

WILLIAM
PATERSON
UNIVERSITY



April 20, 2006

Presented by the
Office of Sponsored Programs
and the
Faculty Senate Research Council

University Research and Scholarship
Day 2006

Is Dedicated To

Dr. Amy Job

For her service and commitment to the Faculty Senate
Research Council, the New Jersey Research Consortium,
for her general support and encouragement of
research and scholarship at William Paterson University,
and for being a good friend.

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William Paterson University
University Research & Scholarship Day 2004
Program and Schedule of Activities

Schedule At A Glance

9:20 to 12:30	Concurrent Individual and Group Presentations Cheng Library Auditorium Amy Job Classroom Paterson Room
12:30 to 1:45	All-University Poster Exhibit, Art Exhibition and Lunch The Friends of the Library Room Cheng Library Auditorium
2:00 to 3:45	Concurrent Individual and Group Presentations Cheng Library Auditorium Amy Job Classroom Paterson Room

Presentation Schedule

Morning Individual and Group Presentations

Amy Job Classroom

- 9:00** ***Nancy J. Weiner, Library***
Privacy in the Information Age
- 9:30** ***Stephen C. Betts, Marketing and Management Sciences***
Integrating Leadership Theories into Team Research: Aligning Multiple Perspectives Using Level of Analysis and Type of Managerial Control
- 9:50** ***Melda N. Yildiz, Secondary and Middle School Educaiton***
Teachers discovering the power of media education and redefining curriculum: Learning from global experiences
- 10:10** ***Rajiv Kashyap, Marketing and Management***
If the Brand Doesn't Fit, Must the Social Marketer Quit? Investigating the Importance of Fit Between Brands and Causes

- 10:30 Janis Strasser, Elementary & Early Childhood Education**
Co-Presenters: Dr. Holly Seplocha, Elem. & Early Childhood Education
How Can University Professors Help Their Students Understand Issues of Diversity Through Interpersonal and Interpersonal Intelligences
- 10:50 Gina Guerrieri, Communication**
A Close Call
- 11:10 Tricia Snyder, Economics and Finance**
Co-Presenters: Martin Gritsch, Economics and Finance
Do Profitable and Non-Profitable Firms Pay Executives Differently?
- 11:30 Enrique S. Pumar, Sociology**
Latin American Today: Contemporary Issues and Perspectives

Cheng Auditorium

- 9:20 Jewel Carter, Community Health**
Co-Presenters: Michael Wilson, Community Health
Let's Make a Cake
- 9:40 Joan Marian Fry, Exercise & Movement Science**
Active wireless technology between student teachers: satisfaction with role and communication
- 10:00 Nadine M. Aktan, Nursing**
Functional Status after Childbirth and its Relationship to Social Support
- 10:20 Jane Bambrick, Cheng Library**
Co-Presenters: Glen Bencivengo, Cheng Library
The State of Adaptive Technology for Learning Disabled Students in the College and University Libraries of New Jersey
- 10:40 Richard Pardi, Environmental Science**
Co-Presenters: Michael Sebetich, Biology
Preakness Brook Restoration and Protection Project, Wayne, New Jersey
- 11:00 Brianne Villano, Biology**
Co-Presenters: Regina Janesko, Roy Rozman, and Ross Manning, Biology; Faculty Sponsor: Michael. J. Sebetich, Biology
Mountain Top Coal Mining in Appalachia: "The best kept dirty little secret in America!"

11:30 Donald Levine, Department of Biology; Donna Potacco, Science Enrichment Center; Richard Pardi and Karen Swanson Department of Environmental Science; Undergraduate Students: Donna Ploch, and Marvin Calderon

Rocks and Minerals Tutorial

12:00 Gilbert Ndjatou, Computer Science

Knowledge and Learning in a System of Autonomous Agents

Paterson Room

9:20 Djanna Hill-Brisbane, Secondary/Middle Education

Co-Presenters: Kenya Easley-Mosby, Graduate Services

Issues of Support & Leadership in the Experiences of Prospective Teachers for Urban Schools

9:40 Susan Dinan, History Department and University Honors College

"Get thee to a nunnery," or not. How the Daughters of Charity avoided Monastic Enclosure during the Catholic Reformation

10:00 H. Mark Ellis, Sociology

The Social Functions and Consequences of Arts in Society: The Video Made Me Have Sex

10:30 Michael Thompson, Political Science

Reworking American Democracy: The Impact of German Social Thought on American Democratic theory

10:50 Elizabeth Birge, Communication, and Kathleen Korgen, Sociology

Teaching Civic Engagement: Alternatives to Service Learning in Media Writing and Principles of Sociology Courses

11:10 Janine Swingle, Psychology

Are Students Drinking to Chase Away Painful Memories?

11:30 Monica Nyamwange, Geography and Urban Studies

A Slice of Kenya's Environment and culture: A video presentation of WPU 2005 SAP

Poster Presentations and Art Exhibition

Cheng Auditorium

Elaine Lorenz, Art

Creative Research-Sculpture in Clay

Robin Schwartz, Art Department, Photography Area

Photography Portfolios

The Amelia Series and Past Projects

Lily Prince, Art

Points of Departure

Leslie Nobler Farber, Art

SOFTWARE: Digital and Traditional Printmaking

Friends of the Library Lounge

Bogong Su, Computer Science

Software De-Pipelining for Nested Loops

Erh-Wen Hu, Computer Science

Co-Presenters: Cyril Ku, Computer Science; Christ Adamopoulos, Computer Science; Faculty Sponsor: Erh-Wen Hu, Computer Science
New DSP Benchmark based on Selectable Mode Vocoder

Michelle Christ, Biology

Co-Presenters: Michelle Christ, Biology; Frank Militello, Biology

Sponsor: Jaishri Menon, Biology

LIPID PEROXIDATION AND ANTIOXIDANT DEFENSES DURING METAMORPHOSIS OF ANURAN TADPOLES XENOPUS LAEVIS.

David Slaymaker, Biology

Reduced Polysome Levels and Preferential Recruitment of a Defense Gene Transcript into Polysomes in Soybean Cells Treated with the Syringolide Elicitor

Christopher Mallery Jr, Biology

Faculty Sponsor: Carey Waldburger, Biology

Mutational Analysis of ATP-Binding Determinants of the PhoQ Histidine Kinase

Jeff Dudycha, Biology

Integrating Ecology & Genetics to Understand Aging

Donald Levine, Department of Biology; Donna Potacco, Science Enrichment Center; Richard Pardi and Karen Swanson Department of Environmental Science; Undergraduate Students: Donna Ploch, and Marvin Calderon
Rocks and Minerals Tutorial

Joan Marian Fry, Exercise & Movement Science
Improving the Quality of Physical Education Teacher Education: Research on, and Research through, Peer Coaching

Katherine Everett-Bolkema, Sociology
Faculty Sponsor: Dr. Rosanne Martorella, Sociology
Is the Family in Decline? An Analysis of Census Report 1960, 1980 and 2000

Morgan Leigh Metzger, Sociology
Faculty Sponsor: Dr. Martorella, Sociology
Theory as a Strategy for Change: The Second Wave of Feminism Meets the Third. Presence, Politics, and Patriarchy."

Kimberly Ricks, Sociology
Faculty Sponsor: Dr. Rosanne Martorella, Sociology
Language, Image and Gender: A Content Analysis of Gangsta Rap Lyrics, 1986-2005

Anna Gomah, Sociology
Faculty Sponsor: Dr. Martorella, Sociology
The Subculture of Gangs: A Case Study

Michael Pelosi, Biology
Co-Presenters: Onolee Jansen Biology; Ross Manning, Biology
Faculty Sponsor: Michael Peek, Biology
*Effects of sand burial on the coastal dune grass *Ammophila breviligulata**

Nicole Magaldi, Communication Disorders
A Retrospective Study of the Prelinguistic Behaviors of Children with Specific Language Impairment

Kathy Lancellotti, Nursing
NCLEX-RN: A Valid Test for a Diverse Society?

Betty Kollia, Communication Disorders
A comparison of children's performance on five tests of articulation and phonology

Betty Kollia, Communication Disorders

Co-Presenters: Martin Addison, Communication Disorders

Temporal and spectral parameters of diphthongs produced by hearing impaired children

Jack Bernardo, Office of Sponsored Programs

The Office of Sponsored Programs

Mukesh K. Sahni, College of Science and Health

Co-Presenters: Gurdial M. Sharma, Chemistry and Physics

Electron Impact Mass Spectra of N -Ary- Thiocarbamylacetamides

Afternoon Individual and Group Presentations

Amy Job Classroom

2:00 Kevin Martus, Chemistry and Physics

Optical Emission Spectroscopy from a Cylindrical Dielectric Barrier Discharge (C-DBD) in Ne and in Ne/N₂ Mixture

2:20 Jeff Dudycha, Biology

Speciation and Gender Determination in Daphnia

2:40 Emmanuel S. Onaivi, Biology

BEHAVIORAL EFFECTS OF PUTATIVE CB₂ CANNABINOID RECEPTOR LIGANDS.

3:00 Starr Eaddy, Community Health

*Co-Presenters: Stephanie George, Community Health
Wellness Attitudes*

3:20 Cyril S. Ku, Computer Science

*Co-Presenters: Nathan M. Mantell, Computer Science
Design Patterns across Software Engineering and Databases*

3:40 Linda Kaufman, Computer Science

Solving symmetric Indefinite Banded Systems

Cheng Auditorium

2:00 Casey Lum, Communication

Outdoor Advertising and Globalization in China

- 2:20** **Burton Weltman, Middle and Secondary School Education**
E.D. Hirsch and the Search for a Common Conversation: Literary Theory as Educational Practice
- 2:40** **Kristen Palana, Art**
Lucky- A Multimedia Documentary
- 3:00** **Nisha Drinkard, Art**
Nature in My Art

Paterson Room

- 2:00** **Barbara Andrew, Philosophy**
Strengths and Weaknesses of Sympathy-Based Ethic
- 2:20** **Tiffany Groglio, Philosophy**
Faculty Sponsor: Barbara Andrew, Philosophy
Lying and Self-Deception
- 2:40** **Linnea Weiland, Elementary and Early Childhood Education**
Encouraging Mathematically Accountable Talk among Pre-service Teachers
- 3:00** **Martin Williams, Office of Sponsored Programs**
Co-Presenters: Kevin Martus and Members of the Research Council
Research Council Survey, 2006

Abstracts

Melda N. Yildiz, Department of Secondary and Middle School Education

Teachers discovering the power of media education and redefining curriculum: Learning from global experiences

This presentation explores the power of media literacy education in teacher education; offers creative strategies for integrating new media technologies into the curriculum with limited resources; outlines results of the study based on producing media in classrooms as well as showcases teacher candidates' video and multimedia projects.

Teacher candidates deconstructed and assessed the national and local social studies curriculum and standards; and documented their stories in order to articulate the realities of conditions in schools through their research, analysis, and dialog. We focus on current educational issues related to power, culture, and social justice and provide practical, hands-on instructional strategies that are engaging especially younger generation who need to become activists in the cause of civil rights for all.

Through the discovery process, teacher candidates explored, designed, and created the strategies, curricula, and programs for improving their students' learning outcomes. They also gained alternative points of view on historical events as well as renewed interest and commitment to multiculturalism.

Methodology included the analysis of media surveys, process papers, questionnaires, electronic journals and reflection papers, responses to online activities and the process of producing media projects, transcripts of interviews, and the content analysis of multimedia projects and presentations. Our study employed three theoretical frameworks: (1) semiotics, (2) media literacy, and (3) multicultural education.

This study explored three areas: (1) the wide range of meanings that participants associated with media education; (2) the impact of video production activities in social studies curriculum; and (3) the ways in which they integrated history and elements of multicultural education in their oral history projects and video documentaries.

Janis Strasser, Department of Elementary & Early Childhood Education

Co-Presenter: Holly Seplocha, Elementary & Early Childhood Education,

How Can University Professors Help Their Students Understand Issues of Diversity Through Interpersonal and Interpersonal Intelligences

This presentation will explore ways in which faculty can create learning communities in their classes and help students reflect on their own identities. Using multicultural theories of Sonia Nieto and others, learning theories of Howard Gardner and the premise that college students bring to the classroom a complex web of experiences, knowledge, skills, and dispositions, the presenters will share several strategies for broadening multicultural awareness and diverse perspectives.

Gina Guerrieri, Department of Communications

A Close Call

What happens when a suicidal teenager misdials a hotline number and reaches a sex phone operator instead? Alternately dark and comic, "A Close Call" explores the randomness of connection and the roles that fantasy and technology play in contemporary interpersonal communication.

Although "A Close Call" is darkly comic, it is not my intention to offend or to trivialize suicide, which is the second leading cause of death among college-aged students. Rather, it is my attempt to explore the com-

plex and complicated nature of communication between people, including the roles that fantasy and technology play in that communication.

But, ultimately, "A Close Call" is about the randomness of connection and the grace and beauty of genuine connection, when it occurs.

Kristen Palana, Department of Art

Lucky- A Multimedia Documentary

The oldest daughter of a New York City taxi driver has dreams of becoming a doctor. Can the future still hold surprises even when her life has been planned for her since the age of eight?

'Lucky' is a fifteen minute experimental documentary short that follows the real life of Lucky Kaur in the United States and in India from 2001 to 2005.

Lucky comes from a religious Sikh family that takes pride in its rich Punjabi heritage. Despite only having come to Brooklyn, New York from India at the age of sixteen, Lucky learns English rapidly, excels at school, and starts to cultivate some very modern American ambitions.

When her arranged marriage inches ever closer, Lucky must walk a tightrope between two cultures, as fate and tradition threaten to take her decisions away little by little.

Lucky lives her life trying to simultaneously honor two very different world views and in many ways relives the story of countless immigrants who came to America in search of a better life.

Elaine Lorenz, Department of Art

Creative Research-Sculpture in Clay

Throughout the ages, the making of ceremonial or art objects sprang from humankind's effort to understand, express and try to control nature's generative as well as destructive forces. It was often a search for order, structure and comprehension in the midst of an uncontrollable and often dangerous environment. Materials and concepts have broadened over the centuries and Art incorporates new knowledge, technologies and globally shared experiences. Like many artists, I still find a powerful connection with the uplifting beauty of the natural world. My project will consist of a series of digital slides presented during common hour. The images will be my clay sculptures; organic abstractions of natural forms. A few installation views of recent exhibitions will also be included. I have talked to Martin Williams regarding this and will supply him with digital images which will be presented with other visual artists work as a slide show.

Linnea Weiland, Department of Elementary and Early Childhood Education

Encouraging Mathematically Accountable Talk among Pre-service Teachers

The project reported here explores how William Paterson University students in my elementary (K-5) mathematics methods course learn to use "accountable talk" in the classroom. Given the content standards in mathematics and the reform curricula based on them, teachers in P-12 classrooms must be able to facilitate meaningful discourse about mathematics. The Institute for Learning at the University of Pittsburgh uses the term, "accountable talk," to describe the kind of discourse needed, e.g., pressing for explanation, requiring justifications, challenging misconceptions, demanding evidence for arguments, interpreting and re-voicing children's arguments.

Data collected during the present academic year for this project include: a written math history from each student enrolled in my course sections, weekly reflection questions on Blackboard, individual interviews with selected students, and a follow-up questionnaire. The data collected is being systematically analyzed to compare the relative effectiveness of different instructional strategies in my classroom and to learn how the students make sense of the course experiences. Based on what I am learning about how pre-service teachers

process what happens in the course, I am modifying my classroom practice. If we are to prepare inquiring educators' as the mission statement of the School of Education says, we have to look deeply at our own classroom practice with the goal of continuous improvement.

The presentation will provide an overview of this ART project and share some samples of student written and oral talk about elementary mathematics.

Robin Schwartz, Department of Art, Photography Area

Photography Portfolios: The Amelia Series and Past Projects

Photography has given me the opportunity to explore my child, and the worlds I have dreamed to enter. Decisively photographing my daughter, Amelia, sometimes combining my life-long obsession with animals, has dared me to transform my photography, in concept and presentation. I have sought the intimate, fleeting portraits of animals in my previous projects. My goal continues to be to catch a society of interspecies relationships and their activities - my imaginary world come to life. The challenge of photographing animals has taught me that the subject does not define the art. Art is distinctive by how the subject is portrayed. An artist photographing her child can invite ridicule, but getting personal with my projects has always been my need, my edge. Motherhood is important, adding a new perspective and dimension to my life and work. Amelia is my priority, my muse, my co-conspirator, my tormentor and my bliss.

My inspiration now comes from the realm of painting: Velazquez, Sargent, Botticelli and Bastien-Lepage. Working with Amelia as my partner, I am able to go to any time or place.

Digital Chromogenic 30x40in Exhibition Prints Mounted on Black Plexi-Glass.

Starr Eaddy, Department of Community Health

Wellness Attitudes

The proposed presentation will describe a study conducted at William Paterson University that explored the relationship between levels of sensation seeking, life effectiveness and perceived wellness in students enrolled in CMHL 120 during the 2006 Spring semester.

Sensation seeking has long been associated with risk behavior including high risk sexual behavior, aggressive behavior, and drug and alcohol use. College students are particularly susceptible to engaging in high risk behavior in a variety of domains including; recreational activities, hazardous driving, pranks and damaging lifestyle choices. Evidence suggests that sensation seeking peaks during the college years yet generations of students have survived this critical period despite engaging in high risk behavior. Sensation seekers may be at higher risk for some health conditions such as those related to unintentional injuries yet, little is known about how sensation seekers perceive their health and what, if any, efforts they take to preserve their health. The research on which this presentation will be based explored life effectiveness or health promoting life skills and wellness perception as possible explanations of high sensation seekers who have avoided damaging their health.

To facilitate data collection with a college sample, an undergraduate research assistant took an active role in every phase of data collection, management and analysis. The research assistant directed most of this preliminary attempt to understand how sensation seekers perceive health and preserve their health.

Nancy J. Weiner, Cheng Library

Privacy in the Information Age

The widespread use of the Internet continues to alter various aspects of our society and has, in many ways, had a positive impact on our lives. Technological advances have also increased the ways that data and infor-

information is stored and retrieved. Newer technologies have also allowed U.S. government agencies to make public records more readily available in computer format, providing easy access to massive amounts of information that was once relegated to physical storehouses such as courts and municipal buildings. Dissemination of what many consider private information by commercial entities is rampant and has spawned an industry that thrives on information gathering and distribution to anyone willing to pay for it.

This presentation examines the relationship between the right to individual privacy and the reality of individual privacy within the framework of information technology that has become a significant presence in our society. Existing government policies currently in effect will be discussed in order to establish what role the government should play in regulating the release of public information as well as regulating the gathering of private data by web sites and emerging tracking technologies. Finally, we will consider whether personal privacy is a concept no longer relevant in the twenty-first century or whether privacy advocates have enough public support to mandate the control and use of private information not only by for-profit businesses, but how this information is being accessed and used by government agencies under the auspices of national security.

Bogong Su, Department of Computer Science

Software De-Pipelining for Nested Loops

Embedded processors have grown exponentially. A large amount of software for embedded and digital signal processing systems is written in assembly language. Software pipelining of loops is necessary to exploit the full potential of Very Large Instruction Word (VLIW) processors. For both understanding software pipelined loops and reverse compiling them to a high level language the software pipelined loop must be transformed back into the original loop (de-pipelining).

In Summer 2005, under the support from CfR Summer 2005 research award of the College of Science and Health, we cooperated with Dr. Andreas Krall in Dept. of CS, Technology University of Vienna, Austria and his Ph. D. student Nerina Bermudo. We applied our own software de-pipelining technique and Nerina Bermudo's CFG (Control flow graph) technique on solving software de-pipelining of nested loops. Our new technique can handle nested loops, which were optimized using transformations like epilog/prolog collapsing. In this presentation we describe our technique, demonstrate it on one working example and evaluate the virtues on some software pipelined nested loops from real DSP assembly code.

Erh-Wen Hu, Undergraduate Student, Department of Computer Science

Co-Presenter: Cyril Ku, Department of Computer Science
New DSP Benchmark based on Selectable Mode Vocoder

Digital signal processing (DSP) industry has been growing rapidly over the past few years; it remains the technology driver for the recovering semiconductor industry. Performance evaluation is essential for the users and manufacturers of DSP processors. Since DSP application programs become larger and more complicated, people need new benchmarks for performance evaluation of different DSP processors. This research project chooses SMV as the target to build a new DSP benchmark, because SMV, a speech coding program from 3G wireless application, has become a major application of DSP recently. The new benchmark will then be used to evaluate the performance of various processors, and to improve DSP architecture design and compiler optimization techniques.

Our new DSP benchmark, called SMV benchmark, consists of eight kernel functions. In this presentation, we introduce the criteria of selecting kernels and our methodology. We also discuss the characteristics and static analysis of the kernels. Finally we present the testing results which are based on experiments conducted on several modern DSP processors including Texas Instruments' TIC62, TIC55 and StarCore's SC series.

Elizabeth Birge, Department of Communications

Co-Presenter: Kathleen Korgen, Sociology Department

Teaching Civic Engagement: Alternatives to Service Learning in Media Writing and Principles of Sociology Courses

This presentation will provide examples of how to teach civic engagement in Media Writing and Principles of Sociology Classes. While teaching civic engagement through service learning is the most well-known model (and can be very powerful, if done well), there are myriad ways we can "educate citizens" through our courses. This presentation will provide two examples of the many possible strategies to connect our classrooms to the community.

Michelle Christ, Undergraduate Student, Biology Department

Co-Presenters: Jaishri Menon, Biology Department

LIPID PEROXIDATION AND ANTIOXIDANT DEFENSES DURING METAMORPHOSIS OF ANURAN TADPOLES XENOPUS LAEVIS.

During anuran metamorphosis, intestinal remodeling involves apoptosis, proliferation and differentiation. It is known that oxygen derived free radicals or oxidants, generated by oxidative metabolism, are one of the factors influencing development and differentiation. Previously, we have shown that there is increased formation of hydrogen peroxide and decrease in the activities of enzyme catalase and reduced glutathione GSH (a non-enzymatic antioxidant) during critical stages of intestinal remodeling in Xenopus laevis tadpoles leading to a pro-oxidant environment. In the present study, malonyl aldehyde (MDA) levels were estimated in the intestine during the period of critical remodeling as an index of oxidative stress. Thiobarbituric acid (TBA) reacts with MDA, one of the aldehyde products of lipid peroxidation, to give a colored product which was extracted in butanol and absorbance measured spectrophotometrically at 530 nm. Additionally, immunohistochemistry (IHS) for catalase was carried out in order to see the cell specific expression of the enzyme.

A considerable decrease in lipid peroxidation during stage 60 in intestine (just before the remodeling begins) probably indicates that antioxidant defenses are at play, which would protect cells from oxidative assault. Since lipid peroxidation is a potent inhibitor of mitosis and during remodeling of the intestine, there is proliferation, differentiation and apoptosis, decreased level of lipid peroxide during stage 60 in intestine (just before the remodeling begins) is self explanatory. However, an increase in lipid peroxidation in both the organs - intestine and tail during stage 63 (corresponds to completion of intestinal remodeling and beginning of tail regression respectively) indicate an oxidative stress. IHS for catalase in intestine demonstrated presence of catalase in specific cells of typhlosole (larval organ) and connective tissue at stage 60, the beginning of remodeling. Role of catalase in the larval cells of intestine is discussed in light of the significance of this antioxidant enzyme in morphogenesis of adult intestine. Further studies on free radical effects on gene expression of antioxidant enzymes are in progress.

Jewel Carter, Department of Community Health

Co-Presenter: Michell Wilson, Department of Community Health

Let's Make a Cake

Are you frustrated with the inability of your students to follow simple directions? As educators we are constantly looking for innovative and engaging strategies for presenting complex information to our students. Let's Make a Cake is an easy to use tool that allows complex information to be disseminated with minimal or no advance preparation.

Students struggle with determining the minor steps that need to be completed in order to achieve a desired outcome such as writing a play or solving a word problem. Often times students know what they want, but don't know exactly how to get it. They are so focused on the end result that they forget the obvious steps that need to be completed in order to achieve their desired outcome. Implementation involves prioritizing, management, and actually setting the plan into action. This is a skill students may not have had much expo-

sure to, thereby making it difficult to make the transition into the classroom. *Let's Make a Cake* helps students envision the small steps when putting a plan into motion.

With this activity students practice assessment, gathering tools, and placing needed tasks in the proper order. These are essential skills needed when completing an ordinary task such as conducting an experiment, developing a lesson plan, or writing a paper. Faculty can easily adapt this activity to their respective disciplines by changing the end product or the tools presented to build the final product. A co-presenter, senior level student, will be available to offer a student perspective.

Cyril S. Ku, Department of Computer Science

*Co-Presenter: Nathan M. Mantell, Department of Computer Science
Design Patterns across Software Engineering and Databases*

Specification and design in databases largely use a domain-specific design approach (e.g., Entity-Relational Model) different from that used in software engineering. Use of the Unified Process, the UML (Unified Modeling Language) models, and design patterns in software engineering for databases and data warehouses can leverage previous experience with software design, make knowledge from database discipline more immediately relevant with software engineering. Our research focuses on the application of generic software engineering design patterns to databases and data warehouses. This project allows issues in logical design and in implementation of databases to be more easily connected with similar concerns in software engineering. In this presentation, we describe our general philosophy and specifically, we discuss the use of GRASP (General Responsibility Assignment Software Principles) patterns for the development of relational databases.

Stephen C. Betts, Department of Marketing and Management Sciences

Integrating Leadership Theories into Team Research: Aligning Multiple Perspectives Using Level of Analysis and Type of Managerial Control

Leaders and leadership have received considerable attention from organization researchers for generations. In the last few decades teams and teamwork have also gained the attention of researchers. Leadership and team phenomenon both have rich literatures characterized by multiple theoretical perspectives and active discussion of many issues, however there has been limited integration or cross development of the literature streams. In this presentation, the notion that team research can benefit by including ideas from the leadership literature is explored. To facilitate this integration the leadership literature will be analyzed along two continuums - level of organizational analysis from micro to macro - and type of managerial control used from controlling to inspiring. Various leadership theories will be placed within a space defined by these dimensions. Using the same two dimensions as the leadership framework, several team research orientations (such as team-utilizing, team-based, standard team, and unique team) can be identified. Team researchers should consider their research orientation and use this dual-continuum framework to identify leadership theories that occupy the same analytical space as their research question and therefore have the potential to inform and develop their research. The presentation concludes with a summary and discussion of implications for both researchers and practitioners.

David Slaymaker, Department of Biology

Reduced Polysome Levels and Preferential Recruitment of a Defense Gene Transcript into Polysomes in Soybean Cells Treated with the Syringolide Elicitor

The bacterial syringolide elicitor induces a hypersensitive defense response (HR) in leaf tissue and cell suspensions of soybean cultivars carrying resistance gene *Rpg4*. To investigate the possible involvement of translational control of gene expression in the syringolide-induced HR, ribosome profiles and polysome-loading of two gene transcripts were investigated. Sucrose density gradient fractionation of soybean cell extracts was used to demonstrate a syringolide-induced, *Rpg4*-specific reduction in large polysomes and a concomitant increase in 80S ribosomes, presumably reflecting an overall inhibition of translation initiation. Syrin-

golide treatment also led to an accumulation of chalcone synthase defense gene mRNA, which remained efficiently loaded into large polysomes in spite of a 22% reduction in cellular large polysome levels. In contrast, while mRNA levels of the housekeeping gene actin remained unchanged following syringolide treatment, the amount of actin mRNA loaded into large polysomes was decreased by 49%. Thus, the translational machinery appeared to selectively exclude a subpopulation of actin transcripts while simultaneously maintaining efficient loading of transcripts for the defense gene chalcone synthase. These data suggest that elicited soybean cells utilize translational control of gene expression during the shift from normal metabolism to defense response activation.

Richard Pardi, Department of Environmental Science

Co-Presenter: Michael Sebetich, Department of Biology

Preakness Brook Restoration and Protection Project, Wayne, New Jersey

Preakness Brook is the major stream within the township of Wayne. Its watershed is almost entirely within the boundaries of the Town and includes portions of the William Paterson campus. In its upper reaches, near its headwater on Preakness Mountain, just west of the campus, Preakness Brook is considered a trout-maintenance stream, one of the highest classifications that can be given to a stream in New Jersey. Segments of Preakness Brook further downstream have been identified as impaired by the US Environmental Protection Agency and the NJ Department of Environmental Protection. The impairments include fecal coliform bacteria and habitat decline as indicated by increases in pollution-tolerant macroinvertebrate species. The source of pollution is thought to be widely distributed (non-point source). As such, attempts to mitigate and restore the stream to as close to a natural state as possible come under the purview of the Clean Water Act, section 319h.

William Paterson University is the grantee for a NJDEP funded non-point source pollution project to restore and protect Preakness Brook. The Township of Wayne, along with the Lower Passaic and Saddle River Watershed Alliance are major partners in the project. William Paterson's primary role will be to collect and assess water quality data along the length of the stream. These studies will be conducted this summer, fall and winter.

Besides monitoring fecal coliform concentrations in stream water at several localities and quantifying habitat impairment through macroinvertebrate surveys, WPU faculty and students will measure stream discharge (flow), nutrient levels and other common water quality variables at several sites along the length of the Brook. In addition, we will be applying state-of-the-art biotechnology methodology (q-PCR) to establish the source of measured coliform bacteria.

Enrique S. Pumar, Department of Sociology

Co-Presenters: Martin Weinstein, Dept. of Political Science; Ileana Labergere, Department of Women's Studies; Octavio de la Suarez & Gregory Shepperd, Department of Languages; Enrique S. Pumar, Department of Sociology; Alejandro Anreus, Department of Art; & Grisel Maduro (moderator), Department of Languages. Latin America Today: Contemporary Issues and Perspectives

The purpose of the group presentation is to discuss various aspects of contemporary Latin American which are of relevance to the university community. We hope to demonstrate how current events in Latin American challenge some conventional ideas in academia as well as the significance of the region.

Presenters and Topics will include:

Martin Weinstein "The transformation of leftist movements into political actors" Ileana Labergere "US/Mexican Frontier Studies"

Octavio de la Suarez and Gregory Shepperd "Literature and Cultural Issues" Enrique S. Pumar "Globalization and Inequality in the Americas"

Alejandro Anreus "Neo-figuration as Cultural Critique"

Grisel Maduro: Moderator

Brianne Villano, Graduate Student, Department of Biology

Co-Presenters: Regina Janesko, Roy Rozman, and Ross Manning, Department of Biology

Sponsor: Michael Sebetich Department of Biology

Mountain Top Coal Mining in Appalachia: "The best kept dirty little secret in America"

Coal mining companies strip-mine coal from the Cumberland Mountains in Appalachia, the most ecologically diverse forest ecosystems in North America. The forests are clear-cut, the mountain tops are dynamited, and heavy machinery is used to extract the coal seams. Formerly called "waste," which could not be dumped in the pristine headwater streams, the spoils are now called "fill," which can be dumped into stream valleys. Over 400,000 acres have been impacted, including more than 1200 miles of streambeds in four states in the Appalachian region. During the semester break in March 2006, several students and instructor M. J. Sebetich from the Aquatic Ecology course, drove to Kentucky to observe the devastation and to discuss the ecological ramifications with Erik Reece, author of "Lost Mountain", a recent book about mountain top coal mining in Kentucky. This PowerPoint is a presentation by the students on their findings and future efforts to bring attention to this dirty secret.

Jeff Dudycha, Department of Biology

Integrating Ecology & Genetics to Understand Aging

*Aging, the deterioration of the body as an individual grows older, has long been a puzzle for evolutionary biologists. Aging harms individuals by definition, and natural selection is therefore expected to act against it. Why, then, is aging nearly ubiquitous among animals and plants? The answer, simply, is that as individuals grow older, the force of natural selection weakens. In the past two decades, evolutionary geneticists have labored to describe the population and quantitative genetic causes of aging. Though successful, this has shed little light on why different organisms vary in lifespan and rates of aging. In my research I draw on ecological and genetic information to evaluate how evolutionary processes have led to variation in aging. I use a common freshwater crustacean, *Daphnia*, and have shown that populations that differ in their selection pressures on aging do indeed show the predicted genetic differences in rates of aging. These differences appear to be adaptive, and are not due to random processes. Recently, I have begun to analyze specific genes, such as *I'm not dead yet*, *methuselah*, *POSH* and *four-wheel drive*, to identify the specific genes involved in natural evolutionary divergence of aging.*

Jeff Dudycha, Biology, Faculty

*Speciation and Gender Determination in *Daphnia**

**Daphnia* are freshwater microcrustaceans, found in ponds and lakes throughout the world. In North America, the *Daphnia pulex* group appears to be going through a burst of adaptive radiation, producing many young species. I am investigating speciation between populations in temporary ponds (*Daphnia pulex*) and their sister taxon from permanent, deep lakes (*Daphnia pulicaria*). The normal life cycle of *Daphnia* involves both sexual and asexual reproduction, which makes defining the boundaries of species difficult. Though ecologically separated, surveys of the genetic structure of metapopulations have indicated that there is gene flow between *Daphnia pulex* and *Daphnia pulicaria*. Furthermore, hybrids are common in the wild. Wild *Daphnia* hybrids, like mules, appear to be incapable of sexual reproduction, and persist solely through asexual reproduction. I bred hybrids in the lab and tested whether they were sexually competent. In stunning contrast to the wild, all of the artificial hybrids were sexually competent as females. Using hormonal manipulations, I also investigated their function as males, and found that male function appeared to be under Mendelian inheritance governed by a single gene. This suggests that the speciation process in the wild is incomplete, and that pre-mating barriers are primarily responsible for maintaining the genetic cohesion of each species in the wild.*

Donald Levine, Department of Biology; Donna Potacco, Science Enrichment Center; Richard Pardi and Karen Swanson Department of Environmental Science; Undergraduate Students: Donna Ploch, and Marvin Calderon
Rocks and Minerals Tutorial

We have developed a series of On-line tutorials designed to teach students rock and mineral identification using interactive modules of increasing complexity and using multiple learning strategies. As part of these strategies, a progressive introduction of information into the student's knowledge base has been interspersed with a series of challenging quizzes for self-assessment and learning reinforcement. The online nature of this tutorial enables our students to access this rock and mineral information at their convenience.

General Geology (ENV-115) is an Environmental Science GE/major course with a semester enrollment of about 125 students. One of the course's learning outcomes is demonstrated competence in the identification and description of common rocks and minerals and the roles they play in the Earth's formation. In order for students to complete the course successfully, they are required to identify a set of approximately 70 rocks and minerals through their physical and chemical properties. Rock and mineral testing is a key component of their General Geology laboratories, which comprises 25% of a student's grade.

This program provides our professors with a supplemental mechanism of teaching the information they expect their students to learn in their Geology laboratory and can also be used as an ancillary learning tool for a blended course. The approach taken here is generally applicable as reinforcement for in-class, hands-on instruction.

Preliminary results indicated that overall student reaction to the modules was very positive.

Janine Swingle, Department of Psychology
Are Students Drinking to Chase Away Painful Memories?

This research presentation addresses alcohol use among students. Alcohol abuse is a significant problem on college campuses. There is debate about what causes alcohol abuse. One theory, the self-medication model, suggests people overuse alcohol to cope with psychological symptoms like depression, anxiety, etc. Some evidence supports this theory, especially among sufferers of Post-Traumatic Stress Disorder (PTSD); a psychiatric disorder resulting from exposure to extreme trauma. PTSD symptoms are many and include: heightened anxiety; exaggerated startle response; trauma-related nightmares; and avoidance of reminders of the trauma. PTSD sufferers often find alcohol to be an effective, albeit destructive, way of reducing symptoms. A normal trauma reaction can include the same symptoms as PTSD only more mild and/or fewer of them.

Most previous research on the correlation between trauma and alcohol abuse used people diagnosed with either PTSD or an alcohol use disorder. This study addresses two questions. One, does the relationship between trauma exposure and alcohol abuse hold for typical college students not identified as having a disorder? Two, is the relationship between drinking and trauma mediated by the intensity of trauma-related symptoms, even where the symptoms are not severe enough warrant diagnosis?

Analyses on a preliminary sample of 126 students showed 65% reported at least one trauma; 30% had trauma symptom scores in the clinically significant range; and 26 % reported drinking scores in the problematic range. Higher drinking scores were correlated with higher trauma symptom scores suggesting students with higher trauma symptoms are drinking more than their less symptomatic peers.

Nisha Drinkard, Department of Art
Nature in My Art

My first year as a gardener had a big impact on the work created in my studio. I started adding plants into my work. I realized that there is a relationship between gardening and creating art; each activity feeding into the other creating more powerful work. For my presentation I will be discussing my newest series of artwork entitled "Garden Books." These books are made from cotton fabric covers and interior book pages of silk organza. Pressed between the layers of silk are plants from my garden. I received a Summer Grant from William Paterson University, College of Arts and Communication this past summer to do research into natural dyes for dyeing fabrics. Natural dyes are dyes that come from plants and insects. In my study of these dyes I have worked on creating layers and layers of color on the surface of cloth. As a dyer of many years I wanted to find new methods of creating pattern and color on fabric; employing creative methods to create rich surfaces on the surface of fabric.

Nadine M. Aktan, Department of Nursing

Functional Status after Childbirth and its Relationship to Social Support

Changes that occur in a woman during the postpartum period not only affect the new mother but the entire family system. This postpartum transition represents significant changes in a woman's ability to return to her previous level of functioning. Functional status after childbirth (FSAC) is a multidimensional concept encompassing a mother's readiness to assume infant care responsibilities and resume previous self-care, household, social and community, and occupational activities. Previous research suggests that postpartum women are unable to integrate the motherhood role with past role demands. Existing research identified significant relationships between satisfaction with support from partner and some dimensions of FSAC. This relationship need to be re-examined as a previous study examined an Australian population and the majority of prior work on FSAC took place in the 1980's and 1990's.

The proposed study aims to explore the predicted relationship between FSAC and social support. The relationship between FSAC and demographic variables such as age and parity will also be explored. A longitudinal design will be employed. FSAC will be operationally defined by the Inventory of Functional Status after Childbirth and social support the Personal Resource Questionnaire. The study findings will be used to develop and test interventions that may facilitate the improvement of the return to full FSAC by increasing social support during the postpartum period. The overall goal of the work is to discover ways nurses can effectively enhance a woman's return to full FSAC. Nursing professionals are involved in the facilitation of this return, as well as the support of families throughout this period.

Lily Prince, Department of Art

Points of Departure

I will present "slides" (digital format jpegs) with others in the art department. My images will be from my most recent solo show "Points of Departure". These color fingerprint paintings based on nature have a pulsating, glowing effect and are reminiscent of the macro and micro elements of viewing nature. The internal self and the external universe collide.

Rajiv Kashyap, Department of Marketing and Management

If the Brand Doesn't Fit, Must the Social Marketer Quit? Investigating the Importance of Fit Between Brands and Causes

Conventional wisdom suggests that a good fit between a brand and a social cause improves the efficacy of cause related marketing efforts. However, recent research has shown that the importance of fit may be moderated by a number of individual characteristics such as consumer familiarity with brands and causes, their knowledge and attitudes towards social marketing, and perceived size and typicality differences amongst causes and brands. Further, it isn't clear whether initial conditions matter. That is, are larger, familiar brands better positioned to benefit from cause related marketing? What about the type of cause? Previous research suggests that familiarity with the cause moderates the impact of fit upon consumer attitudes

(Lafferty, Goldsmith, and Hult 2004). However, there has been no investigation of which causes are considered more or less deserving of corporate support. These questions have important implications for brand strategy and management. For instance, if brand size and familiarity moderate the impact of fit upon consumer evaluations, less well known brands (including most B2B brands) may be better off investing their resources elsewhere. Also, if the type of cause is a boundary condition, the universe of beneficial alliances is potentially limited. This experimental study finds a less than even playing field with larger, familiar brands and typical causes being accorded an advantage.

Michael Thompson, Department of Political Science

Reworking American Democracy: The Impact of German Social Thought on American Democratic theory

My working hypothesis is that the great shift in American political and social thought during the Progressive and New Deal eras was deeply informed by core ideas from German social, moral, and social scientific thought. This manifested itself in a shift away from the founding ideas of Lockean liberalism, English and Scottish empiricism, and utilitarianism which were the bedrock of American ethical-political ideas during the eighteenth- and most of the nineteenth-centuries.

These ideas produced a laissez faire ideology which produced rampant economic inequality and also a rabid individualism that was causing in the minds of many social thinkers of the time an erosion of American political and social life. The late nineteenth-century saw the education of huge numbers of American intellectuals in German universities and, I contend, they brought back with them an entirely new way to think about the social sciences, the function of the state, and an entirely new way of conceptualizing democracy as well.

*This change in thought saw a move away from an emphasis on liberal individualism and a more toward a more socially integrated idea of human liberty and mental life. George Herbert Mead's *Mind, Self, and Society*, John Dewey's reworking of liberalism and his studies in German social philosophy, Richard Ely's founding of the American Economic Association around the principles of German political economy, Edward Bellamy's notion of an American socialism, Thorstein Veblen's studies in German economic development, all were products of this cross pollination. Many of them took degrees in Germany (at the universities of Heidelberg and Berlin, among others) and studied under the greatest minds of the time (such as Wundt and Dilthey).*

The research on this topic in the scholarly literature waned during the 1950s, when a return to liberal individualism became more fashionable in studies of American political thought and policy. But this, I think, was due largely to a reaction against Soviet communism and less to do with actual insights into the foundations of Progressive and New Deal thought. What is so central is the way that these ideas about democracy, individualism, community, the function of institutions (mainly the role of the state in public and economic life), which were reworked during that period are so relevant today, and age which has seen the return of laissez faire, the return of hedonic individualism, the erosion of secular community, and the resurgence of economic inequality.

The research I was able to perform thanks to this grant has enabled me to assemble material for a scholarly paper on the subject (which is presently in progress) as well as a sketch for an book on this topic and its relation to contemporary American policy and public life.

Monica Nyamwange, Department of Geography and Urban Studies

A Slice of Kenya's Environment and culture: A video presentation of WPU 2005 SAP

The Kenya Study Abroad program provides students with an opportunity to gain a basic understanding of diversity in Kenya's environments and cultures through field observations, conversations with field experts as well as field research. Video shows the equator, African Rift Valley, L.Nakuru, Maasai Mara, a visit to a Kalenjin village and traditional dances.

Susan Dinan, Department of History, and University Honors College

"Get thee to a nunnery," or not. How the Daughters of Charity avoided Monastic Enclosure during the Catholic Reformation

In 1563 the Council of Trent issued a decree mandating that all nuns had to live behind the walls of their convents. Yet, a scarce seventy years later, in 1633, with these decrees still in effect, a group of pious French women came together to offer the sick and poor medical care, religious instruction and alms. Although they did not call themselves "nuns," this group of women joined together and behaved in ways that closely modeled the behavior of active women's orders prior to the Council of Trent. The experimental confraternity turned out to be tremendously successful, and spread rapidly through France, progressively evolving into highly organized, disciplined religious communities. These women were highly visible: they had a distinctive form of dress, lived in private houses, and were often involved in administering and staffing large institutions, especially hospitals. By all accounts, Church authorities should have acted to enclose the orders and to preserve the moral integrity of the Church by assuring that these women were secluded. Nevertheless, in 1645, the French Catholic Church recognized their existence, and in 1668 they received approbation from the Pope.

There are many reasons why the Daughters of Charity escaped enclosure, and foremost among them was their ability to negotiate with persons of power within France. The King, Queen and many women at the court were patrons of the Daughters of Charity and supported their efforts to maintain an active vocation in the world. This paper will examine the allies of the Daughters of Charity at the court and also within the parishes in which the Daughters worked.

Joan Marian Fry, Department of Exercise & Movement Science

Improving the Quality of Physical Education Teacher Education: Research on, and Research through, Peer Coaching

This presentation reports the interrelationship between pedagogy and research physical education teacher education (PETE) faculty members that emerged in a study of wireless-communication assisted peer coaching between PETE students. The investigation was supported by an Academic Research Fund grant awarded at the National Institute of Education, Nanyang Technological University, Singapore.

Encouraged by Gordon and colleagues successes in improving counseling and interviewing skills among trainee school counselors (Gordon, Gibson, Hall, Dillon, & Perisce, 1997) and early childhood student teachers (White & Gordon, 2000) as well as the deep personal learning reported by the participants in their studies, the researcher undertook a peer coaching project with PETE students in Singapore. In this she collaborated with peers within the host institution as well as with others in PETE in Hong Kong.

The original intention of the study was for student teachers to support each other in micro-teaching in the school-based component of their pedagogy module. This was pre-empted in on-campus peer-teaching situations, where a "feedback friend" gave encouragement and guidance to the peer who was teaching. However, as the study unfolded an action learning model was developed at three levels (within a team of PE teacher educators, within PE trainee teacher pairs and within trainee PE teacher-university supervisor pairs) and in three contexts (peer teaching on campus, micro teaching in local schools, and practicum).

Following early departmental reporting, two colleagues were recruited to form a faculty team to demonstrate the wireless communication system and to model the reflective process. Over three semesters this trio introduced the wireless devices to the PETE pedagogy cohort.

The project increased the meaningfulness of the "learning-to-teach" experiences of the student teachers through focusing their observations of their peers' practice with subsequent reflections on their own teaching. As such there are indications that the collaboration between student teachers facilitated their learning phase.

These results were encouraging to the teacher educators. The project also strengthened their pedagogical skills and their career satisfaction was enhanced through increased collaborative practices within and between higher education institutions.

The synergy between the PETE pedagogy and research within that pedagogy suggests a model for ongoing collaborative practice.

Joan Marian Fry, Department of Exercise & Movement Science

Active wireless technology between student teachers: satisfaction with role and communication

In technology-savvy Singapore, wireless communication devices were used over four weekly lessons to facilitate communication between pairs of student teachers (STs). In the naturalistic setting of a neighborhood primary school, one ST used the technology to coach the other who was engaged in teaching. (Both were familiar with the lesson plan and in a later lesson the roles were reversed.)

The coach's comments (tape recorded) to the teacher were guided by lecturer-designed focus sheets. Following each lesson, all teaching STs (n=21) completed a short Likert-scale inventory on satisfaction with the role of teacher, influence of communication on satisfaction with role, characteristics of the communication as well as satisfaction with the device. Coding of tape transcriptions after Kahan (2000) showed that the communication was shaped by the focus of the observation sheets. Means of the tabulated frequencies on each survey item indicated that the participants were overall very satisfied with the process of being coached. Satisfaction in role increased across time. However, the influence of communication on role decreased across time. Satisfaction with communication (amount) peaked in week 2 and but satisfaction in content of communication increased across time. Although reporting that the devices were clumsy and at times impeded their teaching, generally the students were satisfied with the technology.

Gilbert Ndjatou, Department of Computer Science

Knowledge and Learning in a System of Autonomous Agents

The semantics of the propositional logic of knowledge proposed by Jakko Hintikka are based on frames of the form (Q, \sim) where Q is a set of possible worlds of the agent and \sim is an equivalence relation on Q that represents the agent's information partition of its possible worlds. In our work, we assume that an agent may perform some internal actions and interact with its environment, and that as a consequence, it learns (acquires new information) from the system and may refine its information partition of its possible worlds if what it learns is incompatible with what it had already known locally. We also propose a mechanism such that given an agent's original information partition of its possible worlds and the specification of its behavior, it derives the refined information partition of the agent's possible worlds, and a logic to specify and reason about what an agent may have learned during the execution of a system computation.

Katherine Everett-Bolkema, Undergraduate Student, Department of Sociology

Sponsor: Dr. Rosanne Martorella, Sociology

Is the Family in Decline? An Analysis of Census Report 1960, 1980 and 2000

The family in today's society is very different than the family forty years ago. As society changed, so did the family, in terms of demographics, responsibilities, women's roles, rates of intact families, and parental discipline. The family no longer looks like it did in 1960, with the high rate of divorce and the growing number of single parent households; the family is no longer made up of parents and their children.

By analyzing data from the U.S. Census Bureau, multiple factors of family demographics was tabulated for Bergen and Passaic Counties, New Jersey. Data revealed changes in marital status for both men and women as divorce rates increased dramatically. In addition, full-time work for women and widowed also increased. The paper discusses concern for the future of the family, and the probability for increased neglect with re-

gard to parental responsibilities.

Morgan Leigh Metzger, Undergraduate Student, Department of Sociology

Sponsor: Dr. Martorella, Sociology

Theory as a Strategy for Change: The Second Wave of Feminism Meets the Third. Presence, Politics, and Patriarchy.

This paper is an analysis of the second wave versus the third wave Feminism. It takes a critical position against "third wave" Feminism given its lack of theory and a theoretical practice which is harming Women's Liberation. Instead of progress from the second wave to the third, we are seeing a retreat to individualism, a severed dialogue among women in this generation, a decline in consciousness of oppression, and an insufficient political presence, among other factors.

Kimberly Ricks, Undergraduate Student, Department of Sociology

Sponsor: Rosanne Martorella, Department of Sociology

Language, Image and Gender: A Content Analysis of Gangsta Rap Lyrics, 1986-2005

Gangsta rap music is often identified with misogynistic lyrics. This research hypothesized that gangsta rap music degrades women and reinforces male dominance in the Hip Hop culture. Women rappers have turned the tables by exploiting men, themselves, and other women, and embraced the misogyny. Individuals and groups that have rallied against gangsta rap music were discussed. The lyrics of 154 rap songs, 107 performed by eight male rappers, and 47 performed by three female rappers were analyzed. The majority of the songs contained lyrics referencing verbal assault and pornography. Ideas to change the way women are viewed in rap music were given.

Discussion also includes the historical development of rap music and artists, and the response by women's groups to their lyrics.

Anna Gomah, Undergraduate Student, Department of Sociology

Sponsor: Dr. Martorella, Sociology

The Subculture of Gangs: A Case Study

Gangs have become an increasingly large phenomena in today's society. Gangsters can be a product of many things such as poor economic status, little (if any) parental supervision, frustration from the lack of opportunities for a future, and even a complete loss of hope for survival. This study will focus on gangs as an institution in today's society. What societal events have contributed to youngsters finding salvation in the "family unit" called a gang? Also, the structure of gangs, and the functions that members have within the organization is also discussed. In order to understand the meaning of a gang, and a member in present day society, data is analyzed from interviews with gangs members participating in a rehabilitation program in New Jersey. While the study analyzes the subculture and social functions of gangs, it addresses some of the concerns and deviance of gangs as well. The impact of a rehabilitation program is also discussed.

Leslie Nobler Farber, Department of Art

SOFTWEAR: Digital and Traditional Printmaking

Digital art is my vehicle for grappling with technology vs. the spiritual soul, nature, mass-production, and time and its rhythms. This work connects the world of nature and atmospheric effects with the world of computers as the timeworn real imagery intersects with the technologically patterned surface. The series of monoprints, mixed media paintings, and artist books utilize both symmetry and grid arrangements to present a sequence of events, a narrative change through time. While focussing on enabling the organic (i.e. human) to reassert itself over the machine, societal concerns are also referenced. This work explores the opposing

concepts of commodification and materialism v. spirituality and green thinking. In this work mass-produced, articles of clothing, literally emerge from photographs of urban and rural environments. Influenced by Pop and Op artists, as well as feminism, allusions to textile arts/industry, and beauty, fashion and commodification are visible.

This metamorphosis of imagery, from everyday scenes into graphic and linear patterning, carries its own tale of process. The elements are digitally collaged, further painted, printed out experimentally, then reworked electronically. This successive replication and recombining reinforces the idea of natural cycles, endless loops and ongoing process. Time past and future is referenced as the work transforms conventional scenes with an electronic kaleidoscope, giving them a new, maybe mystical, virtual reality. The organic is complemented by mechanical, geometric imagery in this visualization of time, space and ideas which allow the human touch to permeate the artwork, perhaps helping us to consider computerization, commodification and humanity.

Barbara Andrew, Department of Philosophy
Strengths and Weaknesses of Sympathy-Based Ethics

In his recent book, "Welfare and Rational Care " (Princeton University Press, 2002), Stephen Darwall attempts to rescue sympathy-based ethics from charges of relativism and subjectivism. In this essay, I question whether all sympathy-based ethics need to be saved from these charges and whether saving them promotes or degrades their value. My concern is that Darwall inadvertently loses the value that sympathy-based ethics sets out to promote: the particular knowledge found in caring for another person. This particularity does not stop sympathy-based ethics from having being universal or having a global impact if it is used to develop judgment about difference and particularity.

"Care ethics," as is well-known, refers to a body of mostly feminist philosophical literature which contends that emotional response to others is the basis of ethical motivation.

Tricia Snyder, Department of Economics and Finance
Co-Presenter: Martin Gritsch, Economics and Finance,
Do Profitable and Non-Profitable Firms Pay Executives Differently?

In the past decade, there has been a considerable increase in the use of stock options as a form of executive compensation. While agency theorists study the relationship between performance based pay and job productivity, they have not addressed whether executive compensation is impacted by a firm's profitability. Profitable firms may pay executives more incentive based pay, to reward their managers for a good job. In contrast, non-profitable firms may be willing to pay executives more in the way stock options to attract better managers. Thus, in this paper, we want to address whether profitable and non-profitable firms pay executives differently.

Linda Kaufman, Department of Computer Science
Solving symmetric Indefinite Banded Systems

This talk will discuss algorithm developed in the summer of 2005 for factoring symmetric banded matrices that may be indefinite. This factorization may be used to solve a linear system or to determine the inertia of the matrix- the number of its positive, zero, and negative eigenvalues. The algorithm preserves symmetry and band structure and bounds the element growth in the transformed matrices. It requires less space and fewer multiplications than unsymmetric banded Gaussian elimination. The problem might arise when finding eigenvalues of a banded symmetric system and was motivated by a problem in optical fiber design.

Michael Pelosi, Undergraduate Student, Department of Biology
Co-Presenter: Onnolee Jansen, Undergraduate Student Department of Biology

*Sponsor: Michael Peek, Department of Biology
Effects of sand burial on the coastal dune grass *Ammophila breviligulata**

*Shoreline erosion represents a major problem for many coastal systems. American Beachgrass (*Ammophila breviligulata* Fern.) acts as a natural stabilizer in this successional system. As a result, this dune vegetation is prone to severe disturbance and stress, most commonly burial by shifting sand. We monitored plant performance above and belowground throughout the summer of 2005 in response to an experimental addition of 10 cm/yr sand accretion rate, added in two increments. While we saw no effects of burial to sand, we did measure a uniform root length and weight distribution down to 70 cm, with an average weight of 0.39 ± 0.027 mg/cm³ and an average length of 2.8 ± 0.15 cm/cm³.*

Aboveground, the number of culms declined linearly from the start of the experiment, while plant height increased steadily until late August, then declined thereafter. The lack of a response to burial was not surprising as the start of the experiment was during the mid-summer, when soil moisture and temperatures were greatest and plant activity reduced. Surprisingly, however root biomass did not change through time or in the soil profile, suggesting the importance of biomass allocation to the root system and ultimately stabilizing shifting sand.

Burton Weltman, Department of Middle and Secondary School Education

E.D. Hirsch and the Search for a Common Conversation: Literary Theory as Educational Practice

E.D. Hirsch is a well-known literary theorist who has been devoted to ridding public schools of what he claims are the regressive educational practices of progressive educators and returning education to the essentials of traditional pedagogical practices since the 1980's. A self-styled political liberal and educational conservative, Hirsch has published numerous polemical works arguing in favor of a core curriculum of facts that he thinks all children should memorize and arguing against the social-centered curricula favored by progressives. He has also published a series of textbooks for each of the elementary school grades which ostensibly contain the core knowledge that students need to learn to become culturally literate.

In his literary theorizing, Hirsch has similarly eschewed the post-modernism and critical relativism of most modern theorists and argued in favor a traditional focus on the author as the source of the meaning of a work. Condemning as intellectual nihilism the idea that the meaning of a work is found in multiple interpretations by its readers, Hirsch has claimed that consensus is the only legitimate goal of literary criticism and that consensus can only be reached by focusing on what a text meant to the author.

My thesis is that Hirsch's literary and educational ideas are primarily motivated by the social goal of creating a common conversation about the world in which everyone would be able to participate. Hirsch is afraid that intellectual and cultural divisiveness will lead to more of the bloody racism and fascism that characterized much of the twentieth century. Having come of age during the 1950's in the aftermath of World War II and the Holocaust, Hirsch seems to believe that a key to avoiding the horrors of the last century is to promote a simple narrative about a better world in which all people can participate, and provide a common core of information and ideas that will both mold people and mediate their differences. He hopes to create a sort of self-fulfilling intellectual prophecy if people know the same things, maybe they will think the same ways and stop fighting each other.

The pedagogical appeal of Hirsch's books to parents and teachers is obvious. To be told that all you have to do to make your children culturally literate is to teach them the material in his textbooks is very comforting. The political appeal of the books is also obvious. The idea that peace on earth and good will amongst all humans can be attained if everyone reads these books is very comforting too. And if you believe, as Hirsch does, that sharing common subject matter knowledge is the key to a common conversation, there is logic to his position.

If you believe, however, that the key to both cultural literacy and a common conversation is cooperative ac-

tion on common problems, then not only is common content knowledge unnecessary, it is inhibiting. Solving problems requires creative solutions and for these purposes, a diversity of knowledge is superior to common knowledge because diversity leads to creativity and a greater chance of solving the problems. While Hirsch's desire for a common conversation is laudable, his approach is wrongheaded. It is not a canon of content knowledge that is necessary to create either cultural literacy or a common conversation. It is cooperation in solving common social problems that will generate the conversation and the content knowledge. And for these purposes, the social problem solving curriculum of the progressives would be superior to the essentialism promoted by Hirsch.

Nicole Magaldi, Department of Communication Disorders

A Retrospective Study of the Prelinguistic Behaviors of Children with Specific Language Impairment

Children with Specific Language Impairment (SLI) demonstrate deficits in the area of language without accompanying conditions such as mental retardation, hearing impairment, or neurological damage. When deficits in other areas of development including nonverbal IQ, hearing, oral motor function, and physical and social interactions are ruled out, and a language deficit of 1.25 standard deviations or lower is present, a child is diagnosed as having a Specific Language Impairment.

At present children are not typically diagnosed as having SLI until approximately three years of age or even later. Until that time it is difficult to differentiate between children who are late talkers and children who have SLI. Some researchers suggest that approximately 50% of late talking toddlers catch up to their peers by age three. However, those that do not demonstrate age appropriate language skills by the time they enter school are at significant risk for continued language impairment, which often contributes to academic difficulties and behavioral and social problems throughout childhood.

Most speech-language pathologists and researchers agree that if children with SLI could be identified earlier, with subsequent earlier therapeutic intervention, linguistic outcomes could be considerably better. In an effort to help identify children with SLI earlier, this study examined the prelinguistic behaviors (those behaviors that develop prior to the onset of spoken language) of a child with SLI and compared them to a child whose language is developing normally.

Prelinguistic behaviors with established links to language including babbling, gestures, and facial affect were examined. Findings indicated a clear difference in the amount of gestures and the amount of time displaying affective emotion. Clinical implications of findings will be discussed.

Casey Lum, Department of Communications

Outdoor Advertising and Globalization in China

This study examines outdoor advertising as both a sign and an agent of globalization in China with a focus on the experiences in major urban centers such as Beijing and Shanghai. Some of the issues to be discussed include (a) a trend analysis of key sponsors of outdoor advertising in China, (b) the themes/genres, technologies, and placements of outdoor advertising displays in China's urban spaces, (c) how outdoor advertising may reflect the changing social, political, and economic conditions in China in the past three decades. Data for the proposed presentation are drawn from an original field research project that was partially supported by a 2005 Summer Center for Creative Activity & Research, College of the Arts and Communication.

Emmanuel S. Onaivi, Department of Biology

Behavioral Effects of Putative CB2 Cannabinoid Receptor Ligands.

We have identified the neuronal expression of the so called "peripheral" cannabinoid CB2 receptors and shown that direct CB2 antisense oligonucleotide administration into the brain modifies mouse behavior. We now describe the effects of the putative CB2 agonist, JWH015, the mixed CB1/CB2 agonist WIN55212-2 and CB2 antagonist SR144528 in mouse motor function tests and in the two compartment black and white box.

Acute treatment with CB2 agonist (JWH015) altered mouse locomotor activities in a strain and gender dependent fashion. A general pattern of depression in locomotor activity was induced by JWH 015 in both males and females in the three mouse strains tested as the dose was increased. In the two compartment black and white box the acute effects of JWH015 at low doses (1-20 mg/kg) did not induce robust anxiolytic response rather this peripheral administration of JWH015 induced an anxiogenic profile of response in the black-white test box. In contrast chronic treatment of control mice with JWH015 induced an anxiolytic profile of response in comparison to the chronic mild stress animals. Using the DBA/2 strain the spontaneous locomotor activity and stereotype behavior was enhanced by acute administration of low doses of SR144528. SR144528 did not induce stereotype behavior in female mice at the doses used. In the two compartment black and white box test box treatment with SR144528 had little or no effect on the time mice spent in both chambers by male or female DBA/2 mice except a reduced time spent in the white chamber by the male mice at the highest dose used.

The spontaneous locomotor activities in both chambers by both DBA/2 male and female treated with SR144528 were also not significantly different from vehicle treated control mice. These effects of CB2 cannabinoid receptor ligands in in vivo behavioral tests are provided as functional evidence of CB2 cannabinoid receptors in the brain that plays a role in motor function and emotionality tests. Supported by WPUNJ Center for Research.

Christopher Mallery Jr., Undergraduate Student, Department of Biology

Sponsor: Carey Waldburger, Biology

Mutational Analysis of ATP-Binding Determinants of the PhoQ Histidine Kinase

PhoQ is a protein consisting of a periplasmic sensor domain coupled to a cytoplasmic transmitter domain (it can, thereby, transmit chemical messages across the membrane of the cell) and along with its partner PhoP (forming a "two-component signal transduction system") allows bacteria (such as Escherichia coli and Salmonella typhimurium) to survive in a low magnesium environment. In limiting extracellular concentrations of Mg²⁺, PhoQ phosphorylates PhoP, and PhoP, in turn, mediates the transcription of a set of genes that include several responsible for the active transport magnesium into the cell. However, if magnesium is plentiful, then active transport of magnesium is not necessary, and it will bind to the PhoQ sensor domain to inhibit the phosphorylation of PhoP. Prior to phosphoryl transfer from PhoQ to PhoP, PhoQ first autophosphorylates itself on a conserved histidine residue. Although more than 1000 histidine kinases of this class have been identified, a detailed understanding of the autokinase reaction mechanism is still lacking, in part due to limited detailed structural information for these proteins. Previously, we have solved the structure of the ATP binding domain of PhoQ by X-ray crystallography.

The structure revealed a number of potentially important contacts between protein residues and a bound ATP. To examine the importance of these residues in enzyme function and/or ATP binding we have individually substituted each of the eight amino acids with alanine and have assessed the effects of these mutations on autokinase activity in vitro and signaling in vivo. Our results suggest that the most highly conserved residues play critical roles in ATP binding and/or autokinase catalysis while other residues that contact the bound ATP molecule play lesser roles in these activities but may be involved in phosphorylation of PhoP.

Tiffany Groglio, Undergraduate Student, Department of Philosophy

Sponsor: Barbara Andrew, Philosophy

Lying and Self-Deception

The concepts of lying and self-deception are concepts that have been pondered and written about in no small magnitude, by philosophers and non-philosophers alike. I explore these concepts in my paper. After giving clear definitions of both lying and self-deception, I begin exploring the ethical ramifications of each, giving real-life, relatable examples in my effort to arrive at a clear footing as to 1) whether the act itself is ethically right or wrong, and 2) whether the person committing the act can be declared ethically right or wrong.

From here, I go on to discuss the connection between self-deception and lying, which I suggest is inevitable in certain types of lies and, in some cases, causal. Using the works of Fingarette, Bok, Rich, Kant, and Sartre, I develop my argument in a three-chapter organization, with the first dedicated to lying, the second to self-deception, and the third to their very powerful, very important relationship.

Kathy Lancellotti, Department of Nursing

NCLEX-RN: A Valid Test for a Diverse Society?

Entry into practice as a registered professional nurse is determined by taking the NCLEX-RN, a standardized multiple-choice test. Students are eligible for this exam after completing a diploma program, associate or baccalaureate degree. Historically, baccalaureate students, African-American students and ESL students have had a lower pass rate on NCLEX-RN. This article examines the validity of NCLEX-RN through analyzing the philosophical assumptions that underlie the exam. The epistemology and ontology of the nursing profession are examined for congruence to the philosophical underpinnings of the exam. Conflicts between current baccalaureate educational philosophies and philosophy of the NCLEX-RN are explored. Leininger's Culture Care Theory (2006) is used as a framework for the analysis. Culture Care Theory considers care and culture as essential concepts in nursing practice, recognizing that tenets of nursing care vary widely across cultures. As American culture becomes increasingly diverse, Culture Care Theory becomes a useful framework for examining entry into practice concerns, which will ultimately affect national health.

Betty Kollia, Department of Communication Disorders

A comparison of children's performance on five tests of articulation and phonology

Children's performance on five widely used tests of articulation and phonology (BBTOP, CAAP, GFTA-2, PAT-3, and SHAPE) was examined in terms of comparability for identifying a phonological disorder and for selecting goals. Our analysis demonstrates that the particular goals selected for a child were influenced by test content. We, therefore, recommend that clinicians use supplementary probes and/or administer more than one test rather than basing goal selection on a single test.

Betty Kollia, Department of Communication Disorders

Co-Presenter: Martin Addison, Department of Communication Disorders

Temporal and spectral parameters of diphthongs produced by hearing impaired children

The purpose of this study is to examine the formant transitions during diphthong production in pre-lingually deafened children who have received cochlear implants. Formant transitions during a diphthong production task are compared to age and gender matched peers. Acoustic analyses of the speech signal compare initial and final formant values between the two groups as well as the contours of the formant transitions and the durations of the diphthongs.

Mark Ellis, Department of Sociology

The Social Functions and Consequences of Arts in Society: The Video Made Me Have Sex

This presentation examines the social functions and consequences of arts in society by considering sexually explicit and violent lyrics and visual images in commercial rap music. The definitions of art as education, politics, entertainment, and art as both a mirror that reflects society and a hammer that shapes it are considered. These ideas are explored through an examination of the representation of the phallic and gynec and how they contribute to the culture of sexual violence in our society. The 1997 and 2002 recommendations made by the American Academy of Pediatrics on the impact of violent and sexually explicit lyrics and images are critiqued. In the end, we know that correlation does not always mean causation. Understanding contributing factors to the culture of violence is not clear-cut. It is important to provide both young children-youth and adults with better media education where the channels for dialogue are kept open between and among

the generations.

Martin Williams, Office of Sponsored Programs, Professional Staff

Co-Presenters: *Members of the Research Council*

Research Council Survey, 2006

The results of the Faculty Senate Research Council's Survey of faculty and librarians concerning the use of their time, especially concerning research and scholarship, and the resources and services provided by the University to support research and scholarship will be presented. The results will also be compared against the Research Council's 2005 survey.

Martin Williams, Office of Sponsored Programs, Professional Staff

Co-Presenter: *Jack Bernardo, Office of Sponsored Programs*

The Office of Sponsored Programs

Poster and accompanying materials will provide information on the Office of Sponsored Programs' services and resources to assist faculty and staff in finding funding opportunities, applying for and managing government grants and contracts, complying with various Federal regulations, and other activities.

Kevin Martus, Department of Chemistry and Physics

Optical Emission Spectroscopy from a Cylindrical Dielectric Barrier Discharge (C-DBD) in Ne and in Ne/N₂ Mixture

The vacuum ultraviolet (VUV) emissions from a cylindrical dielectric barrier discharge (C-DBD) excited by radio frequency (rf) power at 13.56 MHz in both pure Ne and mixtures of Ne with N₂ were analyzed. In pure Ne and Ne-N₂ mixtures, we studied the VUV/UV and visible emissions in three different wavelength ranges: 70-120, 120-180, and 330-365 nm. Channels of energy transfer from the Neon metastables and excimers to atomic nitrogen in excited Ne-N₂ mixture were analyzed based on the dependence of the intensity of the VUV emissions on the discharge operating parameters and gas mixture. The relation between the optical emissions of the Ne excimer and the optical emissions obtained at different wavelengths were analyzed and used to explain the behavior of the Ne excimer under different discharge conditions. A comparison between the optical emissions obtained from Ne/N₂ mixture and Ar/N₂ mixture were made.

Djanna Hill-Brisbane, Department of Secondary/Middle Education Co-Presenter: *Kenya Easley-Mosby, Graduate Studies*

Issues of Support & Leadership in the Experiences of Prospective Teachers for Urban Schools

One of the greatest challenges for the United States as a nation, and for Paterson, NJ in particular, is how to attract and retain academically and pedagogically talented teachers for urban schools - teachers who are committed to remain in those schools to do the difficult, long-term work of reform and renewal. This work is critical if urban students are to succeed in post-secondary education and in the world of work. In response to this increasing need, this paper will explore (1) how William Paterson University is actively recruiting and preparing urban teacher candidates through the Paterson Teachers for Tomorrow Program (PT4T) and (2) urban teacher candidate perspectives on their preparation experience as it relates school leadership. It is based on a qualitative study that attempted to answer two questions: In what ways is William Paterson University retaining and preparing minority urban teacher candidates?, and, What are students' perspectives on their preparation experience related to being effective leaders in an urban setting? Data analysis revealed several themes regarding their perceptions of support, leadership, and school change.

Mukesh K. Sahni, College of Science and Health, Professional Staff

Co-Presenters: *Gurdial M. Sharma, College of Science and Health*

Electron Impact Mass Spectra of N-Ary-Thiocarbamylacetamides

Gaseous molecules of N-phenyl-thiocarbamylacetamide upon bombardment with electrons of energies 12 eV produce two types of molecular ions. One type of molecular ions is produced by the loss of an electron from the non-bonding orbitals of the oxygen.

Jane Bambrick, Cheng Library

Co-Presenter: Glen Bencivengo, Cheng Library

The State of Adaptive Technology for Learning Disabled Students in the College and University Libraries of New Jersey

Although educators are professionally trained to assist learning disabled students throughout the K-12 years, when these students enter college their needs are not always met. Faculty and librarians in higher education are often not prepared to assist LD students, and they are not familiar with the federal laws that apply to the disabled. The purpose of this study was to investigate the present state of library services to learning disabled students in academic libraries in the state of New Jersey. A survey was developed with selected questions on technology available to these students. The libraries' web pages were reviewed in terms of "Bobby Approval" and the accessibility of links that can direct LD students to AT services. An analysis of the results reveals that academic libraries must improve their services to learning disabled students in order to insure that they have every opportunity to succeed in college and become productive citizens.

