG, LDL, apo B, TAF, or PPLr between groups. The SCI group had a lower HDL cholesterol concentration than the AB group (1.1Â±0.2 mmol/L vs 1.3Â±0.3 mmol/L, $p < 0.05$). In SCI, apo B ($r=0.63$, $p<0.01$), small LDL particle concentration ($r=0.57$, $p<0.01$), and TAF ($r=0.36$, $p<0.01$) significantly correlated with PPLr AUC.

CONCLUSIONS: Although concentrations of LDL cholesterol and apo B were not different between SCI and AB groups after the 10-hour fast, concentrations of small LDL particles and apo B, and TAF correlated with PPLr in persons with SCI. An elevated baseline apo B level was associated with a greater PPL response, and each individually and collectively may increase the risk cardiovascular disease.

This project was supported by the Veteran Affairs Rehabilitation Research and Development Service (Grant #B4162C) and the James J. Peters VA Medical Center, Bronx, NY.

Michael A. Figueroa, Kinesiology

Co-Presenters: Peter DiStephano and Chris Poole, Graduate Students, and James Manning, Kinesiology

Aerobic Conditioning in Simulated Reduced-Gravity Environments

Purpose: The purpose of this study was to compare the effects of aerobic conditioning on land and in two simulated reduced-gravity environments. It was hypothesized that each training modality would elicit an improvement in aerobic capacity as measured by changes in peak oxygen consumption (peak VO2).

Methods: Nineteen subjects (males = 7, females = 12; age = 21.5 +/- 1.5 years) were randomly assigned to 1 of 3 groups: AlterG (AG) n=6, Treadmill (TM) n=6, Deep Water Running (DWR) n=7. Subjects trained 3 times per week for 8 weeks on non-consecutive days at 70-85% of their heart rate reserve (HRR). Pre and post-training measures of peak VO2, body composition and body mass index (BMI) were compared using a repeated measures ANOVA. Significance was set at $p<0.05$. Results: There were no significant differences between groups with regards to peak VO2 before or after 8 weeks of training. Although pre and post-training measures were not significantly different within each group, there was a trend towards significance with regards to improvements in peak VO2. Peak VO2 increased in each group as follows: AG (38.2 +/- 9.4 to 41.8 +/- 10.8 ml/kg/min), TM (35.5 +/- 7.0 to 39.5 +/- 7.5 ml/kg/min), DWR (37.6 +/- 8.3 to 45.7 +/- 9.2 ml/kg/min).

Conclusion: As a training modality for aerobic conditioning or rehabilitation, the simulated reduced-gravity environments allowed for comparable gains as land-based treadmill training. These findings are favorable since cardiovascular conditioning can either be improved or maintained without placing excessive strain on the musculoskeletal system.

Bela Florenthal, Marketing and Management Sciences

How to Help College Students Utilize LinkedIn to Promote Their Professional Identity

As competition for employment opportunities increases, maximizing self-marketing skills becomes critical, especially for college Graduates. Because professional networking sites (PNSs) are being used increasingly by recruiters, college Students should build and maintain their professional profiles on these sites as early as possible in their adult lives. At present, college Students are known to be the heaviest users of digital media and social networking sites (SNSs), but what about their use of PNSs? This paper aims to provide insight into whether and how Students use LinkedIn, a leading global PNS. Also, the role of higher education institutes in helping Students utilize PNSs is examined. In particularly, this research provides an example of how a marketing course can incorporate steps for Students to learn the benefits of LinkedIn and begin to utilize it more effectively.

Carol Frierson-Campbell, Music

Inquiry in Music Education: Concepts and Methods for the Beginning Researcher

Inquiry in Music Education: Concepts and Methods for the Beginning Researcher provides an introduction to research and scholarship in music education. This textbook covers topic formulation, information literacy, reading and evaluating research studies, and planning and conducting original studies within accepted guidelines, based on research conventions in music, the other arts, education, and the humanities. Electronic search tools, hands-on assignments, supplementary teaching materials and other resources are included on the companion web site (available January 2013).

Skills in research and scholarship introduce students to the language and protocols by which to succeed in today's competitive market of grant writing, arts advocacy, and public outreach as a contributing member of the community of music educators.

Following the legacy begun by Rainbow and Froehlich in Research in Music Education, published in 1987, the objectives of this book are (1) to expand what is meant by music education and research, (2) to help students find

their niche in those definitions, and (3) to teach tangible skills that are useful for music educators with diverse instructional goals and career aspirations.

This project was supported by the College of Arts and Communication 2012 Summer Research and Creative Activities.

Marie Friquegnon, Philosophy and Asian Studies
Buddhism and Free Will

The aim of this paper is to show the relation between some central philosophical concepts in Buddhist philosophy and the different ideas concerning free will and liberation held by Buddhists. I will argue that there are three distinct concepts of free will and liberation at work. First, Buddhists reject the idea that our actions are determined by the gods or by material causality. Nor are we completely constrained by karma. Second, Buddhists argue that our negative and self-centered actions are caused by mental reactions dictated by anger and hatred, jealousy and attachment, ignorance and fear. Shantideva, a Mahayana philosopher argues that we can no more blame someone for an immoral action, than we can blame fire for causing smoke. Third, in the Mahayana, the same determinist attitude does not seem to apply to selfless actions, which spontaneously spring from one's own enlightened nature.

Philosophically, the grounds for these views are as follows: 1. There is no proof that gods or caste cause behavior. 2. In samsara, causal processes govern all things. Therefore one's actions will be determined by circumstances and our reactions to them. These reactions are themselves governed by our inherited and developed emotional and intellectual characteristics. 3. Nirvana is not subject to causality. In response to the problem of how one can achieve nirvana or enlightenment, Mahayana/Vajrayana Buddhists argue that nirvana and samsara are two perspectives on the same reality. Unenlightened beings can only perceive samsara because they cannot take the perspective of nirvana. This is because their vision is obscured. One can through Buddhist practices, such as meditation, remove these impediments, and one will be able to experience nirvana. Then one's actions will be positive, spontaneous, selfless and free. One can only be free if one has freed oneself from the limitations of the self.

An earlier version of this paper was presented at the Columbia Society for Comparative Philosophy, April 24, 2009.

This project was supported by Assigned Released Time for Research (ART).

David Fuentes, Elementary and Early Childhood Education
Examining the Use of IPads in the ELL Classroom: A Design-Based Study

Due to its popularity in K-12 public schools, the iPad has sparked increased interest in potential benefits of mobile technology on teaching and learning in the classroom. Moreover, the rapid emergence of various M-learning (Melhuish & Falloon, 2010) devices has created paucity in research that reports on the practical nature of how the iPad can be used to further teaching and learning in the K-12 setting. While a few scholars have pointed to the emergence of the iPad as a M-learning tool (Stancil, 2010; Murray & Olcese, 2011; Freidman and Garcia, 2011), this research is in its infancy, and there is a particular dearth of research indicating how the iPad impacts content specific learning. Given the seismic shift in K-12 demographic populations in recent years, and the increased number of English Language Learners (ELLs) in K-12 schools, this research focuses on how the iPad can be used to facilitate ELL teaching and learning. Several apps have been launched with the promise of assisting learners in the process of English language acquisition. This study examines the intended uses of several apps geared for ELLs and reports initial findings about the connection between what the apps do and research on second language acquisition.

Leena George, Undergraduate Student, Nursing

Co-Presenters: Yasmin Shaikh, Amanda Segda and Nesmah Ahmed, Undergraduate Students; Faculty Sponsor: Nadine Aktan, Nursing

The Relationship between Perceived Stress and Eating Behaviors in College Students

The main purpose of our research is to explore how the factor of perceived stress directly affects eating behavior in the population of college Students. In this study, it is predicted that a positive relationship will exist between perceived stress and eating behaviors. The study will compare the results between Students from William Paterson University who are in the honors program versus the Students who are not in the honors program. The study will consist of 54 subjects recruited from the dorms. The results will be discovered with the aid of a Stunkard and Mesick's Three Factor Eating questionnaire as well as a Cohen's Perceived Stress scale.

David C. Gilley, Biology

Does the waggle-dance scent enhance the recruitment of forager bees 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. Waggle-dancing bees produce and release into the air a blend of chemicals that other bees release in only minute quantities, which stimulates a colony's forging activity. To fully understand the role of this apparent pheromone in the honey bee foraging-communication system, and to set the stage for applied research, 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 naíve foragers. To test this hypothesis, we trained bees from an observation hive to a feeder station, marked all experienced foragers at the feeder station, and then video-recorded the recruitment behavior of experienced foragers within the hive following introduction of the pheromone (or the solvent, as a control) into the hive. We detected a change in the number waggle dances, but not in the number of bees following each dance, after pheromone introduction. These results support at least one prediction of our hypothesis, thus demonstrating one mechanism by which the dance pheromone increase foraging activity.

This project was supported by Assigned Released Time for Research (ART) and the Center for Research, College of Science and Health.

Stephanie Guevara, Psychology

Faculty Sponsor: Amy Learmonth, Psychology and the Honor's College

Verbal Intelligence as a Predictor of False Memory

Literature on false memory tasks in children includes a finding that when children are provided with age-appropriate word lists, they are vulnerable to the creation of false memories (Carneiro, et al., 2007). In addition, there is a finding that children with intellectual disabilities demonstrate a higher incidence of false memories (*Henry & Gudjonsson, 2003). Winters, & Goettler (1973) suggest that children with lower IQ scores, and mental age, are more likely to recall critical words not presented in a DRM (Deese, Roediger, McDermott) list. These findings indicate that there could be a great deal of variability in children's susceptibility to false memory tasks, due in part to variance in intelligence.

The current study was designed to examine the effect of intelligence on susceptibility to false memory creation. The participants in the study are seven-year-old children all of whom are in second grade. The task consisted of a PowerPoint presentation that presented each of the fourteen words for a one-second period. All of the words were related to the non-presented term, 'book'.

Following the presentation of the word list, children completed a rough measure of IQ (Lawlis, n.d.) prior to being presented with a second list of fourteen words, that included the word "book," and asked to circle the words that they remembered from the PowerPoint. Scores for the IQ measure were calculated as a total, but also

broken into four subscales (vocabulary, language, spatial, math). Preliminary results show the language subscale as a good predictor of lure rejection.

Carrie Eunyoung Hong, Educational Leadership and Professional Studies
Reading and Writing to Learn in College: Promoting Literacy and Technology in First Year Seminar

College level literacy requires Students to think critically about their reading and effectively present their ideas into writing across various academic subjects (Griswold, 2006; Sommers & Saltz, 2004). Goals of post-secondary institutions are to prepare Students for academic success and promote a lifetime of intellectual growth and professional success. In pursuit of these goals, freshmen need models of how to read and write according to changing demands of college course work. The purpose of this study is to examine effectiveness of a project-based literacy instruction in a First Year Seminar course in which technology-integrated literacy projects are implemented. The study documents impact of the literacy projects that utilize various technology tools. Preliminary findings of this qualitative research study provide valuable insights of how different types of technology impact Student's literacy skills and overall performance in the First Year Seminar. The results of this project have potentials to foster integration of interdisciplinary approaches in teaching and research. Changing needs of literacy and technology among first year Students will be shared and discussed with the university community. Results of the study underline that technology-integrated literacy projects maximize the benefits of First year Seminar experience in preparing Students for 21st century skills.

Mihaela Jitianu, Chemistry
Co-Presenters: Darren Gunness, Undergraduate Student, Chemistry; Doreen E. Aboagye, Lehman College - City University of New York, Department of Chemistry; and Andrei Jitianu, Lehman College - City University of New York, Department of Chemistry
Sol-gel -- a pathway to pursue in synthesis of nano layered compounds?

Takovite, a natural mineral with the formula Ni6A12(OH)6CO3ï¬5H2O belongs to the large class of layered double hydroxides (LDHs) and contains positively charged Ni(II) and Al(III) layers alternating with layers containing carbonate ions and water molecules. Mesoporous takovite-type layered double hydroxides (LDH) of the general formula [Ni1-xAlx(OH)2]x+(CO32-)x/2ï¬nH2O with different Ni/Al molar ratios (1.9-2.8) have been successfully synthesized by the sol-gel method, followed by anionic exchange using nickel acetylacetonate and aluminum isopropylate as cation precursors. A single LDH phase and an anisotropic growth of very small crystallites (below 4 nm) has been evidenced by X-Ray diffraction. The effect of samples' composition on their structural and textural characteristics has been investigated. The BET surface area values are in the range of 100-122 m2/g. BJH pore radius decreased with increase in the Al(III) content in the LDHs. FESEM micrographs show large aggregates of highly porous LDH particles, while TEM analysis reveals irregular agglomerates of crystallites, among which some of them displayed a developing hexagonal shape. The average particle size variation with the Al(III) content in the samples follows the same trend as the pore radius, the sample with the highest Ni/Al ratio displaying also the smallest particle size. This sample is even more interesting, since TEM analysis shows agglomerates with inside circular structures, feature not observed for the other Ni/Al ratios investigated.
This project was supported by Assigned Released Time for Research (ART).

Joyce June, Undergraduate Student, Biology
Co-Presenters: Adonis Rivie, Undergraduate Student, Undergraduate Student, and Jaishri Menon, Biology, and Faculty Sponsor Kevin Martus, Physics
The Effect of Cold Atmospheric Pressure Plasma on Tail Regeneration of Tadpoles Xenopus Laevis

Healthy wounds require a balanced combination of nutrients and growth factors for healing and tissue regeneration. Additionally, nitric oxide (NO) -- a free radical is also crucial in wound healing processes and linked with production of several cytokines, interaction with other free radicals and influence on microcirculation. Hypothesize is that exposure to plasma will affect wound healing and tail regeneration in

tadpoles Xenopus laevis and plasma induced endogenous NO production may have an important role to play at the cellular level. Tail amputation was carried out by removing 40% of the tail and then immediately exposed the tail to the helium plasma. The helium plasma was generated inside a quartz tube with a single electrode powered by a low frequency AC voltage. For histological features, blastema (growing regenerate) was fixed in 4% neutral buffer formalin for paraffin sections. In situ staining for NO was carried out 5 days post amputation. Our results show that the rate of the regenerating tail was proportional to the plasma exposure time, being higher in 60s exposures but at the expense of metamorphic rate. Histological features show that the tadpoles exposed to the plasma flow showed higher level of cellular proliferation and microvasculature in blastema. In situ staining for NO also indicated its increased endogenous production compared to control. These findings suggest that accelerated wound healing and tail regeneration following exposure to helium plasma flow may be due to its direct effect on cell proliferation and increased NO production which may be involved in microvascularization.

This project was supported by Assigned Released Time for Research (ART), Research & Travel Incentive Award, and the Dean, College of Science and Health.

William D. Kernan, Public Health

Co-Presenters: Vanesa Apaza, Nichole Kershaw, and Stephanie Rudalf, Undergraduate Students, Public Health

Using Multiple Strategies for Community-Based Needs Assessment Based on the Strategic Prevention Framework (SPF)

Purpose: To gather information in the community by conducting a needs assessment based on the Strategic Prevention Framework model in order to learn more about substance abuse trends in Passaic County. Significance: To examine trends across the county in order to identify root causes and local conditions so that we may decrease substance abuse and misuse in Passaic County.

Methods: The needs assessment process consisted of key informant interviews, a policy scan and a prevention resource assessment. These were carried about by utilizing snowball-sampling methods, phone interviews, internet research and by using an internet questionnaire. Results: The Prevention Resource Assessment showed that while majority of prevention agencies have programs that target alcohol and drugs, 70% do not focus on designer drugs. The key informant interviews showed that alcohol (95%), marijuana (79%) and prescription drugs (42%) were considered one of the top three substances of use in each community while the Policy Scan revealed that policies regarding anything other than some alcohol violations are incredibly difficult to obtain.

Conclusion: The Needs Assessment process revealed gaps such as a lack of communication and information available to each community in Passaic County. Overall, more research needs to be done in order to better determine how to combat substance abuse in Passaic County.

This project was supported by the New Jersey Division of Mental Health and Addiction Services.

William D. Kernan, Public Health

Co-Presenter: Nichole Kershaw, Undergraduate Student, Public Health

College Students and Stress: The Impacts of Relationship Stress on Male and Female College Students

The move from high school to college often demands that college Students restructure family relationships, friendships as well as romantic relationships (Hicks & Heastie, 2008). Prior research suggests that female college Students experience greater stress from the quality of their friendships, romantic relationships, and familial relationships (Darling, McWey, Howard & Olmstead, 2007) whereas men are inclined to consider women as responsible for attending to their emotional needs (Gormley & Lopez, 2010). While the current literature reports findings on male and female coping strategies in regards to perceived relationship stress, there is little information on the psychological impact that a significant other holds on their romantic partner during the transition to college. The goal of this study was to examine how being in a relationship can influence male and female college Students' stress responses and decision making. A 20-item questionnaire was distributed in three classrooms. Fifty-two complete questionnaires were received and analyzed. Thirty-eight percent of

respondents agreed that they would end their romantic relationship if their course work began to slip as a result. When making an important decision, over half of the Students (52%) would choose to listen to a partner's advice. A full analysis of findings indicates that Students are able to recognize when their stress levels directly relate to their relationships. These results suggest that programs need to be offered to Students in order to help raise their level of self-confidence, enabling them to trust their own thoughts and make their own decisions.

Prabakar Kothandaraman, Professional Sales
The Influence of Trust and Interdependence on Specific Investments in Buyer-Seller Relationships

Firms are often faced with situations where they are asked to make specific investments in their ongoing exchange relationships. Such investments hold out the promise of enhancing the productivity and performance of the relationship. However, specific investments, by definition, have negligible salvage value outside the focal transaction or exchange relationship. Therefore, they may also increase the firm's vulnerability to opportunistic behavior by the partner. In this paper, we identify the types of extant exchange relationships in which a firm should undertake specific investments as well as those where a firm should avoid making such investments. Specifically, we report the results of three experimental studies that investigated the effects of two key dimensions of exchange relationships - trust and interdependence (in the form of own dependence, relative dependence, and total interdependence) -- on a partner's willingness to make specific investments in the focal exchange relationship.

This project was supported by the Institute for the Study of Business Markets (ISBM), The Pennsylvania State University.

Cyril S. Ku, Computer Science
Collaborative Agile Multi-Dimensional Unified Process

The development of large, complex, and innovative software systems has become more collaborative due to advances in telecommunication, internet, and wireless technology; and also driven by economic factors such as outsourcing and off-shoring. Collaborative software engineering has become very popular at different stages of the software engineering life cycle. In this presentation, I will discuss the collaborative efforts of our group of international researchers, working on the concept of building a Collaborative Agile Multi-Dimensional Unified Process and its model. We incorporated collaboration and management dimensions together with the technical and business dimensions of the Unified Process to make the existing 2-dimensional Unified Process into a multi-dimensional model. In addition, the methodology of the Agile Process will be used to carry out the collaborative software engineering life cycle process.

This project was supported by Assigned Released Time for Research (ART).

Jeung Woon Lee, Biology

Co-Presenters: Diane Asmar, Annabelle Beltran, Jennifer Fiorelli, Christina Demirjian, Undergraduate Students, and Robert Benno, Faculty, Biology

Autism and high tolerance to pain: understanding the biological mechanism using an animal model

BTBRs are a novel strain of mice that display autism spectrum disorder-like behaviors such as the repetitive motions, social anxiety/stress behaviors. My lab has reported BTBRs have extremely high tolerance to pain compared to control mice C57BL/6J. Absence of pain behavior was not mediated by abnormal spinal mechanisms, but possibly by a supraspinal pain-suppressing system (e.g. endogenous opioids). Our recent behavioral and neuroanatomical data showed BTBRs also have much higher body weights than age-matched C57/6Js, and high neuronal activity in the hypothalamic arcuate nucleus. The arcuate nucleus contains NPY neurons that mediate feeding behavior and b-endorphin neurons that participate in control of pain information.

Our data show that upon application of inflammatory pain stimulus, the BTBRs have much higher number of FOS+ neurons in the ARC compared to C57/6Js. These neurons were localized within the region where NPY

cells are concentrated. One of the subtypes of NPY receptor, NPY Y1, is found on b-endorphin cells in the ARC. Intracerebral injection of opioid receptor blocker or NPY antisera blocked insensitivity to pain in BTBRs.

Findings from my lab indicate the insensitivity to pain observed in BTBRs and autistic children may be related with the interplay between NPY and b-endorphin neurons in the ARC.

This project was supported by Assigned Released Time for Research (ART), Research Student Program, College of Science and Health, and the Undergraduate Student Research Program, Provost's Office.

Amy E. Learmonth, Psychology

Co-Presenters: Samiyah Brown, Nicole Caltabellotta, Alejandra Jimenez, and Derek Voyticki, Undergraduate Students, Psychology

When is it Actually Place Learning?

Recent studies using the MWM (Morris Water Maze) made the claim that instead of using place learning to solve the maze rats often use a simpler directional learning strategy (Akers & Hamilton, 2007). To distinguish directional responding and place navigation two variants of the task were developed that required direction or place responses. The current study used the software to create levels within Half Life 2. The participant had a first person view of a round circular arena housed within a large square room with twelve pictures on the walls as distal cues to navigate to the proper target location. In two conditions the circular arena moved randomly among eight different but overlapping places in the larger rectangular space. In the directional condition the target moved with the movements of the circular arena (thus maintaining its relative location within the pool) and for the place learning condition the absolute position of the target within the larger room remained the same even as pool moves over trials (requiring true place learning). In a control condition the circular arena did not move. Analyses indicated a significant difference in the number of correct trials between the three conditions $F(2,52)=4.46$, $p<.05$. The participants in the control condition outperformed those in the both movement conditions. The difference between the place learning group and the directional learning group was approaching significant ($p=.07$). Participants in the place learning condition outperformed those in the directional learning condition, indicating the place learning solution is preferred by human adults.

This project was supported by Assigned Released Time for Research (ART).

Amy Learmonth, Psychology

Co-Presenters: Nicole Caltabellotta, Alejandra Jimenez, Samiyah Brown, and Derek Voyticki, Undergraduate Students, Psychology

Competing cues and the development of landmark use

The relative importance of differential cues in spatial navigation can be studied by putting them in conflict. The studies discussed here are computer-based training studies in which participants learn to respond relative to either landmark or geometric cues. In one trial type, the correct response is relative to the location of a moving landmark; in the other trial type, the correct response is relative to the geometric properties of the figure. If a participant is given a test trial in which the two cues are in conflict, which preference is stronger? The initial experiment studied three-year-old, four-year-old, five-year-old and adult responses when presented with competing cues. Results indicated a main effect of age [$F(2,63)=6.86$, $p<.01$]. Five-year olds were not statistically different from adults, both groups almost unanimously favored landmark cues. The four-year olds and three-year olds responded more often to geometric cues, and with more errors. The current study is similar to the initial study, but all cues are in grayscale, rather than in color. In the initial study, the color of the squares varied from trial to trial in an effort to make the task engaging. There is some evidence in the data that the youngest participants made choices following a color rather than the rewarded location. In this study, all the choices are grey, removing the colors that distracted the youngest participants. Findings indicate that the youngest participants are making fewer errors in the all grey study. Data collection is ongoing.

This project was supported by Assigned Released Time for Research (ART).

Kem Louie, Nursing
Systematic review of the role transition of novice nurse faculty

There is a current nurse faculty shortage due to the aging of faculty and increasing retirements along with less competitive salaries teaching in nursing education. This nurse faculty shortage will affect the education of future registered nurses needed. Many schools of nursing are hiring clinical nurse experts to serve as clinical faculty with little formal education in teaching.

The purpose of this presentation is to provide a systematic review of studies which address the question of "What is the role transition of novice nurse faculty?" The studies will be analyzed in accordance to the hierarchy of evidence (Polit and Beck, 2008).

The findings show there is a paucity of research and evidence in this area of role transition of novice nurse faculty to guide them in achieving role competence. There is a need for more high quality research.

This project was supported by Assigned Released Time for Research (ART).

Alexandra Lucas, Undergraduate Student, Environmental Science

Co-Presenters: Kevin Johnson, Undergraduate Student, and Faculty Sponsor Jennifer Callanan, Environmental Science

Structural and Chemical Alteration to Chlorite As Influenced by Rain-Soil-Ash Interactions

Chlorite [(Mg,Fe)3(Si,Al)4O3(OH)10(Mg,Fe,Al)3(OH)6] is a common clay mineral in soils of northwestern New Jersey. These soils are often exposed to prescribed burning of the forests that they support. Studies have shown fire can alter soil clay minerals, including by chemical weathering in the sub-surface. This sub-surface weathering is not well understood. In an effort to better understand the impact of ash, produced by combustion of forest litter, on chlorite weathering, a laboratory-controlled experiment was carried out. Chlorite was weathered under simulated post-fire conditions for periods of one, two, three, and six months. Pure chlorite was exposed to solutions of rainwater, rainwater filtered through soil, ash, and soil + ash to simulate infiltration of rainwater through the fire-impacted soil. Following the weathering period, the chlorite + solution was filtered. The chlorite was examined for structural alteration by x-ray diffraction (XRD). The solutions will be analyzed for chemical changes by atomic absorption spectroscopy and by colorimetric spectrophotometry. The preliminary results of the XRD analysis indicate significant results for chlorite reacted with rainwater + ash. After 4 weeks of weathering the relative intensity of chlorite's d002 peak is 100% as compared to the d001, 003, 004 peaks that show variability. The same trend is observed for the d004 peak after 8 weeks. In addition, all peaks show an increase in d-spacing after four weeks of weathering. It is expected that chemical analysis will reveal significant differences in concentrations of Mg and Fe after 4-8 weeks of weathering in chlorite reacted with rainwater + ash.

This project was supported by Assigned Released Time for Research (ART) and the Student Worker Program, College of Science and Health.

Charles Magistro, Art
River Thames – great wall of china 2012 the Olympics

The Grant I received from the University, opened the possibility for me to buy the materials, enlarge my art work to the specifications required, ship it to China for the final framing to be included in the Thames River - Great Wall – Embrace the World, the Olympics in London 2012.

The Organizing Committee for the "Creative Cities Collection – Fine Arts Exhibition London, held a Gala Opening at the Barbican Centre, London, UK and coordinated with 2,000 artists from 76 Countries for this event. This was meant for the cultural Exchange between contemporary artists from the west and Chinese artists. There were demonstrations, performances by the most famous Opera singer from China, the famous Pianist, Lan Lan.

We then toured all of the artworks of the artists submitted from the 76 countries. The experience was great for networking and sharing ideas with other artists.

After the Opening Gala, we were able to go out and explore London Galleries and famous Museums. At the Saatchi there was a fascinating and innovative exhibition by several Korean artists, using a holographic technique to create a triptych work and another artist using broken porcelain welded together at unusual angles using gold foil, to mention just two, at the Tate Modern, Damian Hurst and Edvard Munch's collections were on display, at West Minster Abbey, I had not only a historical journey but also an incredible architectural experience. Buckingham Palace's Tour was of the Queen's Gallery and the State Rooms, which held A Jubilee Celebration of the last 200 years centered on how diamonds have been used by the British monarchs, Art in its own right. We then went to Paris and went to the Salvatore Dale exhibition and took the tour of the Rodin Museum and gardens.

I want to thank The Center for Creative Activity and Research Committee, Summer 2012 Grant monies for enabling me to experience a wonderful time with the art of Europe and Asia. I absolutely know that my experiences this summer will have a direct impact on my teaching and that I will be sharing this knowledge, which will stimulate my students in a new way beyond what they think they know.

This was supported by the College of Arts and Communication 2012 Summer Research and Creative Activities.

William J. Manzo, Undergraduate Student, Biology

Faculty Sponsor: Jaishri Menon, Biology

Programmed Cell Death by Reactive Oxygen Species in Tail of Tadpole, Xenopus laevis

During metamorphosis, anuran tadpoles undergo morphological, biochemical, and physiological changes in order to adapt to a different habitat. The process involves reorganization of the body plan and regression of the tail which are controlled by several pathways of apoptosis including autophagy. Autophagy induces cell death in regressing tail in response to reactive oxygen species (ROS). Several antioxidant systems regulate the presence of oxidant species such as superoxide dismutase (SOD), glutathione, catalase etc. Nitric oxide synthase(s) (NOS) leads to the production of nitric oxide (NO), a free radical, important in cellular signaling. We performed a cellular, biochemical and molecular analysis of SOD, catalase, NOS, in situ staining for NO and mitochondria in the tail of tadpoles Xenopus laevis. NO also has profound effect on the mitochondrial function as mitochondria possess their own NOS enzyme. Spatiotemporal distribution of SOD and catalase showed significant co-localization (overlap coefficient of 95%) during earlier stages of metamorphosis. However, during climax (just before the tail regression begins), there was a significant decrease in activity of these enzymes as well as a reduction in overlap coefficient (49%) which suggests an elevated ROS accumulation. Expression for nNOS and iNOS was found to be stage specific and both enzymes co-localized in epidermis and muscle tissues of tail, their expression being controlled by thyroxin. NO and mitochondrial staining also shows co-localization suggesting that NO is derived from mitochondria. These findings are discussed in terms of putative functional importance of ROS and mitochondria derived NO in programmed cell death in tail tissue.

This project was supported by Research & Travel Incentive Award, the Dean, College of Science and Health, and the Department of Biology, College of Science and Health (for both the research and travel portion of this project).

Kendall Martin, Biology

Co-Presenter: Ammar Ali, Biology, Undergraduate Student

Using DNase to improve the reliability of PCR detection of microbes

The presence of contaminating DNA can invalidate PCR detection of microbes particularly when using a highly sensitive PCR procedure such as nested PCR. Recent reports indicate that the commercially available polymerase (the most expensive component of a PCR reaction) can be a source of contamination. This is a relatively new phenomenon. While the level of contamination is low enough that most labs would not notice, in

research where small amounts of template DNA must be amplified at high rates, this contamination presents a serious problem. We had previously attempted to overcome our contamination problem by decontaminating the less expensive PCR reagents. Following these reports of contamination in the polymerase we expanded our decontamination effort to include decontaminating the polymerase and primers using heat labile (HL), double stranded (ds)-DNase to degrade unwanted traces of double stranded DNA. We varied the levels of temperature, reagent concentration, and incubation time. Our initial successful attempts at removing contamination required high levels of expensive enzyme that made the protocol impractical for daily use. We developed a novel method using high concentrations of HL-ds DNase in small volumes of undiluted polymerase at room temperature. This mix was then stored at -20 oC, without the recommended DNase inactivation. This allowed us to use the same DNase to decontaminate the PCR master mix at the lower concentrations needed there, and brought down the cost considerably. We increased the effective concentration of DNase in this second incubation adding most the water afterwards. This protocol worked well at lower cost.

This project was supported by Assigned Released Time for Research (ART) and the Student Worker Program, College of Science and Health.

Olivia Matthews, Undergraduate Student, Nursing

Co-Presenters: Andrea Recinos, Diana Scalici, and Rudensa Doda, Undergraduate Students, Communication Disorders; Noelis Peralta and Leah Kabrel, Undergraduate Students, Nursing; Faculty Sponsor: Lizy Mathew, Nursing

College Student Sleep and Academic Performance

College students seem to be the population that is most heavily affected by sudden overloaded schedules including classes, work, sports and other various extracurricular activities which can sometimes lead to insufficient amounts of sleep (Evans, 2011). Brown and Soper (2001) state "Students who experience academic difficulties do not realize poor sleeping habits may contribute to their problems." Deficiency of sleep seems to be taking a toll on college Students' overall academic performance. This quantitative correlational study examines the relationship between college Students' sleep and its effects on academic performance. The instrument "Pittsburgh Sleep Quality Index" along with a demographic questionnaire was used to obtain data. The survey measures sleep habits in seven different components in combination with a questionnaire of demographics to acquire the grade point average of among William Paterson college Students. With pending evaluation of the results, we hope to confirm a strong correlation between Students' sleep and their corresponding grade point averages. Taking into consideration various demographic differences among the Students, we are also determined to establish other possible significant correlations with our results.

Omar Mayorga, Undergraduate Student, Biology

Co-Presenter and Faculty Sponsor: Joseph Spagna, Biology

Abstract Title: Running performance and gait kinematics of a sand-adapted arachnid, Galeodes granti

Solifuges ("camel spiders" Arachnida: Solifugae) typically live in desert environments and run quickly on sandy substrates. To test the hypothesis that Solifugae are well-adapted to running on sand, we compared the running performance of the solifuge Galeodes granti, to three cockroaches: B. discoidalis and immature B. discoidalis, which are tropical, and A. investigata, a desert species. We then analyzed the solifuges' gait characteristics and compared them to those of spiders and scorpions. The animals were placed on a platform covered with a uniform layer of 0.3 mm diameter glass particles, similar to natural sand, ~1 cm deep. The platform was adjusted to four angles (0, 5, 10, 15, 20 degrees) and locomotion bouts were recorded using a high-speed camera. Comparisons of slopes of speed vs. angle showed that with increases in angle, solifuge performance was maintained, while the other species slowed. Each solifuge video (n=3 individuals, mean mass 1.7g, 34 total runs) was analyzed to measure periods of ground contact and swing phase for each leg across two step-cycles. These indicated that the solifuges used their 6 rear legs in alternating sets of three, analogous to the insect 'alternating tripod' gait. Average speed was 12 cm/sec, stride frequency was approximately 3 strides/sec, duty factor was 0.86. , and tripod synchrony factor was 0.62. Regression analysis revealed a significant relationship ($p < 0.01$)

between speed and step-frequency. The gait patterns of solifuges are more similar to those of scorpions than to comparably-sized spiders, which may reflect adaptation to their shared sandy habitats.

This project was supported by Assigned Released Time for Research (ART), Research & Travel Incentive Award, and the Dean, College of Science and Health.

Corrine McCarthy, Undergraduate Student, Psychology

Faculty Sponsor: Amy Learmonth, Psychology

Enhancing emotion recognition in a child with autism spectrum disorder: an intervention using The Transporters

The present experiment was designed to measure the effect of an intervention developed to help children with autism spectrum disorders identify emotions. The Transporters is an animated series developed at the University of Cambridge. Previous research has shown The Transporters' significant effect on improvement of emotion recognition. The participant, one Student in a special education preschool classroom, diagnosed with PDD-NOS, watched three to four episodes, five days a week. The participant was tested before and after the intervention on recognition of the emotions, happy, sad, sorry, afraid, and angry. The pretest and posttest included five questions on each emotion. A still shot of a Transporters scene and a description relating to the scene was presented. A question or situation was then presented to the child. Animated clips of a Transporters character were played. The participant chose which clip related most accurately to the question. The participant matched faces with faces (Charlie is feeling happy, who else is happy?), matched a face to an emotion (Who is feeling happy?), and matched situations with faces (William is taking Charlie across the estuary. That's his favorite thing to do. How is he feeling?). This study followed the guidelines provided in the previous study (Golan et al., 2009) as a first step to be sure that the child would benefit from the intervention when it was provided at school in a different country than the original research. An improvement in emotion recognition for afraid, angry and sad was found after the invention was implemented.

Loretta C. Mclaughlin-Vignier, Communication

Can Cell Phones Facilitate Test Taking

Mobile phones are not only the signature technology of today but an essential part of our students' lives. The cell phone thus offers real potentials for teaching and learning. While cell phones have many potentials for the classroom, test-taking is one area where students' comfort with this technology could prove useful. This research therefore compares test-taking via cell phones to test-taking using traditional paper-and-pen. Results of the pilot are reported here; a more complete study is under way.

Billy Mercedes, Undergraduate Student, Psychology

Co-Presenters and Faculty Sponsors: Natalie Obrecht and Thomas Heinzen, Psychology

Intergroup Interaction, Racism, and Racial Anxiety

This study adapted three scales to test whether there was a relationship between openness to intercultural interactions and racial anxiety: the Miami University Diversity Awareness Scale (MUDAS) (Mosley-Howard, et al., 2009), the Old-Fashioned Racism and Modern-Racism questions from Swim et al. (1995), and the Rudaizky and Macleod (2011) Anxiety Scale.

Previous results from the Miami University Diversity Awareness Scale (MUDAS) showed that Midwestern Caucasian Students were not as aware of diversity as the other ethnicities (Mosley-Howard et al 2009). In order to see whether living in a more diverse area increases openness to intercultural interactions, we used a sample from a highly diverse university in New Jersey where Caucasian Students comprised 47% of the Student body.

Results indicated that openness to intercultural interactions correlated negatively with racial anxiety and racism. As openness to intercultural interactions increased racial anxiety decreased ($r(145)= -.305$, $p= <.001$). Students who scored higher on the openness to intercultural interactions scale tended to score lower on the Old-Fashioned Racism and the Modern-Racism scales ($r(145)= -.304$, $p=< .001$; $r(145)= -.221$, $p= .008$), respectively. Overall, these results suggest that openness to intercultural interactions is associated with decreased racism.

Since, openness to intercultural interactions correlates with racial anxiety we decided to test whether Caucasians in our sample from New Jersey had greater openness to intercultural interactions scores than the Midwestern Caucasians in the Mosley-Howard et al. (2009) sample. We found that Caucasian Students in our sample had significantly higher openness to intercultural interactions ($t(72)=3.84$, $p< .001$).

Heather Miller, Undergraduate Student, Nursing
Faculty Sponsor: Kem Louie, Nursing
Dominican Republic Medical Mission Trip 2013

Sigma Theta Tau's (Nursing Honor Society) Region 14 teamed up with the Foundation for Peace to endeavor on a medical mission trip to San Pedro de Macoris, Dominican Republic in January of 2013. Nurse Practitioners, Registered and Student Nurses worked together to provide free primary medical care in the local communities. We provided health supplies and education to families with limited access to healthcare.

I am a senior nursing Student at William Paterson University who has been recently inducted into the Iota Alpha Chapter of Sigma Theta Tau International. I learned of the trip through a Student Nurses Association meeting and jumped at the opportunity. As a nursing Student, this was an enriching experience. I was able to experience something that most nursing Students will never have the opportunity to do. I worked in a community setting where I could triage, assess, and treat a vast number of people in a short amount of time. I gained a great deal of knowledge and confidence in my assessment and decision making skills. This trip made me think about my future in Nursing. The gratification of helping others encouraged me to continue my education and give back to the community. This experience made me realize that I have a lot to offer in the world of health care.

Dilma Monastario, Undergraduate Student, Accounting and Law
Co-Presenters: Melissa Strong, Neel Jani and Michael Salocha, Undergraduate Students, Marketing & Management Sciences, and Maureen Lerner, Undergraduate Student, Accounting and Law; Faculty Sponsor: Jorge Arevalo; Marketing and Management Sciences
Clean Development Mechanism: A view from North America, Central America and the Caribbean

The Kyoto Protocol sets obligations on industrialized nations by restricting the amount of carbon emissions they may be allowed to produce. The Protocol was introduced by the United Nations over a decade ago and so far 37 nations have committed to it by opting to reduce their emissions. Clean Development Mechanism (CDM) involves projects that have been proposed by the UN in accordance with specific nations to create projects that are economically stimulating and also provide cleaner solutions for the natural environment. The purpose of this paper is to look into the social and economic structure of developing countries in Central and South America. Drawing on various business models and key theories, we discuss sustainability and CSR initiatives for a select group of countries in the regions. Our case proves that CSR is a very necessary feature in any business that has interests internationally because it helps improve the working environment, which enhances production efficiency and quality. CSR activity thus attracts or solidifies business within a particular country. We note that there are Clean Development Mechanisms which are in progress for more than several years and are beginning to show their significance within these nations. These CDM projects will have significantly positive impacts in the respective countries as it may be the necessary element needed to help the countries not only further themselves, but prove to the already developed countries that they are capable of sustaining their development. We conclude the case by providing a discussion on the implications for CSR managers who are considering a CDM activity, or related sustainable funding initiative.

Geraldine Mongillo, Educational Leadership and Professional Studies

Co-Presenters: Rochelle Kaplan, Educational Leadership and Professional Studies, and Dorothy Feola, Associate Dean, College of Education

An Examination of the Questioning Behaviors Used by Effective Elementary Mathematics and Literacy Teachers

The purpose of this study is to examine the communicative interactions used by effective elementary mathematics and literacy teachers. The data for this presentation are from a larger cross-cultural study involving 12 first and second grade teachers in New Jersey and Israel. Data presented for this paper is drawn from two U.S. second grade teachers. The teachers, who were identified by their principals as effective, were video-taped during two mathematics lessons and two reading lessons and were interviewed after each lesson. Two of the New Jersey teachers worked in a low SES, bilingual school and two of the teachers worked in an affluent monolingual school. Specifically, this paper focuses on the identification and evaluation of the types of questions used in teaching the mathematics and literacy lessons. We are particularly interested in the function and purpose of the teachers' questioning choices.

This project was supported by Assigned Released Time for Research (ART) and the Dean, College of Education.

Barry Morgenstern, Communication

Finca GiraSol: The Green House

This photographic documentary presents the master craftsmen, materials and process stages of constructing "The Green House." Designed by the filmmakers and built by three master craftsmen and their four assistants this house was built over a period of eight months. Handcrafted in Colombia, South America, this house is 90-93% environmentally green and is located on a natural bird sanctuary/habitat established over the past decade by the filmmakers.

This project was supported by the College of Arts and Communication 2012 Summer Research and Creative Activities.

Amanda Muraca, Undergraduate Student, Chemistry

Co-Presenters: Michael Stamper, Undergraduate Student, Chemistry; Naphtali O'Connor, Lehman College - City University of New York, Department of Chemistry; Ravnit Kaur-Bhatia, Lehman College - City University of New York, Department of Chemistry; Andrei Jitianu, Lehman College - City University of New York, Department of Chemistry; and Faculty Sponsor Mihaela Jitianu, Chemistry

Visible light sensitive Nitrogen-doped Titanium dioxide based composites. Synthesis and photocatalytic applications

Many organic compounds can be decomposed in aqueous solution in the presence of TiO2 powders under irradiation with near ultraviolet light into carbon dioxide and water. When titanium dioxide (TiO2) absorbs ultraviolet radiation from sunlight or is illuminated by a light source (fluorescent lamps), it will produce pairs of electrons and holes. Consequently, to keep the photooxidation process going, it is necessary to avoid accumulation of the electrons on particles to ultimately avoid their recombination with the holes. Recent studies revealed that N-doped TiO2 has received attention as a promising photocatalyst for extending the light absorption of TiO2-based photocatalysts towards the visible-light range. Besides, N-doped TiO2 eliminate the rapid recombination of excited electrons/holes during photoreaction. We have created N-doped TiO2-LDH composites that may benefit from a synergistic outcome of preventing recombination of electrons in the photocatalytic reactions, by combining the beneficial effect of the LDH layered structure and that of the N-dopant. Layered double hydroxides, LDHs, are lamellar mixed hydroxides, relatively easy and inexpensive to synthesize in the laboratory. Their structure is based on stacking of positively charged layers with anions and water that confers relatively high mobility to the anions. Composites containing N-doped TiO2 and Mg-Al-LDH have been synthesized using Titanium (IV) isopropoxide and urea as nitrogen dopant for TiO2 component, while the LDH constituent has been prepared starting from the corresponding Mg(II) and Al(III) nitrates. Composites have been tested for photocatalytic decomposition of vanillin, showing a high conversion rate into carbon dioxide and water.

This project was supported by Center for Research, College of Science and Health.

Neeraja Nannapaneni, Graduate Student, Kinesiology

Co-Presenters: Alan Hsieh, Graduate Student, and Faculty Sponsor Jason Wicke, Kinesiology

Kinetics of a Fastball and Curveball Pitch

Baseball is a sport in which a few-inch difference in where a ball crosses the mound when being pitched can result in a strike out versus a home run. One biomechanical aspect of the pitching motion that has not been examined fully is the kinetic (forces and moments acting about a joint) comparison of the fastball pitch and the curveball. With this knowledge, coaches can make the minute changes to a pitching pattern resulting in the ball travelling at higher speeds or with a more pronounced path that makes it difficult for the batter to hit it. The OptiTrack Motion Capture SystemTM with six motion cameras will capture the 16 joint reflective markers position during a fastball and curveball pitch from 20 college level pitchers. Statistical analysis will include an analysis of variance with the dependent variable being the kinetic parameter at different joints and at different phases of the pitch and the independent variable being the categorized pitch ability. The results of this study will be prepared as an abstract for the International Society of Biomechanics in Sport and as a manuscript for Sport Biomechanics journal.

This project was supported by the Human Motion Research Lab, Department of Kinesiology.

Elena Noonan, Undergraduate Student, Environmental Science

Co-Presenters: Kevin Johnson, Undergraduate Student and Faculty Sponsor Jennifer Callanan, Environmental Science

A Re-analysis of Fire-Impacted Soil in Northwest NJ

Forest fires can cause changes within the soil profile upon which it occurs. These changes are chemical and physical. An investigation took place in Frelinghuysen, NJ in 2009, which suggested that the mineral chlorite within the soil was weathering over time due to fire impact. A current burn in 2012 at the same location allows for the opportunity to repeat the study and include a complete soil analysis. Soil from this site was collected at one, two, three, and six-month intervals after the burn took place. Phase one of this study included measuring soil pH, soil organic content, soil water content and soil particle size in William Paterson University's environmental laboratory to determine any changes occurring within the soil profile over this time period. These soil properties may contribute to a mechanism causing chlorite weathering to occur. Preliminary data suggests non-significant alterations of pH, organic content, and particle size distribution. Phase two of this study is currently in progress and includes CHNS/O analysis of inorganic carbon, ICP-OES analysis for exchangeable ions, and soil color and porosity. Phase three of the project will take place over the summer and will consist of XRD analysis to observe structural weathering of the chlorite mineral.

This project was supported by Assigned Released Time for Research (ART) and the Student Worker Program, College of Science and Health.

Natalie Obrecht, Psychology

Co-Presenter: Dana Chesney, Department of Psychology, Post-Doctoral Fellow, University of Notre Dame

Sample Representativeness Affects Whether Judgments are Influenced by Base Rate or Sample Size

We investigated how people use base rates and sample size information when combining data to make overall probability judgments. Participants considered two samples from an animal population in order to estimate the probability of that animal being aggressive. Participants' judgments were influenced by subpopulation base rates when they were provided and linked to specific samples. When samples were not identified as coming from different subpopulations, judgments typically reflected sample size information. We conclude that 1) People can use base rates when combining samples to make an inference; 2) People can correctly use sampling information to determine when to use base rates, and 3) People are able to consider base rate and sample size

information at the same time. Additionally, we found that individuals' numeracy correlates with the extent to which base rate and sample size information is used.

This project was supported by Assigned Released Time for Research (ART) and by a Summer Research Stipend awarded to the first author by the Research Center for the Humanities and Social Sciences at William Paterson University.

Brian O'Broin, English
Conflict and Liberal Arts Pedagogy up to (and beyond) the First World War: How the Presentation of War Changed in Western Culture. Moderator

Jacqueline DeSanto, Undergraduate Student, Sigma Tau Delta (English Honors Society): *How Attitudes to War Changed in Western Literature after World War One*
Lori Hoffman, Undergraduate Student, Sigma Tau Delta (English Honors Society): *The Teaching of War in the Modern American Classroom*
Richard Siegler, Undergraduate Student, Phi Alpha Theta (History Honors Society): *How Conflict Globalized in the Wake of the Napoleonic Wars*
Lindsey Freedman, Undergraduate Student, Phi Alpha Theta (History Honors Society): *Civilian Involvement in and Reaction to the Battle of Gettysburg*

John O'Gorman, Undergraduate Student, Economics, Finance and Global Business

Co-Presenters: Cynthia Buchelli, Undergraduate Student, Accounting and Law; Christian Campos and Cheire Lozaw, Undergraduate Students, Marketing & Management Sciences; and Jordany Rodriguez, Undergraduate Student, Economics, Finance and Global Business; Faculty Sponsor: Jorge Arevalo, Marketing and Management Sciences

A Quest for Clean Development Mechanisms and CSR: The Similarities Found in Diverse Regions of the World

This is a case study for Clean Development Mechanism (CDM) focusing on diverse regions of the world. Our group investigates the issues and CSR challenges in developing nations that are rarely studied and addressed in the academic literature. We provide a brief discussion on some of the CDM projects implemented in these regions. During our research, we found several commonalities. Some of these regions, for example, are looking into more efficient and effective ways of supplying electricity to decrease the dependency on fossil fuels (coal, oil, gas, and paraffin). It is important to remark that the objective of CDM it to reduce the emissions of greenhouse gases (GHG) in compliance with the Kyoto Protocol. In order for our team to be able to provide an explanation of the environmental problems each region faces, we have performed a detailed analysis about the location, culture, and social problems affecting these countries. We visualized these locations through the facts we gathered and the characteristics of the projects in place. We have also become aware that some of these CDM projects were funded by private companies and some public organizations outside these countries jurisdictions. In addition, we find that some of the reported CSR challenges in these countries are similar to the challenges in some African regions - yet we integrate the common problems in a way that makes parallel sense. Consequently, we decided to arrange this case study by providing first a brief summary of important facts and statistics of each country, then by describing the CDM projects implemented in these regions, and lastly by commenting about the companies or organizations that made these projects possible. The conclusion will summarize the information provided within this research paper. Certain questions will be posed and answered as well as looking to the future of Corporate Social Responsibility in developing nations.

Emmanuel S. Onaivi, Biology
Neurobiology of Drug Addiction and the Cannabinoid System

It is an exciting time for brain research with new technologies and approaches in understanding brain function and dysfunction. We know so much about the brain yet we know so little in treating brain disorders like Schizophrenia, Alzheimer's and Parkinson's disease or drug addiction. It has become clear that drug addiction is not a moral failure but a complex neuroadaptive process and chronic relapsing brain disease characterized by

compulsive drug use despite adverse consequences to the individual and society. Developmental, genetic, epigenetic and environmental risk factors have been linked to molecular neurobiological mechanisms in drug addiction.

Significant progress and advances have been made in understanding the neurobiology of drug addiction but major gaps remains. New strategies, like epigenetics and optogenetics may open novel therapeutic approaches in the era of pharmacogenomics to individualize drug addiction treatment. Similarly, significant advances have been achieved in marijuana and cannabinoid research, with the discovery of endocannabinoids (eCBs) in animals and humans that are components of an elaborate and ubiquitous endocannabinoid system (ECS). The ECS consists of eCBs, their synthesizing and degrading enzymes, and the genes encoding cannabinoid receptors (CBRs) - CB1Rs and CB2Rs. CB1Rs have been well characterized and are known to be abundantly distributed in mammalian CNS and peripheral tissues. However, the functional neuronal expression of CB2Rs in the brain has been much less well studied and characterized. The CNS effects of CB2Rs from mice to human subjects have been evaluated. Multidisciplinary approaches including RT-PCR, genotyping, immunoblotting, hippocampal cell cultures, immunoelectron microscopy, and stereotaxic techniques with behavioral assays were used to determine the CNS effects of CB2Rs. CB2Rs and their gene transcripts are expressed in the brains of mice and rats and are modulated following exposure to stressors and administration of drugs of abuse and intracerebral microinjection of CB2 anti-sense oligo modulated mouse behavior in the plus-maze test. Cannabinoid induced behavioral changes and CBR gene structures differ across species notably in motor function and emotionality tests in rats and mice. We discovered two isoforms of CB2Rs; CB2ARs are localized in the brain and testis whereas CB2BRs are in immune cells in the periphery. There is high incidence of Q63R polymorphism in the CNR2 gene in schizophrenia, eating disorders, depression and alcoholics in the human population investigated. The genes encoding the components of the ECS and their gene products are major therapeutic targets in many disorders and in drug abuse and addiction and our data provide a basis for further studies.

This project was supported by Assigned Released Time for Research (ART) and an award from the National Institutes of Health (DA032890).

John Parras, English

Song of Magsaysay: A Fiction Reading and Discussion

A reading of original fiction followed by question/answer discussion. "Song of Magsaysay" is a novella that takes place during the Huk insurgency in the Philippines in the late 1940s and early 1950s--a civil war that pitted Filipino nationalists against the American-backed Philippine government. The novella centers on a giant historical figure who played a crucial role in the counter-insurgency campaign: Ramon Magsaysay, the Philippine military officer who as Secretary of National Defense made huge inroads battling the Hukbalahap insurgents, and who later became President of the Philippines.

This project was supported by Assigned Released Time for Research (ART).
This is presented as part of the Program in Writing and Rhetoric and Department of English's Living Writers Series.

Amante Pascua, Undergraduate Student, Nursing

Co-Presenters: Nicole Seerattan, Natasha Abella and Richie Him, Undergraduate Students; Faculty Sponsor: Lizy Mathew; Nursing

Self-efficacy and Health Promoting Lifestyles in University Students

Previous studies have indicated that self efficacy has a direct relationship with health promoting lifestyle (Jackson, Tucker, & Herman, 2007; Sullum, Clark & King, 2000; Brannagan, 2010). A study by Jackson and colleagues (2007, p. 72) found that "participants who placed a higher value on health and on health self- efficacy tended to also have a greater involvement in a health- promoting lifestyle." This study entitled "Self-Efficacy and Health Promoting Lifestyles in University Students" is a quantitative correlational study. The study was conducted to observe any possible relationships between self-efficacy and a health promoting lifestyle. The instruments used to detect relationships between the two variables are the SRAHP scale and the HPLP2 scale

and the sample size for this study was among 75 William Paterson University Students, varying from freshman to seniors. The data will be collected and analyzed for summarized results, potentially leading to the formation of any possible relationships between self-efficacy and health promotion.

Cesar Perez-Alvarez, Marketing and Management Sciences

Co-Presenter: Mahmoud Watad, Marketing & Management

The Impact of Organic Processes on Group Creativity in Distributed Environments

Group performances, in general, and creativity, in particular, depend on the mode of coordination used in group processes, a factor which in turn is determined by the level of complexity of the group's task. According to the extant literature, an organic process is a vital element, a pre-condition to creativity. This paper explores the way in which the relationship between task complexity and level of process organicness affects group creativity. Contrary to a widespread belief in the literature, this study concludes that the match between task complexity and process organicness does not have an impact on group creativity. The implication of the study is that creative outputs are not necessarily generated by organic group processes. Consequently, managers and team leaders are expected to grant working groups some level of standardization in their processes to foster high levels of creativity.

This project was supported by Assigned Released Time for Research (ART).

Cesar Perez-Alvarez, Marketing and Management Sciences

Co-Presenter: Mahmoud Watad, Marketing & Management, Professor

Cultural Differences in Information Technology Settings: Impacts on Creativity and Knowledge-sharing

This paper examines the dynamics of a multicultural workforce in IT units and the potential that cultural diversity has in impacting the effectiveness of the work environment. The research approach is exploratory in nature and attempts to provide insight into the relationships existing amongst cultural diversity, creativity, and knowledge-sharing. According to the findings of the study, there appears to be patterns of behavior among IT people that are attributable to their different cultural backgrounds. Moreover, it seems that those patterns impact knowledge sharing and creativity among them. Given the exploratory nature of this study, the findings may have limited generalizability. However, this study is important for practitioners in the sense it emphasizes the need for managers to (i) encourage their employees to share knowledge and opinions as a way to enhance creativity; and, (ii) adjust their managerial style if they are to overcome their own cultural barriers.

Lena Qasem, Undergraduate Student, Nursing

Co-Presenters: Nataliya Podlozhnyuk, Julia Dickson and Ogechukwu Adinde, Undergraduate Students; Faculty Sponsor: Nadine Aktan, Nursing

The Relationship between Exercise and Self-esteem in Undergraduate Students

Relationships between the two variables of exercise and self-esteem have been examined in varying age ranges. This study explores the relationship between exercise and self-esteem in Undergraduate university Students. The subjects are 54 Undergraduate university Students from William Paterson University who will complete the Rosenberg Self-Esteem Scale and the International Physical Activity Questionnaire. Data will be analyzed using various statistical correlations and regressions with SPSS. The results will be fundamental in understanding the correlation between exercise and self-esteem.

Kara Rabbitt, Humanities & Social Sciences

Co-Presenters: Pei-Wen (Winnie) Ma, Psychology; Benjamin Vilhauer, Philosophy; Ming Jian, Languages & Cultures; and Theodore Cook, History

Understanding Asia

HSS Senior Faculty Research Panel: An interactive, interdisciplinary discussion of recent research findings as they relate to the broader question of "Understanding Asia." **Pei-Wen (Winnie) Ma (Psychology)**: Dr. Ma will

present her research on family conflict over career decisions among Chinese immigrant families. This is a qualitative study that explores the experience of first and second generation Asian American adults dealing with this situation. The talk will highlight the conflicting traditions, values and expectations between US and Asian cultures and outline strategies that the study's participants found helpful in negotiating these generational conflicts. **Benjamin Vilhauer (Philosophy)**: Dr. Vilhauer will present his work on free will, the idea that the individual self has control over and therefore moral responsibility for its actions. Philosophers steeped in European traditions often view free will as fundamental to an understanding of life. However, some Asian philosophical traditions (including Taoism and Buddhism) have questioned the concept of the individual self as a locus of control for even longer than European traditions have been wedded to it and provide ways of understanding life that do not rely on free will. Given that developments in neuroscience and experimental psychology in recent decades have cast new doubt on the idea of free will, increasing awareness on the part of European-influenced philosophers of the different ethical and psychological paradigms available in Asian traditions can help move philosophical understanding forward. **Ming Jian (Languages and Cultures)**: Dr. Jian will discuss his research on the fiction of Gao Xingjian, Chinese writer and the 2000 Nobel Prize laureate in literature. Gao Xingjian's maxim "Writing is a way of life" has quintessentially expressed his fundamental understanding of literature and life. This presentation discusses how this philosophical understanding informs Gao Xingjian's fiction (e.g. writing as a way to purposefully forget the past and to create one's being in the text and in the act of writing) and how it impels him to seek fresh narrative strategies such as fictional autobiography using tripartite pronouns as main characters, a fragmented discursive mode, etc. The presentation will also compare Gao Xingjian with another Chinese writer, MoYan, the 2013 Nobel Prize laureate in literature, to explore the special meaning of "writing as a way of life" for writers in communist China. **Theodore Cook (History)**: Dr. Cook will provide a brief overview of his long-term research on "War and Memory in the Shaping of Japanese Culture," particularly addressing the problem of "capturing" war memory for posterity and the challenges of conveying to the future the experiences of the past. Using Japan as a case study, the talk will also reference war imagined—exploring the way war as depicted in the literary arts, painting, music, film, and scientific prognostication can impact collective memory of the event. The panel will be moderated by Kara Rabbitt.

Amir Rahmoun, Undergraduate Student, Marketing and Management Sciences

Co-Presenters: Lin Zhang, Matthew McDonough and Naser Nassar, Undergraduate Students, Marketing & Management Sciences, and Dorothy Hartley, Undergraduate Student, Accounting and Law; Faculty Sponsor: Jorge Arevalo, Marketing and Management Sciences

South America CDM and Innovation: What Developed Nations Can Take Away from Sustainability Initiatives in Developing Nations.

Currently, there are many different CDM projects being promoted throughout South America. The purpose of writing this case is to outline some of the similarities as well as differences found among countries and their CDM activity. Through various researches and by using the CDM website we have been able to find much information on some of their projects including the amount of time that some of the projects take to be in full effect. Initially, we find there are many projects being proposed in the region, but only some are passed - making it critical for top management teams in considering projects depending on their urgency and importance. We also find that the impact on society after learning of the CDM projects should be a positive experience as one of the main concerns in the world today is whether there will be a sustainable world for the future generations. In this research, we also find CDM funding and support should encourage corporate social responsibility because these projects are promoting positive changes and a better way of life. Assuming many of these projects report positive and measurable outcomes, it will definitely make the world a much cleaner place to live. In reality however, there needs to be more additional funds to support CDM projects from start to finish. CDM activity in South America can also bring positive and creative outcomes to the rest of the world as these developing nations are preparing themselves for a cleaner, more sustainable environment.

Michael Rees, Art

Collaborative exhibition with 3D software and 3D Printing

In 2012 I won a COAC grant to support the manufacture of physical models made from a collaborative process that employs 3d software and automatic manufacture. Two artists Robert Gero & WPUNJ faculty Michael Rees developed a strategy to co-create a series of artworks over a period of several years. These works are forms that generally begin with contextual architectural elements derived from the site of exhibition, for example, the floor plan of the gallery, and other localized features. These virtual files become the core structures or null objects that are added to, morphed and modified in multiple iterations using 3D modeling software. The digital files are passed back and forth between Gero & Rees creating a networked 'ground of play' that will extend itself, as adaptive potentiation, finally resulting in objects that are extensive transitive structures. The COAC grant supported the manufacture of these objects by providing material for the rapid prototyping machine that is part of the Center for Computer Art and Animation Lab. Work from this project will be exhibited at the Trois Gallery at the Savannah College of Art and Design in Atlanta, GA from June 23-September 12, 2013.

This project was supported by the College of Arts and Communication 2012 Summer Research and Creative Activities.

Khushnuma Sabavala, Graduate Student, Biology

Co-Presenters: Melissa Gallo, Graduate Student, and Faculty Sponsors Joseph Spagna, and Miryam Wahrman, Biology

Interaction of Bacteria with Spider Silks

Spiders produce silks for a variety of purposes, including shelter, foraging, and protection of eggs. Spider silks resist breakdown in nature, can persist for long periods, on the order of entire seasons, and have long been assumed to have some resistance to bacteria. As part of a research program investigating the affinities of bacteria to various natural and synthetic textiles, we studied the interaction of bacteria with spider silk. To test the hypothesis that spider silks have surface properties that repel bacteria, we inoculated 3 silk types (web-anchor silk from an orb-web spider, burrow-lining silk from a tarantula spider, and egg case silk from an orb-web spider) with 3 types of bacteria- E. coli, S. epidermidis, and B. subtilis. The inoculated silks were stained with safranin and crystal violet, in succession. This novel protocol helped produce maximal contrast under the microscope, and allowed us to view the bacteria and the silk surface simultaneously. Compared to control slides, the different types of spider silks showed different tendencies to associate with the bacteria; this may be a reflection of the importance of bacterial resistance by these three silk types in their varying functions in nature.

This project was supported by Assigned Released Time for Research (ART).

Natalie Santillo, Undergraduate Student, Kinesiology

Co-Presenters: Patricia Escamilla, Undergraduate Student, Jason Wicke, James Manning and Faculty Sponsor Michael A. Figueroa; Kinesiology

Validation of ACSM Metabolic Equations in an Anti-Gravity Environment: A Pilot Study

Purpose: The purpose of this study was to evaluate whether the ACSM metabolic equations of walking and running would correspond to the differential air pressure (DAP) technology used in the AlterG anti-gravity (AG) treadmill. Methods: Oxygen consumption (VO2) and caloric expenditure were monitored for each subject at 100%, 90% and 80% of body weight (BW). Participants were tested once at each %BW, with two weeks in between each test. Measured VO2 was then compared to calculated VO2 (VO2Calc) at each stage using an ANOVA with repeated measures ($p<0.05$). Results: Significant differences were found between VO2Calc and measured VO2 during the last 3 stages of 100% BW, stages 2-5 at 90% BW, and during all stages at 80% BW. Conclusion: Results found that the ACSM metabolic formulas are not precise when training in an AG environment. Exercise intensities, as per ACSM guidelines, would be below the recommended level. This could lead to discrepancies between caloric expenditure and measured oxygen consumption when using this modality of exercise. New metabolic formulas specific to an AG environment are necessary for an accurate exercise prescription.

This project was supported by the Research & Travel Incentive Award and the Undergraduate Student Research Program.

Amanda Schaefer, Undergraduate Student, Nursing

Co-Presenters: Nicole Fittizzi, Cassandra Jung, Danielle Kramer and Emily Miller, Undergraduate Students; Faculty Sponsor: Lizy Mathew, Nursing

The Effects of Stress on Eating Habits

College Students endure a great deal of stress that may lead to changes in their eating habits. Whether it is academics, athletics, or home life situations, college Students are susceptible to negative effects on their health. This is a quantitative correlational study and the purpose is to determine if there is a correlation between levels of stress and eating habits. The two concepts being studied may prove to have a positive relationship. The instruments used are "The Compulsive Eating Scale" and "The Perceived Stress Scale." The population for the study is college Students on the William Paterson University campus. Data is being compiled to further analyze the findings and will be completed within the next few weeks.

Sharon Simmons, Marketing and Management Sciences

Liabilities of Informality and the Competitive Advantages of Formality in the Informal Economy

While strategic resources have remained a central and enduring facet of organizational research for decades, their antitheses - strategic liabilities - have largely remained in the periphery. This paper introduces a novel strategic liability to the organizational literature; one which is commonly endured by organizations around the world - a liability of informality. Drawing upon resource based theory, we explicate the construct and hypothesize its consequences on the orchestration of resources in the context of informal firms competing with formal firms. We empirically test these hypotheses on a large sample of African firms and demonstrate means by which formal firms may exploit liabilities of informality to sustain competitive advantages over informal competitors. We focus on four competitive capabilities that provide competitive advantages to firms in developing and emerging countries: flexibility, delivery, quality and cost. Our findings suggest that flexibility, delivery and quality capabilities provided by simple resources such as websites and quality certifications can provide formal firms with a competitive advantage over informal firms doing business in the informal economy. A cost-based capability of formal firms from access to financial institutions, however, was not found to be a liability of informality.

Brandon Sinisi, Undergraduate Student, Psychology

Faculty Sponsor: Natalie Obrecht; Psychology

The Relationship Among Empathy, Social Anxiety, and Public Self-Consciousness

Previous research has shown that individuals with socially anxious tendencies in a non-clinical group scored significantly higher than controls on concern over mistakes, doubts about action, and public self-consciousness (Saboonchi, Lundh, and Öst, 1999). The concept that individuals with socially anxious tendencies are more aware of negative evaluation has been supported. For example, a study that examined a clinical sample of individuals with social anxiety found that those that met criteria for social anxiety were more likely to recognize critical faces. In contrast, individuals without social anxiety were more likely to recognize accepting faces (Coles & Heimberg, 2005). This fear of being negatively evaluated allows individuals with social anxiety to adjust their behavior accordingly to prevent future negative evaluations. The current research will test whether the fear of negative evaluation along with high levels of social anxiety predict high degrees of empathy toward others. This relationship is predicted due to the precautionary demeanor that people with socially anxious tendencies may feel during social interactions. The study design will include Undergraduate Students that will be evaluated for empathy, socially anxious tendencies, and public self-consciousness in an online study.

David Slaymaker, Biology

Co-Presenter: Michael Peek, Biology

Genotypic Diversity in Native and Restored New Jersey Populations of Ammophila breviligulata (American Beachgrass)

New Jersey's coastal dunes provide natural beauty and infrastructure protection for the state's coastal communities. The importance of coastal dunes -- both natural and engineered/restored -- has become increasingly clear in the aftermath of hurricane Sandy, where communities with coastal dune fared better than communities without. Since the 1970's, stabilizing New Jersey's engineered coastal dunes has involved single-genotype restorative plantings of the 'Cape' variety of American Beachgrass (Ammophila breviligulata). However, it remains an important question whether single-genotype plantings provide sufficient long-term sustainability and function. To establish a benchmark of native beachgrass diversity we used ISSR markers to measure genotypic diversity in three native New Jersey A. breviligulata populations. Our results show that moderate to high levels of genotypic diversity occur in all three populations. To compliment this work, we used the same ISSR markers to assess genotypic diversity in two well established, restored A. breviligulata populations, and found zero to low levels of genotypic diversity. Implications for future dune restoration practices will be discussed.

This project was supported by Assigned Released Time for Research (ART) and the Center for Research, College of Science and Health.

David A. Snyder, Chemistry

Applications of Covariance NMR and Extensions to the FindCore Algorithm: Key results of the Snyder Research Group in 2012-2013

Nuclear Magnetic Resonance (NMR) is a powerful tool for the elucidation of molecular, including such complicated macromolecules as proteins, connectivity, conformation and flexibility. Additionally NMR experiments have great utility in probing intermolecular interactions, identifying the components of chemical mixtures and tracking the progress of chemical reactions. Computational techniques such as covariance NMR further leverage the information provided by NMR experiments allowing for the reconstruction of NMR datasets at resolution or sensitivity far exceeding that available from direct experimental acquisition of such data. The Snyder research group at William Paterson University has made substantial progress in using covariance NMR techniques to identify weak but biochemically and pharmacologically relevant protein-ligand interactions as well as in the development of heuristics to predict protein flexibility and to assess the precision of NMR-derived conformational models. In particular, the 10th Critical Assessment of Protein Structure Prediction utilized an extension to the FindCore method (used to quantify the precision of NMR-derived protein structural models) developed at William Paterson University in collaboration with an international team of researchers in the process of assessing protein structure predictions of structures solved using NMR data. This talk presents recent progress in the Snyder research group in the evaluation of protein coordinate uncertainty and in the use of covariance NMR and Diffusion Ordered Spectroscopy (DOSY) in the ligand-discovery process.

This project was supported by Assigned Released Time for Research (ART), the Center for Research, College of Science and Health, and the Cottrell College Science Program, Research Corporation for Science Advancement.

Joseph Spagna, Biology

Co-Presenter: Robert Sutherland, Undergraduate Student, Biology

Evolution of Jaw-Morphology and Kinematics in Ponerine Trap-Jaw Ants

Trap-jaw ants in the genus Odontomachus and Anochetus are known for their oversized jaws that can be cocked and rapidly released in the form of devastating strikes on prey or enemies. In some species, these strikes have been co-opted for locomotion; by striking their jaws against hard surfaces, the ants can launch themselves many body-lengths into the air. These two genera, in the subfamily Ponerinae, represent the majority of the known trap-jaw species, and encompass a large range of variation. As a basis for comparative hypothesis-testing on these species, we developed a multi-gene molecular phylogeny for the ponerine ants. Over the past two

summers, we have sequenced the Histone H3, 28S, and 18S genes from a total of 40 species (20 Odontomachus, 9 Anochetus, and 11 exemplars of potential ponerine outgroup genera) These were supplemented with existing data from the Long-wavelength rhodopsin, Cytochrome Oxidase 1, and wingless genes to produce the matrix, which was analyzed using maximum-likelihood analysis. The trap-jaw ants form a monophyletic group (Anochetus + Odontomachus) with marginal statistical support (< 95% posterior probability), and both genera are likewise monophyletic . From a small sample (n = 3 species) force production in Anochetus species is not inconsistent with the force-production model developed using the larger Odontomachus ants, though values are lower due to smaller ant sizes.

This project was supported by Assigned Released Time for Research (ART) and the Center for Research, College of Science and Health.

Jitwipar Suwangbutra, Undergraduate Student, Psychology

Faculty Sponsor: Michael S. Gordon, Psychology

Music of the Body: An Investigation of Skull Resonance and its Influence on Musical Preferences

Musical preferences can be attributed to environmental and biological factors. This research analyzes the specific influence of body resonance, and in particular, how the resonant properties of the skull might contribute to auditory perception of music and musical preferences. To examine this issue resonances were sampled from a set of participants and analyzed using FFTs. The fundamental frequencies of each participant's head was correlated against their preference amongst a set of novel melodies presented in each of the 12 major keys. Using this method the spectral properties of the melody could be directly related to the resonant properties of a listener's skull to evaluate their influence. While results were subtle, participants were found to be influenced in their judgments of loudness and musical preference for the melodies. Conclusions from this research support speculation on an embodied model of cognition for musical interactions.

Jake Taubner, Undergraduate Student, Physics

Co-Presenters: Joyce June, Biology, Undergraduate Student; and Faculty Sponsor Kevin Martus, Physics

Preliminary Observations of Hydroxyl Radical and Molecular Nitrogen Emissions from an Atmospheric Pressure Plasma Jet

An atmospheric pressure plasma jet that consisted of a quartz tube with a single powered electrode and no metallic grounding electrode has been studied. The system was operated in a regime that generated a discharge in the region between the powered electrode and the exit aperture. The power supply delivered a 15kV potential with a frequency of 18kHz to the electrode. Helium gas was being flowed at a controlled rate through the tube. Emission spectroscopy in the wavelength range above 500-800nm indicated that the Helium emissions were extremely weak. Analysis of the discharge in the axial direction indicated that below 500nm the spectrum was dominated by gas impurities, specifically molecular Nitrogen, N2, and the Hydroxyl radical, OH. The discharge was self-sustaining for gas flow rates above 25sccm. For all emission features studied the intensity of the discharge was a maximum at the 25sccm cutoff and decreased with an increase in gas flow rate until 50sccm where the intensity remained constant up through 150sccm. At flow rates of 50sccm the radial emissions from inside the tube were from OH and N2+ and outside the tube the emissions were from neutral N2. The most intense emissions were not due to the primary gas in the system, Helium, but from ambient N2 and OH that were presumably from water vapor in the atmosphere. The tube end was a demarcation plane where a transition between the ionic species of the discharge and the neutral species of the flowing glow region occurred.

This research was supported in part by the Student Worker Fund Program (Dean of the College of Science & Health) and through the WPUNJ Assigned Released Program (Provost's Office). This material is also based upon work supported by the National Science Foundation under Grant No. 1040108. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

Rachelle Tobias, Undergraduate Student, Psychology

Co-Presenters: Johanna Ancheta, Psychology Alumni, and Faculty Sponsor Michael Gordon; Psychology

Affective Auditory Speech with Spectral Distortions

Audio and audiovisual speech expressed with a happy emotion has been found to be easier to discriminate in a noisy background relative to speech expressed with a neutral or sad emotion. Recent findings have suggested that this advantage with positively expressed speech may be related to an activation of an approach response, in addition to potential acoustic factors in an emotionally-expressed sentence that may cause the speech stream to be more easily segregated. To further explore these influences, the approach/withdrawal features of the face were exaggerated in an audiovisual experiment and spectral components of the speech were manipulated in an acoustic experiment. Findings from these experiments were found to suggest the dominant role of spectral cues in segregating positively expressed speech. Additional findings seem to suggest the greater influence of facial features to induce withdrawal responses than approach (with exaggerated sad versus happy expressions, respectively), and consequently inhibiting speech detection performance with sad facial expressions. This research suggests the critical cross-modal interaction of affect, face perception, and speech detection that are engaged in a speech task.

William Tooma, English

Fly First & Fight Afterward: The Life of Col. Clarence D. Chamberlin

On May 21, 1927, Charles Lindbergh landed both in Paris, France and into the history books by making the first successful, non-stop flight from North America to the European mainland. But, only one day before, another pilot, Clarence D. Chamberlin, was all set to take off from Roosevelt Field, Long Island, NY, with his plane, The Columbia. However, due to circumstances beyond his control, he was barred from the hangar, making it possible for Lindbergh to fly without any competition.

Featuring interviews with experts on the subject and family members, as well as photos and newsreel footage direct from the 1920s, this award-nominated film is the definitive documentary on the story of Chamberlin, the Golden Age of Aviation's forgotten hero, who, two weeks after Lucky Lindy's flight, flew off towards Berlin, Germany, with the world's first transatlantic passenger.

Manina Urgolo Huckvale, Special Education and Counseling

Refining the Role of Secondary Special Education Teachers: Teacher Leaders

The role of the secondary special education teachers is changing to that of teacher leader due to the inclusion of special needs Students in the general education classroom. As such, general education teachers, particularly on the secondary level, are relying more and more on special education teachers to assist them in the instruction of special needs Students. Based on an article, written with Dr. Christopher Mulrine, and in review by Kappa Delta Pi's "The Record," this session discuss a variety of teaching strategies used to differentiate instruction in secondary education general classrooms.

Ronald Verdicchio, Elementary and Early Childhood Education, affiliated with the Anthropology Department

Co-Presenters: Eman Al-Jayeh, Undergraduate Student, Communication Disorders; Jean Gervais, Graduate Student, Education; Kelly Ginart, Undergraduate Student, Education and English; Sara Johnson, Undergraduate Student, Education and English; Amani Kattaya, Undergraduate Student, Education and Sociology; Paige Rainville, Undergraduate Student, Education and Spanish; and Rita Vander Stad, Undergraduate Student, Mathematics

The Cultural Transformation of a Small Urban Community: A Community Study (IRB 2013-302)

The project studies the way in which a small urban community has been transformed by immigration and migration patterns which has resulted in new challenges for both the community and the one public school in

the borough. This project identifies, economic, social, political, and religious factors that have led to a changing community context and the relationship and impact that the changes have had on the local school. The community we are studying was originally founded by Dutch immigrants but has in recent times experienced an influx of newcomers with diverse cultural, religious, and political backgrounds. Our study aims to address the following questions: How has the cultural make-up of the community changed overtime, how has the school apparatus adjusted to newcomers, how have the newcomers adjusted to the school experience, and what role does religion play in the community? To address these questions we have employed ethnographic field methods of participant observation, oral history, archival research, and interviews that provide a holistic view of our findings. Preliminary findings suggest a subtle divide between long-time and new residents stemming from a struggle to maintain traditional values. Oral histories and archival research suggest historical markers have resulted in changing demographics. In the late spring, we will continue the study with a greater focus on the community's education systems public and religious.

This project was supported by Assigned Released Time for Research (ART) and funding from Professional Development Contracts.

Miryam Z. Wahrman, Biology

Co-Presenters: Khushnuma Sabavala, Henry Raab and Shalaka Paranjpe, Undergraduate Students, Biology

Growth, Adherence and Transfer of Bacteria on Textiles

In clinical environments neckties and other garments that harbor bacteria may serve as vectors for transmission of disease. We studied the interaction of three bacterial species with six different types of textiles to determine how bacteria associate with a variety of fabrics. Phase contrast microscopy of was used to observe individual threads from the six fabrics. Endogenous bacteria, including cocci and rods, are harbored by some fabrics, including wool, silk, cotton and polyester. No endogenous bacteria were observed on microfiber. E. coli, B. subtilis and S. epidermidis were incubated with fabrics, and all adhered to wool, silk and cotton. No adherence to microfiber and minimal adherence to polyester were observed. In addition we studied the survival of bacteria on fabrics and the transfer of bacteria from one type of fabric to another, focusing on the transfer of bacteria from polyester, silk, cotton, wool, polyester/cotton blends, and microfiber fabrics to either microfiber or poly/cotton blend (typically found in scrubs). As long as two weeks after bacterial contamination, viable bacteria could be transferred from fabric to fabric. In many experiments microfiber appeared to harbor and transfer less bacteria than the other textiles, suggesting that microfiber may be a fabric of choice for clinical settings. This research was supported by an ART award; support for Student research assistants was provided by the College of Science and Health.

This project was supported by Assigned Released Time for Research (ART) and the Student Worker Program, College of Science and Health.

Kevin J. Walsh, Educational Leadership and Professional Studies

Value-added Teacher Evaluation - A Trojan Horse: Principals' Attitudes towards Teacher Empowerment

This research project focused on school principal supervisory beliefs and behaviors and included: a) review of literature related to current best practices of teacher evaluation and supervision, b) survey information from approximately 90 school principals located in northern New Jersey, c) an analysis of the data exploring the degree of consistency that exists between beliefs and practice related to teacher empowerment and d) an examination of the current national trends to adopt value-added teacher evaluation models. This paper examines the importance and benefits of teachers having more control of and being more responsible for their professional growth and development and will include a detailed analysis of the results of the (Supervisory Behavior Inventory) SBI survey completed by 86 school principals.

This project was supported by Assigned Released Time for Research (ART).

Nancy J. Weiner, David and Lorraine Cheng Library

Co-Presenter: Kathy Malanga, Assistant Director Access & User Services, David & Lorraine Cheng Library

RIM Shot: Using assessment data to Revise, Improve and Modify library instruction

This poster will provide an overview of the various assessment activities of Cheng Library's User Education Program for 2012-2013. As part of the library's long standing commitment to assessing the impact that library instruction has on Student information research skills, data is collected throughout the academic year in a few different ways and the results from some of these ongoing projects will be of interest to Students, faculty and staff. Highlights include data collected from the most recently graded First Year Seminar assignments as well as results of a survey that nearly 350 first year Students completed prior to the start of the library instruction session. Student responses to the question "What was the most important thing you learned today?" will also be shared along with the results of the biennial faculty survey regarding instruction.

Jamie L. Weiss, Biology

Co-Presenters: Ama Berko, Biology Alumni, Walter Barr, Undergraduate Student, Mathematics, Jasmine N. Wood, Undergraduate Student, Biology, and Michael Gonzales, Undergraduate Student

Examining the Role of NCS-1 in the Regulation of Nitric Oxide Levels: Implications for Autistic Spectrum Disorder

Calcium (Ca2+) signaling is the main process that neurons use to undergo neurotransmission. Neuronal Ca2+ Sensor-1 (NCS-1) is Ca2+-sensing protein that is an important signaling regulator of neurotransmission. NCS-1 is implicated in synaptic plasticity as well as neurodegenerative and cognitive disorders. NCS-1 regulates Ca2+ channels but the exact mechanism is unclear. NCS-1 mediates dopamine signaling by regulating D2 dopamine receptor cell surface expression. Nitric Oxide (NO) is a gas essential for neuronal differentiation and functions as a retrograde neurotransmitter. However overproduction of NO is implicated in neuronal injury and neurodegeneration. NCS-1 has been reported to potentate Nitric Oxide Synthase (NOS). We are currently developing an NO detection assay in PC12 cells. We depolarized PC12 cells causing Ca2+ influx via voltage-gated Ca2+ channels and examined the effect on NO levels in cells transfected with NCS-1 mutants predicted to disrupt Ca2+ signaling pathways. Our preliminary data suggest that NCS-1 can be found in mitochondria and that in our assay high K+ depolarization leading to Ca2+ influx increases NO production. We have confirmed that NCS-1 potentiates NOS in PC12 cells. Our data also suggest that over-expression of an autistic mutant of NCS-1 (NCS-1R102Q) may lead to increased NO production all round seemingly with no Ca2+ inducible NOS activity. This result is interesting given that the NCS-1R102Q protein has been reported to have increased binding to the D2 dopamine receptor and D2 receptor modulation is also linked to the regulation of NO. In addition high nitric oxide production had been linked to autism.

This project was supported by Assigned Released Time for Research (ART), Research & Travel Incentive Award, the Center for Research, College of Science and Health, the Student Undergraduate Research Program (SURP), the Roche Foundation, and Faculty for Undergraduate Research (FUN).

Adrian Wilson, Undergraduate Student, Accounting and Law

Co-Presenters: Aneta Veselinovski and Carolina Monroy, Undergraduate Students, Marketing and Management Sciences, Undergraduate Student, and Olga Druzhbina, Undergraduate Student, Accounting and Law; Faculty Sponsor: Jorge Arevalo, Marketing and Management Sciences

Popularity in Clean Development Mechanisms: The Case for Asia and Major Players of CDM Investment

Energy generation and Waste handling are clearly the backbone of the sustainability dilemmas in Southeast Asia and represent key factors for the progress of Clean Development Mechanism projects in this region of the world. The Asian continent is recognized as the most abundant with CDM projects, due to its two major players, China and India, where most of the projects are being funded and traded. Along with these two giants are also important countries like Korea, Philippines, Malaysia, Indonesia, Thailand and Vietnam. Many contemporary companies operating in Asia have made environmental and social issues a big part of their corporate strategies. In this paper we attempt to attain a better grasp of what CSR truly means for the people in this part of the globe.

The case study presented in this report will give an overview of how sustainable development is handled in the region, in the context of CDM advancements. We find that the transition to CSR practices seems to be in tune with the religious beliefs and practices, which is quite different from CSR models in the Western part of the world. We also note that the eastern way of thinking makes it somewhat less complicated for multinational companies to implement Clean Development Projects that address pressing environmental as well as social issues. At the moment, the focus for many companies in this region is to execute business agendas that enhance some dimensions of sustainability as the best and only way to reduce the huge impacts business has on the environment. To conclude this significant topic, we offer a discussion on the implications CDM has for us as future managers and potential future investors in the region.

Shaun Woerner, Undergraduate Student, Kinesiology

Co-Presenters: Tracy Krulikowsky, Undergraduate Student, Michael Figueroa, Faculty, Kinesiology and Faculty Sponsor Jason Wicke, Kinesiology

Inertial Changes While Running at Different Body Weights

Mass is defined as the amount of matter that an object possesses, whereas weight is the gravitational force acting on that object. The Alter-G™ treadmill uses a pressurized chamber to change the weight of an individual while walking or running. The goal of this study was to determine the kinetic changes in running at different body weights while maintaining body mass. It is expected that the greatest alterations will be found during the swing phase of the gait pattern and that the stance phase will be insensitive to changes in body weight. Ten female and ten male college-aged participants were recruited for this study. Participants ran on the treadmill at 100% body weight, 80% body weight and 60% body weight separately for approximately 2-3 minutes. Within that time frame, 5 gait cycles were captured using OptiTrackTM Motion Capturing system with a single camera in the sagittal (side) plane. Using Newtonian equations of motions, the displacements, velocities and accelerations of the joints were determined. Finally, these data were combined with the inertial data to estimate the forces and moments acting across each joint. All calculations were performed by writing code for MatLab™. The data are in the process of reduction and results will be presented on the poster for University Research and Scholarship Day. Also, a manuscript is being prepared for the Journal of Sport Biomechanics.

This project was supported by the Human Motion Research Lab, Department of Kinesiology.

Kyung-Hyan (Angie) Yoo, Communication

Co-Presenters: Heejung An, Elementary & Early Childhood Education; Min Hee Go, Political Science; Keumjae Park, Sociology; and Kyung-hyan Yoo, Communication

Korean Wave (Hallyu): From The Land of the Morning Calm to the Bustling Cultural Hub

With the growing popularity of Korean culture and its international visibility, the image of Korea has dramatically changed from "The Land of the Morning Calm" to the "Bustling Cultural Hub." In this panel discussion, the expert panelists examine the current trends and impacts of “Korean Wave”. Presentations include “Learning about Korea with Google Earth" by Dr. Heejung An, Elementary & Early Childhood Education, “Korea's Economic Growth and Democratization” by Dr. Min Hee Go, Political Science, “Hallyu and Globalizing Korea” by Dr. Keumjae Park, Sociology, and “IT in Korea” by Dr. Kyung-Hyan Yoo, Communication. The panel will be moderated by Kyung-Hyan Yoo.

Erica Young, Undergraduate Student, Nursing

Co-Presenters: Gina Munkcasy and Nao Maeda, Undergraduate Student, Nursing; Faculty Sponsor: Nadine Aktan, Nursing

Sleep Quality and its Effects on Life Satisfaction Among Undergraduate College Students.

This research project is going to be examining the possible positive relationship between life satisfaction and sleep quality among Undergraduate Students at William Paterson University. A non-experimental study design is the one that was used. Study participants will include 60 Undergraduate Students at William Paterson

University. Survey will be distributed to collect data such as sleep quality, age, gender, grade level etc. The surveys will be collected and analyzed based on pre-determined values.

Deniz Yucel, Sociology
Perception of Family Values in a Bi-Communal Island: Evidence from the European Values Survey Data

Using the most recent wave of European Values Survey (EVS) data, this study explores the correlates of family values by comparing Turkish and Greek communities living on the island of Cyprus, and comparing the results from these two communities to their respective "motherlands." In the northern part of the island, males, less religious, those with no children and with more egalitarian gender ideology are more likely to have egalitarian family values. On the other hand, for the southern part of the island, those who are more religious and those with children are less likely to have egalitarian family values. When I compare the North Cyprus sample to Turkish sample; being a male, less religiosity and more liberal gender ideology are correlated with more egalitarian family values whereas having children is associated with significantly less egalitarian family values for both countries. When I compare the South Cyprus sample to Greek sample; less religiosity is correlated with more egalitarian family values whereas having children is correlated with less egalitarian family values for both countries. With the changing family values (a shift towards more egalitarian) for both communities living in Cyprus, I discuss the implications of these findings in terms of the future of this bi-communal island.

This project was supported by a Summer Research Stipend, College of Humanities and Social Sciences.

Beata Zaluska, Undergraduate Student, Computer Science

Co-Presenters: Eduardo Avila, Undergraduate Student, Erh-Wen Hu, Cyril S. Ku, and Faculty Sponsor Bogong Su, Computer Science

Performance Prediction of Multi-Core DSP Processor using Statistic Approach

Due to the surging of the cellular and mobile broadband market over the last decade and the doubly increase in the number of subscribers in recent years. The 4G LTE (Fourth Generation Long Term Evolution) networks have become the new standard in the industry. Many new DSP (Digital Signal Processing) processors and software for 4G LTE networks have come up and as a result, the performance evaluation and prediction of new DSP processors have become a hot research area.

The latest trend to predict the performance of a computer system is using statistic approaches. However, most of the published works so far focus on general purpose computers by using statistic data from many large application programs, almost none on DSP processors. Our research proposed a new approach -- using linear regression technique to predict the performance of DSP processors. We will establish a regression model whose attributes will be collected from the results of many typical DSP functions running on the new DSP processor. The model will then be used to predict the performance of the major functions of the new 4G LTE benchmark. Finally, the performance of the whole benchmark will be predicted.

This project was supported by Assigned Released Time for Research (ART) and the Student Worker Program, College of Science and Health.

Office of Sponsored Programs
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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 develop-ment, 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 sponsors 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. Stephen W. Hahn, Associate Provost for Academic Affairs in the Office of the Provost and Senior Vice President for Academic Affairs.

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Proposals that will be submitted through the OSP require prior approval by the University. A nearly final narrative, final budget, and copy of the funding program's guidelines must be submitted to the OSP with a **Project Approval Sheet** at least five days before the deadline. Applicants working with the OSP generally require less review time. The Project Approval Sheet is available in several formats on the OSP webpage: www.wpunj.edu/osp

OSP Publications

Dates, Updates and Insights (DUI), a weekly subject-based funding opportunity email
The STAR Report, a newsletter report on funding issues and WPU successes
OSP Website

Databases and References

On-line Databases & Resources
GrantSearch
Pivot: Funding Connected
Grants.Gov
Grant Resource Center/AASCU
Directories and guides on proposal development and project management.

OSP Workshop Series

April 18	PIVOT: Search Tool to Find Funding Opportunities	
April 25	Proposal Writing	
May 21	9:00 to 10:15	Finding and Applying for Grants: Its the Program
May 21	10:30 to 12:00	Grant Search Tools and PIVOT
May 21	1:00 to 3:00	Proposal Writing

Unless otherwise noted, workshops are presented between 12:30 to 1:45 in the Office of Sponsored Programs, Raubinger Hall 309

Technical Assistance Travel

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. Support must be requested before registering.