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Graduate Research Fair Program, 2010

EMU Graduate School
Eastern Michigan University

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Welcome to the Graduate Research Fair

Welcome to our annual celebration of graduate student scholarly and creative work. Students share oral and poster presentations of theses, dissertations, capstone/final projects, unique internship experiences, and other scholarly course projects.

We have a new record! There are 288 graduate student presenters this year. This represents a 25% increase over last year's participation and a 45% increase since 2008. The great news is that the event has not only grown in quantity but, most important, in quality of work.

There are 150 faculty mentoring the scholarly projects this year. They represent all colleges and 28 academic departments and schools.

As the event enters its second decade, the reputation and faculty support has grown. The research and scholarly work has matured. Students feel comfortable presenting in multiple years. Team/collaborative projects are more readily shared. Many students use this as a stepping-stone to local, state, national and international scholarly presentations, of which we are very proud.

Thank you for taking the time to view the posters, listen to oral presentations, and network with one another over these student achievements.

Thank you to the faculty judges who reviewed paper submissions for student presenter monetary awards.

Thank you to the faculty room moderators who introduced the oral presenters and kept them on track and on time.

Thank you to the individuals, departments/schools, offices and corporate/ community partners who financially supported the event. We could not offer the event without your generosity.

At the end of the day, 6 p.m. in the Student Center Auditorium, we look forward to the 2010 Sigma Xi speaker, Dr. Elizabeth Friedman, from the College of Science and Letters, Illinois Institute of Technology. Her talk, *Archaeological Science: Forging Common Ground across Academic Disciplines*, will address interdisciplinary collaborations that enable cultural and historical understanding through evidence gathering and analysis in the midst of natural disasters, war, looting, agricultural changes, and more.

EMU is proud of its graduate programs and the distinctive professional advantages they offer our graduate students with basic and applied scholarship. On behalf of the Graduate Council, a University committee that plans and helps implement this event, enjoy the day!



Deb de Laski-Smith, PhD
Dean (Interim)
Graduate School

Event Schedule:

- Lunch in the Grand Ballroom at 11:30 a.m.
- Oral Presentations on the 1st, 2nd and 3rd floors at 1:15 p.m., 2:45 p.m. and 4:15 p.m.
- Poster Presentations in Room 310 at 2:15 p.m. and 4:00 p.m.
- Sigma Xi Speaker Dr. Elizabeth Friedman in the Auditorium at 6:00 p.m. *Archeological Science: Forging Common Ground Across Academic Disciplines*

2010 Graduate Research Fair

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College of Arts and Sciences

Department of Art

Martin E. Somberg

Professors Leslie Atzmon and Andrew Maniotes

Neville Brody and Postmodern Design

This presentation discusses the British graphic designer, Neville Brody, in terms of his relationship to both the visualization and contextualization of postmodernism. Brody's influences are traced to early avant-garde art movements and historical figures in typography. His evolution as a designer is described as he developed unique visual languages that helped define postmodern graphic design and, in the process, created philosophical contradictions in his practice that were models of the postmodern condition. Brody's work and practice are described in relation to the tenets of postmodernism, his concern for humanism, and his desire to bring a fine art sensibility to design and print.

Room 320, 1:15 p.m.

Department of Biology

Sakina Alem

Professor Marianne Laporte

The Effect of GC1 Promoter on the Expression of NADP Malic Enzyme

Guard cells control the release of water from stomata in a process known as transpiration. Malate synthesis in guard cells, in addition to influx of ions such as K⁺ and Cl⁻ from adjacent cells, results in an increase in turgidity of the cells. This increase in pressure allows the stomata to open, thus releasing water from the plant. It has been shown that increased malic enzyme activity causes conversion of malate to pyruvate, thereby decreasing water loss thru stomata opening. I have worked on cloning a guard cell promoter (GC1) that will be used to increase the expression of malic enzyme. I am currently working on inserting my cloned guard cell promoter and the gene for NADP malic enzyme into pMP535 vector. I plan to grow lines of transgenic Arabidopsis plants. I hypothesize that increased NADP ME activity specifically in guard cells will decrease stomatal pore size.

Poster Presentation: Room 310, 4:00 p.m.

David L. Bavers

Professor Glenn Walker

A Possible Model of Inducible and Reversible Proteinuria

While there are animal models of kidney disease, the mechanisms by which they act are not well understood. Here, we analyze an injectable compound, previously used as a cancer adjuvant, to investigate its role in causing reversible proteinuria. Intra-peritoneal injections of 40 mg/kg body weight/day resulted in massive proteinuria by day 2, which cleared after cessation of treatment. Tubular walls of the cortex appeared porous and diffuse when stained with H&E or Mason's Trichrome. SEM of visceral epithelial cells of the glomerular filtration barrier, known as podocytes, showed marked retraction and flattening, or effacement, following treatment for 3 days. It is unclear if the proteinuria and kidney damage observed is a primary result of acute treatment or secondary to animal sickness caused by the compound. We have not ruled out use of this compound as an inducer of proteinuria, but the mechanism of action must be better understood before it will prove useful as a model of disease.

Poster Presentation: Room 310, 4:00 p.m.

Michael P. Camilleri

Professor Aaron Liepman

Characterization of Recombinant Cellulose Synthase-Like Proteins Expressed in Physcomitrella patens and Pichia pastoris

Plant cell walls are composed of a matrix consisting primarily of cellulose and hemicelluloses. The unique characteristics of this matrix are exploited in many useful ways. Plant cell walls also hold great promise as a feedstock for biofuels. Much remains to be learned about the synthesis of hemicelluloses, including the identities of genes encoding glycan synthases and glycosyltransferases that biosynthesize these polymers. It has been previously demonstrated that some Cellulose Synthase Like (CSL) genes encode glycan synthases involved in cell wall polysaccharide synthesis. While it is hypothesized that these genes encode glycan synthases, no members of the CSLG family have been functionally characterized. Here, the three members of the CSLG family from Arabidopsis thaliana are studied using heterologous expression in a moss (Physcomitrella patens) and a yeast (Pichia pastoris). Preliminary results of these efforts are presented.

Poster Presentation: Room 310, 4:00 p.m.

Rochelle A. Hughes

Professor Robert Winning

Localization of p190RhoGAP in Xenopus laevis Embryos

P190RhoGAP, also known as p190A, is an important regulator of the monomeric GTPase Rho, which regulates the cytoskeleton. We know little about the expression of p190RhoGAP in Xenopus laevis embryos. The purpose of this project was to visualize the expression patterns of p190RhoGAP in developing embryos. Using an antibody for p190, expression was visualized in whole embryos. Sections of the antibody-stained embryos were taken using a microtome to observe the protein expression within the embryos. During the early stages of development, the protein was localized to the cortical cytoplasm in the animal hemisphere of the embryo. P190RhoGAP appeared to be expressed within specific structures including the neural folds of neurulation. The expression of p190RhoGAP in particular regions during embryogenesis suggests an important function for this protein in the developmental of Xenopus laevis. Knockout studies are being performed to further determine the developmental function of p190RhoGAP.

Poster Presentation: Room 310, 4:00 p.m.

Lauren Koch, Kristi Budwit, Davra Campbell, Supriya Davuluri, Rajesh Kiran Kare, and Francis Leong

Professor Daniel L. Clemans

Phylogenetic Analysis of Bacterial Communities Isolated from Natural, Agricultural, and Urban Streams within the Huron River Watershed

Microbial communities differ within varying aquatic environments, with land usage impacting the natural makeup of these communities. Diversity is lower at areas of heavy human use than at sites considered more natural. Water, sediment, and biofilm samples were obtained from three different sites within the Huron River Watershed. Bacterial 16S rDNA was cloned and PCR amplified, and samples were sequenced at the University of Michigan DNA Sequencing Core and identified using the Ribosomal Database Project (<http://rdp.cme.msu.edu>). The 16S rDNA bacterial sequences from the water, sediment, and biofilm samples were analyzed for diversity and the role of possible human impact. Identification of the different bacterial samples suggested the role of land use in the formation of microbial communities within stream habitats.

Poster Presentation: Room 310, 4:00 p.m.

Robert A. Loepf III

Professor Robert Winning

Rho-associated Protein Kinase 1 (ROCK1) Catalytic Activity Rescues Receptor Tyrosine Kinase EphA4's Phenotype in *Xenopus laevis* embryos.

The Eph family of receptor tyrosine kinases is involved in mediating interactions between cells during embryonic development. Activation of the EphA4 receptor in early *Xenopus laevis* embryos leads to perturbation of cell adhesion, causing exterior lesions and disruption of blastocoel development. The downstream effectors of this signaling pathway are not well understood, although studies have shown RhoA GTPase to be inhibited by EphA4 catalytic activity. We investigated the involvement of rho-associated protein kinase (ROCK) in the signaling downstream of EphA4 by ectopically expressing mutant forms via RNA microinjections into *Xenopus* embryos. Our results showed a significant rescue of the EphA4 phenotype when expressing a constitutively active mutant isoform ROCK1, with normal blastocoel formation increased from 32% (n=50) to 60% (n=42) (two-sample t-test, $p < 0.01$).

Poster Presentation: Room 310, 4:00 p.m.

Kristie Mitchell

Professor Jim Vandenbosch

Chromosomally Encoded Serum-Resistance in *Salmonella typhimurium*

Salmonella typhimurium is a leading cause of infectious gastroenteritis and results in systemic disease when it escapes into the bloodstream. One of the most important components of human serum in fighting bacterial infections is the complement system. A strategy *S. typhimurium* uses for survival outside of cells is resistance to killing by complement (serum-resistance), a trait conferred by several known virulence genes. Our goal is to investigate a complement-resistance gene located on the chromosome of *S. typhimurium*. A chromosomal *TnpA* insertion of *S. typhimurium* strain EM876 results in reduced serum-resistance. Inverse PCR with DNA sequence analysis revealed the insertion to be located in the gene *glpQ*. To determine the gene's role in serum-resistance, we will use complementation assays, and the resultant isolates will be tested to determine whether the reduction in serum-resistance has been repaired. We hypothesize that *glpQ* is responsible for the decreased serum-resistance phenotype seen in EM876.

Poster Presentation: Room 310, 4:00 p.m.

Greg Norwood

Professor Peter Bednekoff

Common Tern (*Sterna hirundo*) Nest-Site Selection, Nest Desertion, and Productivity at the Detroit River, MI

Common terns (*Sterna hirundo*) in the lower Great Lakes have declined in number since the 1960s and nest mostly on artificial structures adjacent to water. These colonies are often spatially fixed and prone to excessive annual predation, especially in the urbanized Detroit River, where nest predators are common. This study investigates the spatial and temporal patterns of habitat use of one colony underneath a busy bridge in the Detroit River with high variability of habitat. I compared substrate and vegetation variables of nest sites with random points throughout the colony. I also characterized the vegetation at three areas with different substrate and explored differences in early nests and late nests and successful and unsuccessful nests. I employed a technique for monitoring general patterns of nocturnal nest desertion through the use of temperature sensors placed within incubated nests.

Room 104, 2:45 p.m.

Keshav Prasad Sah and John Reid

Professor Daniel L. Clemans

Study of Antibacterial Efficacy of AOT against Various Micro-organisms

AOT is an anionic surfactant and a common ingredient in consumer products, including stool softeners. This study was aimed at finding the role of surfactant AOT as an antibacterial against wide range of micro-organisms from pathogenic probiotics to yeast. It involved culture and identification of organisms and MIC (Minimum Inhibitory Concentration), followed by determination of MBC (Minimum Bactericidal Concentration) of AOT. In this study, AOT was found to be an effective antibacterial substance against a wide range of micro-organisms, including pathogenic organisms. Its antibacterial effect is limited to the Gram-positive organisms tested, including several *Staphylococci*. It is interesting to note that one strain of *Lactobacillus* was found to be resistant to AOT. Further studies will be directed toward elucidating the mode of action of AOT against Gram-positive bacteria and yeast, using strains sensitive to AOT.

Poster Presentation: Room 310, 4:00 p.m.

Saedeh Sepehri

Professor David Kass

Detection and Quantification of the Expression of LINE, Mys and SINE Retrotransposons in Somatic and Germ Line Tissues in *Peromyscus maniculatus*

This research focuses on the detection and quantification of long interspersed DNA element (LINE), short interspersed DNA element (SINE), and Mys retrotransposon expression in the deer mouse (*Peromyscus maniculatus*). These "mobile elements" increase in genomic copy number via a process called retrotransposition. This study is designed to determine if germ-line expression of these elements is the limiting factor associated with their relative successes in generating newly inherited copies. This will be analyzed by contrasting the RNA levels in gonadal tissues with the number of copies of the elements found within the *Peromyscus* genome. Currently I am developing the appropriate conditions for real-time PCR for RNA quantification of the elements within the gonadal tissue. In addition to addressing our hypothesis, this will enable us to determine whether the male or female is more responsible for transferring these elements to the next generation.

Poster Presentation: Room 310, 4:00 p.m.

Prannda Sharma, Adnan K. Syed, Danielle M. Rosen, and Christine Mella

Professor Aaron Liepman

Analysis of Cellulose Synthase-Like A (CSLA) Gene Expression Using Reporter Gene Fusions in *Arabidopsis thaliana*

Plant cell walls provide an abundant renewable resource used for the production of biofuels, paper, textiles, and other products. These composites consist mainly of carbohydrates, including cellulose and non-cellulosic polysaccharides. Previous studies of cell wall polysaccharides have revealed their complex structures but have not identified all the enzymes needed for their synthesis. Numerous members of the Cellulose Synthase-Like A (CSLA) family have been demonstrated to encode glucomannan synthases, enzymes that produce mannan polysaccharides present in plant cell walls. The genome of *Arabidopsis thaliana* contains nine CSLA gene family members; however, mannans are not accumulated in abundance in this plant. We are using promoter:GUS fusions to study the expression patterns of CSLA genes in *Arabidopsis*. Progress of these efforts will be presented.

Poster Presentation: Room 310, 4:00 p.m.

Catherine E. Wiesner

Professor David Kass

Expression Levels of Non-autonomous Retrotransposons in Germ-line Rodent Tissues

SINES (short interspersed DNA elements) are families of non-coding regions of DNA that amplify within genomes via an RNA intermediate and are referred to as retrotransposons. These elements mobilize using machinery from other retrotransposons and therefore are non-autonomous. It has been shown that both nucleotide sequence and the 3' A-tail are important contributors for successful amplification. We propose that the level of germ-line transcription of SINE "master genes" is a primary factor in their successful mobility and vertical transmission. By RT-PCR, the GPIDL SINE family appears to be active in the guinea pig germ-line. Since copy numbers of different SINE families are highly variable in genomes of various rodent species, a relationship in germ-line SINE expression levels, determined by real-time PCR, would support our hypothesis.

Room 104, 3:05 p.m.

Cody T. Williams

Professor Steven Francoeur

Nutrient Limitations of Lyngbya wollei in the Western Basin of Lake Erie

Filamentous cyanobacteria have caused ecological problems in the southern United States. One species of particular concern is the filamentous *Lyngbya wollei*, which has recently been observed in Lake Erie. Some problems arising from invasion by *Lyngbya* include alteration of natural communities and skin lesions in mammals. Unless an effective management strategy can be developed, there may be consequences for Lake Erie. Therefore, the reason *Lyngbya wollei* has taken hold in Lake Erie must be ascertained. The purpose of this study was to determine if *Lyngbya* is nutrient-limited in Lake Erie. Nutrient-diffusing substrata were used to establish whether *Lyngbya* is nutrient-limited. We hypothesized that *Lyngbya wollei* has been nutrient-limited in Lake Erie and that historical data will show a shift towards conditions conducive to the growth of *Lyngbya*. Preliminary results suggest that *Lyngbya wollei* is nitrogen-limited in Lake Erie.

Poster Presentation: Room 310, 4:00 p.m.

Department of Chemistry

Nadine C. El-Ayache

Professor Cory Emal

Design and Synthesis of Bis-arylsulfonamides and Aryl Sulfonimides as Inactivators of Plasminogen Activator Inhibitor-1 (PAI-1)

PAI-1 is a naturally occurring serine protease inhibitor involved in the inhibition of urokinase- and tissue-type plasminogen activators. At physiological levels, PAI-1 takes part in many processes, such as cell migration, fibrinolysis, angiogenesis, and wound healing. At pathological levels, PAI-1 has been linked to renal disease, obesity, deep vein thrombosis, type 2 diabetes, cardiovascular disease, cancer, and pulmonary disease. Therefore, synthesis of potent and specific PAI-1 inhibitors is of great importance. A variety of aryl sulfonamides and aryl sulfonimides were synthesized, and their potencies as PAI-1 inhibitors were determined. Based on the data collected, a structure-activity relationship model has been developed.

Poster Presentation: Room 310, 4:00 p.m.

Reshma Kankanala

Professor Hedeel Evans

Characterizing the Oligomeric Structure of the Dihydroorotase and Aspartate Transcarbamoylase from the Bacterium *Bacillus anthracis*

Bacteremia is the bacterial invasion of the blood. Bacterial proliferation in the blood requires that the organism adapt its metabolism to available nutrients. Nucleotides precursors that could be used are

present at very low levels in the blood, and thus the invading bacteria must rely on de novo nucleotide biosynthesis for survival. The dihydroorotase domain is a key enzyme in pyrimidine biosynthesis and catalyzes the third step in the pathway. It was recently shown to be a promising drug target since defects in this enzyme caused an approximate 1000-fold decrease of viable cells in the blood. We cloned the genes encoding the dihydroorotase and aspartate transcarbamoylase from the bacterium, *Bacillus anthracis*, and expressed them in *Escherichia coli*. The proteins were purified by affinity chromatography and their oligomeric structures determined by gel filtration and cross-linking methods. The oligomeric structures were determined in the presence and absence of substrates.

Poster Presentation: Room 310, 4:00 p.m.

Mahalakshmi Kotichukkala

Professor Hedeel Evans

Interaction of Carbamoyl Phosphate Synthetase with Other Components of the Pyrimidine Pathway in *Aquifex Aeolicus*

Aquifex aeolicus encodes proteins that are homologous to the major carbamoyl phosphate synthetase domains found in mesophilic organisms. The CPS.A and CPS.B homologs from *A. aeolicus* were overexpressed in *Escherichia coli* and purified to homogeneity by affinity chromatography. In this study, the purified carbamoyl phosphate synthetase components were tested for their binding and interaction with the aspartate transcarbamoylase and dihydroorotase domains, the enzymes that catalyze the next reactions in the pathway. The interaction was tested in the absence and presence of the substrates and at different temperatures. Enzymatic assays to determine the outcome of protein-protein interaction on the catalytic activity of each component were also carried out to investigate putative functional linkages.

Room 104, 1:35 p.m.

Ran Li

Professor Ruth Ann Armitage

Characterization of the Binders in the Rock Art of Cueva La Conga, Nicaragua

Archaeologists want to know if the paintings in Cueva La Conga, the only recorded painted cave in Nicaragua, were influenced by the Maya, Caribbean cultures, or were a purely indigenous development. Using radiocarbon dating to determine the age of the paintings will help to understand the possible cultural relationships between known cultures and the rock art. The prerequisite for radiocarbon dating using accelerator mass spectrometry is that an organic binder must be present in the painting samples and is extracted and dated later. We are using thermally assisted hydrolysis/methylation-gas chromatography-mass spectrometry (THM-GC-MS) to study the composition of the paints to determine if any binder material remains. Comparing the compositions of the paint and unpainted limestone will allow us to determine if a reliable date is likely to be obtained. We will describe the inherent difficulties of reconciling good analyses with preservation of these irreplaceable and at-risk cultural materials.

Room 104, 1:15 p.m.

Rajani Maddi

Professor Steven John Pernecky

GC/MS Characterization of Short Chain Fatty Acids in *in vitro* Microbial Culture Systems

Butyrate and lactate are naturally occurring short chain fatty acids (SCFAs) produced by probiotic bacteria that reside in the human gut. These chemicals play a vital role in the maintenance of colonic health. *In vitro* cultures of probiotic bacteria containing single and combined cultures producing lactate and butyrate provide an opportunity to determine how bacterial interaction affects butyrate and lactate production. To conduct our studies, anaerobically cultured probiotic bacterial samples were obtained from Dr. Clemens. The cultures were subjected to C-18 column extraction followed by ether extraction.

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Quantitative measurement of lactate and butyrate was performed on the extracts after chemical derivatization and analysis by GC/MS. Results revealed that the combined cultures of probiotic bacteria produced a measurable amount of butyrate compared to single cultures. Detection limits were such that butyrate levels in biological samples could appropriately be determined.

Poster Presentation: Room 310, 4:00 p.m.

Mace R. Mattieson

Professor Heather Holmes

On-Trap Derivatization of Short-Chain Fatty Acids

It has recently been hypothesized that gastrointestinal microbiota modulate immune response by the production of short-chain fatty acids (SCFAs). There is a need for rapid, selective analytical methodology capable of trace analysis of SCFAs in complex biological matrices. Preconcentration of SCFAs has been demonstrated with gas and liquid chromatography using multibed-sorbent traps, solid phase microextraction (SPME), and on-fiber derivatization with SPME. This project incorporates the use of 1-pyrenyldiazomethane (PDAM) as a derivatizing agent immobilized on graphitized carbon beds in a multi-bed sorbent trap. The goal is to achieve low ppb-range detection limits for SCFAs using headspace-gas chromatography with flame ionization detection. Isobutyric acid at a concentration of 100 ppb has been detected without derivatization at this point in time.

Poster Presentation: Room 310, 4:00 p.m.

JoLisa McDay

Professor Heather Holmes

Ecological Method Development for Detecting N-Nitrosodimethylamine in Water Using HPLC-PDAD

Using ethanol, a sustainable reversed-phase high-performance liquid chromatographic method with photo-diode array detection (HPLC-PDAD) was investigated to detect sub-parts per billion concentrations of N-nitrosodimethylamine (NDMA) in drinking water and environmental water samples. This presents a practical and "green" option to analytical methods that require laborious derivatization, expensive detectors, and unecological solvents. Mobile phase characteristics, instrument operating parameters, and sample preparation were investigated. Selectivity for NDMA was evaluated using three different C18 columns. Optimal peak resolution and detection were achieved at 231 nm. The limit of detection and quantitation for NDMA was 0.29 µg/mL and 0.96 µg/mL, respectively, with an ethanol modifier and 5-µm column. A sustainable solid-phase extraction method was also investigated. Using ethanol for cartridge conditioning and extraction, recovery of NDMA was low (10%).

Poster Presentation: Room 310, 4:00 p.m.

Sarika Pamarthy

Professor Deborah Heyl-Clegg

Simulation of Human Islet Amyloid Polypeptide (hIAPP) and Pancreatic Beta Cell Membrane Interactions:

Experimental Analysis and Possible Implications in the Etiology and Pathogenesis of Diabetes Mellitus type II

Pancreatic beta cells secrete insulin, an endocrine hormone that regulates blood glucose levels and maintains normal physiological activity in humans and animals. Diabetes mellitus type II is a consequence of the gradual destruction of these important cells, likely by human islet amyloid polypeptide (hIAPP) that is co-secreted along with insulin. Increasing health care costs, coupled with the World Health Organization's prediction of a worldwide diabetic epidemic by year 2030, make experimental diabetes research a crucial prologue to future clinical trials in prevention, diagnosis, and treatment. Our experimental set-up simulates hIAPP and pancreatic beta cell membrane interactions in order to uncover factors that initiate and promote progression of beta cell death. Results from our study establish the potential role of various fragments of hIAPP in the disease process and explore the molecular mechanisms involved in pancreatic damage.

Room 104, 1:55 p.m.

Karen L. Sanders and Hasina Saraha

Professor Cory Emal

Structure-Activity Relationships of Inhibitory Molecules for Plasminogen Activator-Inhibitor-1

The inhibition of plasminogen activator-inhibitor-1 (PAI-1) is anticipated to increase our understanding of various human ailments including diabetes, stroke, and atherosclerosis, with which high levels of PAI-1 have been associated. Previous accounts have reported the synthesis of inhibitors that bind to PAI-1 with a low affinity and fail to inhibit PAI-1 when vitronectin, a cofactor of PAI-1, is present. Therefore, the synthesis of small-molecule inhibitors of PAI-1 that improve upon these properties has been the main goal of this research. The refinement of one of these synthesized moieties into a selective and highly active inhibitory species has been achieved. IC50 values of our synthetic inhibitors were determined in an ex vivo plasma inhibition assay.

Poster Presentation: Room 310, 4:00 p.m.

David J. Sitar

Professor Larry Kolopajlo

E-volving Student Learning in the Sciences using Technology

Bringing new technologies into classrooms, lecture halls, laboratories, and online tutorials are ongoing projects in today's curricula. Although studies have questioned the efficacy of using technology to promote content learning, technology does pave the way in making some subject matter more interesting to students. The objective of our work was to design and produce different forms of media that could be made available to students during chemistry courses. Technologies that were investigated, used, and integrated pedagogically were flip videos, online calculator tutorials, podcasts, and animations. These tools were then made accessible to students outside the classroom to heighten their learning process and enjoy ability of science.

Room 104, 2:15 p.m.

Department of Communication, Media, and Theatre Arts

Brian A. Golden

Professor Jeannette Kindred

Leader Member Exchange and Deception: Building a Bridge to Nowhere

Leadership in corporate America has been experiencing a transformation over the last two decades as traditional leadership methods have progressed into inclusive, high-quality exchange supervisor/subordinate relationships, with the goal of increasing productivity and lowering employee turnover. Trust between supervisors and subordinates is a key component in the successful operation of an organization. The purpose of this study was to investigate and focus on the high exchange or in-group member dynamic of Leader Member Exchange (LMX) literature and deception literature in hopes of gaining a greater understanding of the effects supervisor deception has on subordinates involved in high-exchange subordinate relationships. Furthermore this study examined low-quality exchange (out-group members), LMX as transactional and transformational leadership, and perceptions of organizational justice due to supervisor deception.

Room 300, 1:35 p.m.

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Diviin J. Huff

Professor Jessica Alexander

Fear Behind Moonlit Steps

This is a prose piece written for a storytelling class. The story is shaved from Chapter Fourteen of the book "Trouble Don't Last" by Shelley Pearsall. I decided to cut the description of the terribly scarred riverman to focus on the most important thing, which was overcoming for the boy. The man's face was described briefly later and there was a short reference to the man's slave master, too; that description proved to be enough. The piece was shaved down to a moment where the boy recalls a made-up memory of his mother, like a dream state. The idea that he now must walk to seem free frightens the boy to no end, but he must not let fear paralyze him. The performance of walking is one that will either set him aside as free or hold him back to possible re-enslavement. He is deciding to let freedom become him.

Room 300, 2:45 p.m.

Kenton Jones

Professor Jessica Alexander

Who is Speaking in Neil Gaiman's "Danse Macabre"?

Choosing a narrative voice is vital in the oral performance of fiction. Otherwise, a story is simply being read aloud. An omniscient narrator, being emotionally uninvolved in the story, literally has no character and is thus not very interesting. Dickens' speaker in "David Copperfield" readily reveals himself in the title of the first chapter, "I am Born." Other books are less clear, the plot and action moving the proceedings forward with the assumption that the narrator is the person telling the story. In Neil Gaiman's "The Graveyard Book," an omniscient, unidentified narrator describes past events. In this presentation I will share through performance how and why I chose to place the story in the present with the young boy narrating. The challenge in this oral interpretation is in justifying the use of third person narration when the third person is the first person. As a performer, I place myself in the Now of the story, telling it to an audience as if I were remembering events while they are unfolding. Ultimately, these choices challenge the time/space continuum, requiring total commitment from the storyteller.

Room 300, 3:25 p.m.

Sarah L. Mark and Max Wartel

Professor Dennis Patrick

A Textual Analysis on Truth Telling Themes found in Children's Books

Parents, educators, and other adults often use narratives and story telling as a way of socializing and guiding the moral development of children. This presentation is an examination of approximately 10 children's books that focus on truth telling and deception. Two examples of themes covered include 1) Lies do not go away on their own and 2) If you tell the truth, you will not experience consequences.

Room 300, 1:55 p.m.

Callie McKee and Sandra Baughman

Professor Susan Badger Booth

Low Profit Liability: Supporting Arts and Culture

This presentation will explore the new business model the Low Profit Limited Liability Company (L3C) and its potential to serve arts and cultural organizations. An outgrowth of the LLC (Limited Liability Corporation), the L3C addresses the economic viability of for-profit organizations whose mission is to further the social good. In Michigan, one of the few states nationwide to pass L3C legislation, the L3C model may help non-profit arts and cultural organizations expand services through for-profit branches, encourage collaboration between organizations and businesses working for social good, provide new opportunities for entrepreneurs, and motivate an expansive creative economy in the state. We will explore how the L3C impacts foundation giving, look at examples of L3Cs in other states, and discuss the critiques of this new model.

Room 300, 3:45 p.m.

Emily D. Patton

Professor Jessica Alexander

Brace: Creating and Performing a Personal Myth

Personal mythmaking is the art of creating an autobiographical tale focusing on universal truths. The process begins with a personal anecdote in which the author looks for interconnections, significant themes, and metaphors. A personal myth is written for oral performance and focuses on rhythm, pace, and language patterns within delivery. There is less focus on literal truth, as fabricated plot may be necessary to piece a memory together and, ultimately, connect with audiences. Personal myths can be a weaving of stories within one theme, often under the frame of separation, initiation, and return.

Room 300, 3:05 p.m.

Adam M. Sheaffer

Professor Lee Stille

'ciphers to this great accompt': Globe Performativity, Actor Training, and the Production of Shakespeare

My current research considers the artistic, pedagogical, and phenomenological shifts which original staging produces and considers how the actor's process might benefit from these shifts. Drawing on Research Bulletins from the first six seasons at Shakespeare's Globe, I will consider the production process in light of established Shakespearean dramaturgy and pedagogy, performance theory, and academic and artistic accounts/research of Globe practitioners and scholars. The Globe project, since its construction and more than a decade of production and research, remains a lightning rod for various and often competing artistic and academic interests and investments. I wish to take a step back and ask what implications the conventions employed at the Globe—such as universal lighting, direct address, and "scene change" in full view of the audience—might have on the evolving ways Shakespearean "characters" are constructed.

Room 300, 4:15 p.m.

Thomas Basil Simon

Professor Lee Stille

The Persuasive Tactic of Agreement: A Study of the Performances of Improvisation, Comedy, and Politics and How these Topics Offer an Insight into the Ability to Influence

This research begins to explore the ability to persuade in a live dialogue. To evoke laughter is a persuasion in which the performer has influenced the spectator to respond. Therefore, the skills of improvisation, which have been championed by the business community, offer lessons to political activists, specifically at the grassroots level. During an interaction, if the actor is trained in the skills of agreement, he or she will be agreeing with the other person in order to move the conversation forward. Improvisation and liminality may provide the balance of freedom and equality that allows a community to create a reciprocally advantageous outcome. As a result, if a trained improviser is able to use his or her skill to direct the interaction, he or she is able to persuade.

Room 300, 4:35 p.m.

Sarah R. Smarch

Professor Dennis Patrick

A Textual Analysis of Children's Books on Interpersonal Truth Telling and Deception

This presentation addresses the thematic elements of children's moral/character development and how narrative is used as a tool to teach children moral lessons. Specifically, this review explains how literature is used in the moral education of children, ways that adult readers and writers communicate with children through narrative, existential questions that arise from the writings used, and related pedagogical approaches that act as companions to and/or reinforcement of perspectives and programs in book-centered character education.

Room 300, 2:15 p.m.

2010 Graduate Research Fair

Lisa A. Storc

Professors Christine Day and Michael Tew

Communication with Non-Employee Volunteers at a Non-Profit Organization

This presentation addresses the current trends in how nonprofit organizations communicate with volunteers. Applications of these trends among unemployed/misplaced, baby boomer, and young are highlighted, as is the importance of clear communication of the organization's mission between staff and volunteers and when using technology. Finally, this presentation uses examples of non-profit organizations to demonstrate how these communication trends can be incorporated effectively when working with volunteers.

Room 300, 1:15 p.m.

Department of Computer Science

Byron E. Heads, Puyu Liu, and John Markus

Professor Susan Haynes

GLIF - Graphical Language Instruction Flow

Teaching common computer science concepts such as recursion, concurrency, and data structures to new students in existing programming languages can be difficult. Visual aids such as flow charts and stack tracing are often used to assist in teaching these concepts, but developing a programming language that is designed to graphically represent the flow of logic and data through an algorithm can assist rather than impede teaching. The GLIF programming language helps reduce common mistakes made while students are learning computer science concepts. GLIF is parallel by design but done in a safe and controlled environment. The design of GLIF reduces common problems and pitfalls in threading so students can learn concepts and algorithms and not just programming.

Room 352, 3:25 p.m.

Department of Economics

Xiaoxia Lu

Professor Mehmet E. Yaya

An Empirical Study on Yuan and Balance of Trade in China

Chinese economy is a prime example of rapid growth among developing countries. With its dynamic population, China has become one of the largest exporting countries. The value of Chinese Yuan, which is artificially kept low by the Chinese government, is considered the predominant factor for the recent Chinese trade surpluses. However, in July 2005, China started to loosen its exchange rate policy, and Chinese Yuan began appreciating. This paper analyzes the relationship between the value of Chinese Yuan and China's balance of trade, and results suggest that it is significant.

Room 352, 3:45 p.m.

Department of English Language and Literature

Abdulhamit Arvas

Professor Craig Dionne

"Come, The Recorders!" Hamlet's Postmodern Subjectivity on Screen

In a time of shift from literary culture to electronic media culture, Shakespeare on screen, particularly *Hamlet*, has been a significant component of film studies with adaptations from high-budget Hollywood movies to musicals, animations, and erotic movies that attest to the hybrid productions of the plays in different cultural contexts. This paper is an investigation of "Hamlet on film," which has always been a popular window for directors to look at Shakespeare and find their own Shakespeare from silent era to post-industrial age. The focus will be on Coronado's 1976 and Almeryda's 2000 adaptations of *Hamlet* to present how directors of these films, as opposed to

mainstream Shakespearean films, explore and exploit the play-text in a self-conscious mode to bring in a striking, imaginative, and every inch filmic *Hamlet* on screen through re-visiting and re-contextualization of the play from a specific point of view, which is, in this case, a postmodern one.

Room 222, 3:25 p.m.

Kristen J. Barnes

Professor Steve Benninghoff

Helping Improve Design, Language, and Function for UrbanSportsLegends.com

Most people think of "editing" as copy-editing and proofreading—activities that address the surface features of text but not its major functions or purposes. But technical or comprehensive editing engages with the actual writing and design processes to consult for the writer and advocate for the reader/user of a text on its purposes and goals, not just the wording towards those goals. Therefore, technical editing is a research activity, where the editor gathers data through interviews, user tests, and surveys of different kinds, and analyzes and presents results of those data to the client/writer to improve the client's document. My client wanted a more user-friendly site, so I administered tests that provided valuable feedback on usability issues, visual appeal, design, and grammar usage and discovered that my clients' website did not support a diverse audience base. In issues of language I discovered a conflict between different communities and their ideas of appropriate language conventions for building community and effective ethos of the client.

Room 208, 4:35 p.m.

Sandra K. Beals

Professor Sheila Most

From Princess to Person: A Psycho-Social Analysis of Esperanza Rising

Multicultural children's literature is often taught with the intent to foster change in society. It seems obvious that fundamental flaws, such as racism, should be addressed. Unfortunately, this often does not happen. In *Esperanza Rising*, Pam Muñoz Ryan shows that awareness of problems does not, in itself, lead to change. If people believe that their society is "the way it is" and that they cannot get what they need because of their position within that social system, they will not work to change the system. A person must have a sense of personal agency and an understanding that the current system is not necessary, true, or right. The value of *Esperanza Rising* is that it goes beyond bringing social problems to the reader's attention. By presenting the parallel development of Esperanza's sense of herself as an agent in her life and her community with her growing awareness of the injustice around her, Ryan shows how change becomes possible.

Room 208, 2:15 p.m.

Urmila Dinkar Bilgi

Professor Sheila Most

Developing Children's Literature in English: A Case Study of India

This presentation explores the need for developing children's literature with Indian cultural references in English. The current lack of children's literature in English has led to Indian children's reading English literature from the Western countries, which doesn't provide any experiences from their culture. In spite of the rich regional children's literature in India, there is a need for creating something new, which is designed for a very specific but a widely growing class in India. Due to the rising number of students studying in English Medium Schools and with the IT revolution that resulted into interstate migration, English has become a widely spoken language in India. The development of children's literature in English is essential for this class. My presentation concludes with a discussion of certain challenges and ways of overcoming them in the process of developing this genre.

Room 208, 1:35 p.m.

2010 Graduate Research Fair

Kelly A. Bowron

Professor Christine Neufeld

Fractured Narrator: "Pearl"

Written in the fourteenth century, the medieval poem "Pearl" is arguably the most elaborately constructed work existing from that time period. Part of a manuscript of four poems also containing Sir Gawain and the Green Knight, the poem's intricate and circular use of layered numbering, concatenation, and alliteration demonstrates the author's skill; consequently, the poem's inherent ambiguity of meaning cannot merely be a flaw in writing. Given the complicated allegorical layering and language of the medieval poem, the scholarship attempting to decipher its meaning, its genre, and who or what the pearl represents has been extensive. Nearly all of this scholarship, however, centers on either a discussion of genre or the figure of the pearl. While both of these aspects are important to the understanding of the poem, the key remains in the figure of the narrator who exists as a consistent, if fractured, thread that runs the length of the poem. The author created a piece of literature that recognized the psychology of grief and the flaws of the various social networks of the time. He explores the fractures that occur when a man cannot, or chooses not to, conform to those socially accepted modes of grieving.

Room 222, 4:55 p.m.

Caitlin E. Conn

Professor Martin Shichtman

Secondhand Lives: (Re)telling the Holocaust

In the wake of the Holocaust there was only stunned silence. With time came words, and with these words—transcribed and translated into writing—came the "truth" of the Holocaust. The truth was, and is, that we can never know the truth. Eyewitness accounts point to the frailty of memory, the impossibility of representation. Fictional narratives, however, fill in the gaps, provide answers, and create a stable story. Audrey Thacker says that the Holocaust "is, in a sense, being re-imagined to comport well with American perceptions of history, valor, and faith...the ability of both the individual and group to rise above and even be strengthened by . . . hardship." Nevertheless, Art Spiegelman, in *Maus*, suggests that there can be no grand Holocaust narrative of healing or hope. Despite a desire to derive meaning for both his father's life and his own, he finds only trauma.

Room 208, 3:25 p.m.

Jesse Eagle

Professor Carla Harryman

Turn the Dial

This is an exploratory work of creative fiction designed to deconstruct the space of a hospital. The work manipulates time and space and place in order to investigate and obliterate traditional constructs of storytelling. The words commonly used within the medical establishment are pushed to the threshold in an attempt to destabilize technical medical jargon. The experiences of healing and sickness, pain and pleasure, are conjured as a means to reconcile the fragmented form of earthly human existence. The acts of birth and death are smeared experimentally as a means to uncover a small understanding of these mystical and terrestrial actions. The notion of helpless confinement and solitude and the influence of machinery and television are also explored in this work.

Room 222, 4:15 p.m.

Sujeewa Hettiarachchi Gamage

Professor T. Daniel Seely

Semantic-syntactic Interface of Sinhala Involitives

Sinhala belongs to the Indo-Aryan branch of the Indo-European languages and is spoken by approximately 19 million people in Sri Lanka. It shows unique characteristics in terms of its classification of verbs. In addition to the traditional categorization as transitive and intransitive, Sinhala makes use of a semantic distinction of verbs known as volitive and involitive verbs. While the properties of volitive verbs conform to current semantic and syntactic linguistic theory,

involitive verbs display unique behaviors in the language in terms of verb morphology, case assignment, and theta properties. This study reports the extent to which the involitive construction in colloquial Sinhala conforms to or deviates from the Chomskyan theories of case assignment and the theta criterion.

Room 222, 1:15 p.m.

Jessica P. Kander

Professor Elisabeth Daeumer

The Abominable Body: Abjection of the Female Reproductive Body in Stephenie Meyer's *Breaking Dawn*

This paper addresses the abjection of the female reproductive body in Stephenie Meyer's *Breaking Dawn*. This abjection is apparent through several authorial choices on Meyer's part, notably the switch in narrative perspective following Bella's discovery of her pregnancy. The problem of this switch is twofold: First, by moving from Bella's first person narrative point of view Meyer is denying Bella her own voice during her pregnancy and subsequent birthing process. Second, it allows the depictions of the pregnant body to remain, always, other. Drawing on feminist and psychoanalytic theory, this paper works to join a long-standing discourse on the depictions of female sexuality and reproduction in popular literature.

Room 222, 3:05 p.m.

Angela Laginess

Professor Sheila Most

Fairy Tale Fallout

While the stereotypical nature of fairy tales and their silencing of women have been exposed for some time, we are still experiencing the fallout from these tales. Even today, through avenues such as the media, postmodern revisionist texts, toy culture, and the clothing options we give to young girls and women, fairy tales continue to teach subversive lessons. Due to their overly romantic yet stereotypical notions of gender roles, girls and boys are given neatly packaged ways of thinking. Indeed, fairy tales have been so effective in programming women to act in such ways that men no longer need to oppress women; they are happy to do it on their own in hopes of becoming the next Cinderella.

Room 208, 1:55 p.m.

Joseph B. Lieberman

Professor Martin Shichtman

Framing Aesthetic Memory: The Construction of Space in Holocaust Texts

Comics have come far from the "literary junk food" Will Eisner warned graphics could produce, and it has done so with blue men, cats, and mice. The medium is a bridge between text-based models of the novel and the purely image-driven medium of film. In the representation of the Holocaust, comics are able to create a space for the reader and frame aesthetic memory. The reader not only participates in the diegetic space (the story occurring on the screen or in the panels of the comic) of the comic, but also the extradiegetic space (the space within the work itself and the real space of the reader). This unique construction of space creates a fourth dimensional relationship between the reader and the past, present, and future of a text, thus framing aesthetic memory through its use of the yoking of text and image to create a visual narration.

Room 208, 3:45 p.m.

Hunter T. Lockwood

Professor T. Daniel Seely

"There's No Thermostat In The Woods": Talking About Temperature in Anishinaabemowin

In recent years, some linguists have become focused on the diverse and fascinating way different languages and communities treat and perceive temperature. Studies have been carried out on Japanese and several European languages. These studies show remarkable differences in the

2010 Graduate Research Fair

number of distinct temperature terms they have and the nuances these encode, shedding light on the way humans perceive and interpret physical sensations. Here we present the first study of this kind on a Native American language, Eastern Ojibwe, referred to by speakers as Anishinaabemowin. Its complex word structures and requisite morphological encoding of temperature source provide a challenge for established theories in this field. Influenced by external cultural practices, the perception of temperature as something fully subjective and anthropocentric is shifting in Ojibwe communities, and a new perspective where temperature can be treated as an objective, abstract scale is taking hold.

Room 222, 1:55 p.m.

Kelli Massa

Professor Martin Shichtman

Finding Representation in Erased Memory of Holocaust Survivors

Many authors struggle with representing the Holocaust. Survivors speak about the impossible task of writing the Holocaust for other others to understand when they themselves cannot. Second-generation survivors feel the burden of retelling their parents' memories with accuracy. Common discussions of representation often deal with either the survivors or the second-generation writers without placing the two groups in juxtaposition to one another. My presentation focuses on survivor Dan Pagis's poetry and second-generation writer Art Spiegelman's unique genre of comix, and emphasizes how each work shows the author's struggle with representing the Holocaust outside the genre of memoir. Pagis's representations appear in poetic metaphors; Spiegelman's two volume comix contain an elaborate animal metaphor among many others. When looking at these works together, readers see how second-generation writers seek to locate the memories survivors attempt to erase.

Room 208, 3:05 p.m.

Pamela D. McCombs

Professor William Tucker

How Do We Teach Grammar in Context?

My presentation illustrates, through Deborah Dean's newest book *Bringing Grammar to Life*, how to teach grammar in context. In the introduction she admits she didn't know what that meant. So the teaching of grammar seems to have come full circle since 1963. As Dean mentions in one of the "Extending Your Knowledge" boxes in her book, "Grammar teaching seems to be on the way back after a period of absence, but we must make sure that it is free of the fatal weaknesses that almost killed it." Today one of the NCTE beliefs states "Conventions of finished and edited text are important to readers and therefore to writers." How can students be taught grammar today, so they can produce "finished and edited text"? This is the question addressed in Dean's book and illustrated in my presentation.

Room 208, 5:15 p.m.

Adam Mitchell

Professor Martin Shichtman

On Plots and Plodding Deathward: Approaching the Holocaust

The Holocaust represents a profound and unspeakable trauma. Victims of our species' first industrial genocide were not simply murdered but pushed through a complex factory system designed to utterly obliterate any trace of their humanity. They were erased. The absurd, abject cruelty of such a crime represents a lingering threat to signification—to master narratives of civilization, progress, and the Enlightenment's conception of humanity. To speak the Holocaust is to cast words into a vast silence; to speak the Holocaust is to risk speaking over and re-victimizing those who were silenced. When we study such a profound trauma, we walk a fine line between archiving and assaulting. Building on the work of Primo Levi and others, this project is an attempt to provide an approach to literary study of the Holocaust that does the

least violence to the victims and the ever-dwindling number of Holocaust survivors.

Room 208, 2:45 p.m.

David A. Nassar

Professor William Tucker

Book Review: Writing Outside Your Comfort Zone

This review discusses the book *Writing Outside Your Comfort Zone: Helping Students Navigate Unfamiliar Genres* by Eastern Michigan University professor Cathy Fleischer and high school English teacher Sarah Andrew-Vaughan. The book presents theory and practice concerning a language-arts unit, The Unfamiliar Genre Project, which develops research and inquiry skills for reading and writing in emerging and unfamiliar genres. The Unfamiliar Genre Project asks students to choose a genre of writing that is challenging or unfamiliar to them and practice effective research and inquiry skills in investigating the genre, and finally culminates with the composition of an original piece from within the genre. In essence, it teaches students how to critically evaluate examples from any genre of writing and develop the skills and strategies necessary to read a text like a writer would.

Poster Presentation: Room 310, 2:15 p.m.

Bridget Pizzino

Professor Abby Coykendall

Objectification and Otherness in *Grey Gardens*

This essay examines tropes of female objectification and competition, the representation of woman as the Other, and the demonization of a household devoid of men in the documentary *Grey Gardens*. Originally released in 1976, the cinema verité style of *Grey Gardens* casts an unflinching yet noncritical eye on the two female subjects and their paradoxical life stories. While their personal histories articulate the larger narrative of class, gender, and social systems of marriage and women as objects of exchange, the Beale story, elucidated by and through the directors, serves to feature and exploit the very notions of gender inequality and subjugation for which it seeks to breed empathy. Through the feminist theoretical work of Butler, Irigaray, and others, an analysis of the Maysles' critically acclaimed documentary illuminates the Beale story as both an Aristotelean tragedy and a caveat that supports the hegemonic order of compulsory heterosexuality and the marriage contract.

Room 208, 4:55 p.m.

Lauren M. Roberts

Professor Sheila Most

From Conversation to Classroom: Teaching Holocaust Literature

Can the Holocaust truly be "taught" to elementary or secondary school students? The essay "From Conversation to Classroom: Teaching Holocaust Literature" investigates the notion that by pairing historically accurate reference texts with Holocaust narratives, educators may create a more engaging curriculum, which will expose younger generations to new information based on significant historical events, so that students may learn and grow as individuals in a multicultural society. This essay also surveys a number of Holocaust narratives to discuss the importance of evaluating the accuracy and authenticity of a book, whether a text is age-appropriate, and how a text will engage and enlighten students. Ultimately, I believe that Holocaust historical fiction and nonfiction texts can be paired in an elementary or secondary classroom to complement one another and decrease knowledge gaps for young learners so that they may fill in another piece of the puzzle that is our multicultural world.

Room 208, 1:15 p.m.

2010 Graduate Research Fair

Brad P. Romans

Professor Natasa Kovacevic

Oyeyemi's *The Icarus Girl* and the Complication of Primitivism

The colonizing impulse borne out of the Enlightenment led to a decree that "noble savages" possessed some desirable quality, regardless of their perceived primitive standing. My inquiry will focus on the intellectual repression of members of both colonizing and colonized nations. Primitivism posits insecurity about exposure to new cultures, challenging a metaphysical or spiritual hegemony. Europeans seem to react to both the vast material wealth represented by colonies and the fear that this essence will somehow become more attractive than tradition. I hope to investigate whether this tacit fear is a part of the impulse to colonize. In terms of textual exploration, I will closely read through Helen Oyeyemi's *The Icarus Girl*, highlighting moments of extreme returns to the spiritual in her protagonist's Nigerian birthplace.
Room 222, 3:45 p.m.

Robert Stevens

Professor Carla Harryman

The Softly Spoken Fish Monologue (From the Shallow to the Deep)

This monologue, written for a graduate level workshop on performance writing, explores and explains fish from the Great Lakes region, both real and imaginary. The entire monologue is a forty-minute performance so, for the purposes of this presentation, a shorter excerpt will be performed.

Room 222, 4:35 p.m.

Natalie Tomlin

Professor Doug Baker

Teacher as Writer: A "Disorienting Dilemma"

Each summer, thousands of teachers nationwide participate in the National Writing Project's Invitational Institute, a leading professional development opportunity for K-College teachers in the teaching of writing. The Institute believes that through experiencing the role of a writer firsthand, participants become better teachers of writing. This study examines the applications of this model by following two participants in Eastern Michigan University's 2009 Summer Institute and the researcher herself into the next school year, pursuing questions such as: How do teachers' writing practices and processes transfer to their teaching of writing? What gaps exist between how writing is taught and how a teacher practices as a writer? What happens when teachers systematically share their writing processes with students? The findings will also interact with themes found within a chapbook of the researcher's poetry entitled "The Ashtray."

Room 208, 4:15 p.m.

Mfon Eyibio Udoinyang

Professor T. Daniel Seely

Multiple Head Agreement in Ibibio

This paper presents an analysis of aspects of agreement and word order patterns in Ibibio, a pro-drop, Subject-Verb-Object, Lower-Cross language spoken in Akwa Ibom State of Nigeria. Determiner Phrases in Ibibio non-imperative finite clauses obligatorily co-occur with corresponding agreement markers or clitics that encode the phi-features of person and number, but the clitics may occur without their DP counterparts. Subject and [+human] object clitics must agree with lexical and functional heads, or the construction is disallowed. Thus, in addition to DP – verb agreement, there is also DP agreement with mood, tense, and aspect phrases. The "dropping" of a human DP object in Ibibio and its representation by a clitic results in a switch from SVO to a superficial SOV word order. This paper intends to examine the multiple agreement phenomenon and the SOV word order in Ibibio language.

Room 222, 1:35 p.m.

Susanne Vejdemo

Professor T. Daniel Seely

Crosslinguistic Lexical Change: Why, How, and How Fast?

Many Romance languages have different words for 'girl' and 'boy' but retain the same word for 'three' and 'louse': different kinds of words change at different speeds over time. Much research remains in order to discover why this is the case and which semantic domains these words represent. By tagging two Indo-European and one Austronesian comparative word-database semantically and by wordclass, I endeavor to show that there is a system to which different semantic domains change at what speed. I believe this avenue of semantic based research can complement recent statistical phylogenetic studies to shed further light on the basic semantic categories in cognition.

Room 222, 2:15 p.m.

Kelly K. Waldschmidt

Professor Elisabeth Daeumer

Surviving Creation: Culture versus Nature in Atwood's *Oryx and Crake*

Constructed as a companion piece, Margaret Atwood's recent publication, *Year of the Flood*, has generated new eco-critical interest in her 2003 post-modern success, *Oryx and Crake*. In *Oryx and Crake*, Atwood invites her readers into a world that reflects the aftermath of a war fought between Nature and Culture. Atwood establishes Nature and Culture as individual gendered entities involved in a deadly struggle over reproduction and environmental rights. I argue that in its quest for survival in an inhospitable environment, Culture's obsession with bio-genetic engineering begins to overstep Nature's traditional evolutionary processes, thus creating a tension as each attempts to gain control over creation and their habitat.

Room 222, 2:45 p.m.

Department of Geography and Geology

Adam A. Cook, Kirsten E. Freiberger, Derek Spinei

Professors Ted Ligibel and Dan Bonenberger

Modernism in Michigan: Efforts to Preserve the Recent Past

As the 21st century progresses, the protection and preservation of architectural resources dating from the "recent past," defined as the prior 50 years, has inspired vigorous debate both within and outside of the field of Historic Preservation. Many of these resources were built in modernist architectural styles that have fallen out of favor and are deemed unimportant in the eyes of a general public young enough to remember their construction. The need to protect recent past resources is acknowledged, though consensus has not been reached when discussing the relative importance of these resources. This presentation will discuss the issues involved in recent preservation efforts to preserve the work of two modernist architects based in Michigan, Alden B. Dow and Minoru Yamasaki.

Room 304, 1:55 p.m.

Sarah L. Hayes

Professors Dan Bonenberger and Ted Ligibel

Georgian Architecture: The Style, the Plan, and the Idea

This presentation focuses on aspects of Georgian architecture in the United States including the style, the idea, and the changes it brought to the early American society. The areas of focus are the history of Georgian architecture; how the American colonies added their own elements to the style; the aesthetic philosophy; features of ornamentation; examples of Georgian buildings in the United States, with pictures and floor plans; plan variations including vernacular; and the end of the style and how it impacted its successor and society during that time.

Poster Presentation: Room 310, 2:15 p.m.

2010 Graduate Research Fair

Stephen J. Holowicki
Professor Hugh Semple

Detroit's Urban Design Crisis

Detroit experienced the same problems as other large cities during the 1960s and '70s. Some cited industrial decentralization as the cause; others cited fear of integration of cross-town busing as well as civil disturbances, lack of social services, poor transit options, and so forth. Still, many cities that suffered from these problems have since experienced great economic prosperity. The question still looms: Why did Detroit not rebound the way other cities did and continue to do? One critical question is whether poor planning and urban design during the 1920s-1950s was related to the intense destruction of Detroit's riot in the summer of 1967 and its inability to rebound since. This paper argues that poor planning and design were the underlying culprits by showing that the intensive spatial demands of the auto industry, the depletion of good transportation planning, and a unique albeit weak urban design strategy were to blame.

Room 304, 2:45 p.m.

James A. Miller

Professors Dan Bonenberger and Ted Ligibel

Architectural Significance of Old Town Hall

Using the Historic American Buildings Survey (HABS) format, the student offers a written and photographic record of historic Old Town Hall in Brighton, Michigan. The building is a remarkable architectural treasure on the shore of the Mill Pond in Brighton; the design incorporates many features of a classic Italianate motif: arched Palladian windows, brick pilasters, and an elaborate decorative cornice. Built in 1879 for use as village government offices, Old Town Hall has served as a fire hall, police station and jail, city library, and newspaper offices. The buildings' distinctive architecture makes it the most recognizable structure in the city of Brighton. This report captures the various structures of Brighton's Old Town Hall; each component is described in detail, noting all known modifications made over time. This comprehensive study will serve as a historical record for future generations to utilize when studying the history of Brighton, Michigan.

Room 304, 1:15 p.m.

Amanda Tremba and Brenna Moloney

Professor Dan Bonenberger

GIS & Historic Preservation: Case Study Elk Rapids, Michigan

Integration of spatial and relational data in GIS is a valuable tool for Historic Preservation professionals. Proficiency with GIS assists with the development of conditional assessments of historic building materials, resource documentation, interpretive programs, historic mapping and designations, and cultural preservation. GIS is utilized in historic preservation to assimilate historic information with current data, designate historic districts, document individual structures, and chart settlement patterns. Elk Rapids, Michigan, will be used as an example of how GIS can be used in historic preservation. The village is interested in developing a heritage route. Information regarding the development of the village and EMU's role in Elk Rapids will be provided. The use of GIS tools and techniques will be shown to illustrate how GIS can be incorporated with historic preservation, with an interpretive heritage route as the end result.

Room 304, 1:35 p.m.

Yiman Song

Professor Hugh Semple

Designing an Interactive Online Campus Map for Eastern Michigan University

According to the New York Times, the introduction of Google Maps signaled the arrival of Internet-based geographic information systems to the broader public imagination. Technically, the rapid developments of web services technologies has provided solutions for this new generation of interactive maps and, together with map service technology, have given cartographers the tools needed to design maps

that meet the changing expectations of people. This paper describes how the new technologies were used to create an online interactive campus map for Eastern Michigan University. The map caters to the needs of the campus community as well as visitors to the campus. Its main functions include allowing users to quickly locate buildings, parking lots, or even campus events; find the shortest route between places; and calculate distance between points.

Room 304, 3:05 p.m.

Xining Yang

Professor Yichun Xie

The Internet, GIS, and Public Participation in Crime-Mapping System on Campus

One of the most important tools in crime prevention and safety is one that gets an accurate and timely picture of what is going on for people within the community. With the aid of Geographic Information System (GIS), we are already able to combine geographic data with police report data and then display the crime information on a map accessible by the public. Furthermore, the burgeoning web 2.0 technology, which possesses the user-create web content spirit, offers the possibility to encourage a broad public participation in order to facilitate and supplement the system at new levels. We will discuss a framework for the design of a web-based GIS public participation mapping system for area crimes. We also discuss the values and unsolved questions of putting the system into practical application on EMU's campus.

Room 304, 2:15 p.m.

Department of History and Philosophy

Carly F. Bower

Professor Joseph Engwenyu

Striking a Rock: Women's Liberation Movements in South Africa, 1912-1960

This study examines the efforts made by South African women to change their political and social realities in the early to mid-twentieth century. The study of women's labor movements, anti-pass protests, and political organizations reveals their cohesive nature to the larger South African struggle for liberation. Highlighted in particular are the Federation of South African Women and its Women's Freedom Charter and infamous protest on the prime minister's doorstep in Pretoria. As the women's actions bring to light, black liberation and women's issues need not be mutually exclusive.

Room 320, 3:05 p.m.

Dennis R. Caldwell

Professor Philip C. Schmitz

Michigan's Role in Aviation Development, 1900 to 1930

This historical study of Michigan's aviation industry presents a socio-cultural analysis of the state's early aircraft industry. The first known Michigan aeroplane flight did not occur until 1910, nearly seven years after the Wrights' flights at Kitty Hawk. The 1911 Detroit Air Meet demonstrated aviation's limited value as spectator entertainment, but in 1912 aircraft became weapons of war. By the mid 1920s, aeroplanes developed into instruments of transportation and economic growth. Michigan's involvement in the aircraft industry was driven alternately by wartime needs and by commercial opportunities. Expertise acquired through pre-existing boat, auto, and other industrial manufacturing was advantageous for Michigan when aviation began to show commercial promise in the mid-1920s. Between 1910 and 1933, at least forty Michigan aircraft companies produced designs ranging from immediate failures to enduring successes. Progressive individuals sought to make Detroit the nation's "center of aviation," and occasionally, the title was nearly deserved.

Room 320, 3:25 p.m.

2010 Graduate Research Fair

Jordan P. Carr

Professor Ronald Delph

Personality and Power

The role personality plays in a monarch's leadership is a crucial aspect of understanding the dynamics of power in the Middle Ages. During the twilight of the twelfth century, King Richard of England provided an excellent example in his struggles to assert his authority. As Richard attempted to establish his independence from his father, Henry II, he also showed how the personality of the ruler greatly affected his reign as he tried to differentiate his rule from that of his father's and shape his ruling style according to his martial and administrative interests. In this investigation, the use of contemporary accounts of the struggles between Richard and his father allow the modern examiner insight into the evolution of the manifestations of power from strictly personality-driven to a more bureaucratic and structured emphasis. The research also describes contemporary views of the rights of kings and the intricacies of feudal political power.

Room 304, 5:35 p.m.

Rachel E. Foshag

Professor George Cassar

Old Regime Salons and Revolutionary Clubs: Women and Gender during the French Revolution

An important element in the numerous causes that led to the French Revolution was the influence of the Paris salons. In the late 18th century, these social organizations were a place of rational discourse in which members of both the aristocracy and bourgeoisie were able to assemble and discuss ideas from the Enlightenment. In the salons, women functioned as hostesses who invited men to use the parlors in their home as a location for these meetings. Salonnières, as they were called, were highly influential in these intellectual societies and participated in the lively debates and discussions. Because of the significance of salons in the years preceding the fall of the Bastille, it is important to ask whether women were able to actively participate in the revolution and whether these salons were a remnant of the Old Regime or a center of modern liberalism. To answer these questions, I will trace the evolution of the salon, women's participation in the revolution, and the changing perceptions of gender at the end of the 18th century.

Room 304, 3:25 p.m.

Christian C. Goos

Professor Ronald Delph

Sodomy in Renaissance Florence

Between the years 1432 and 1502 Florentine records show a rise in homosexual behavior, with 17,000 men out of 40,000 being investigated for acts of sodomy. Why did Renaissance Florence experience a rise in homosexual behavior, and why did it have such a powerful impact upon Florentine culture and society during the Renaissance? This question is answered by exploring the social and political structures under which males lived. Marriage patterns in Renaissance Florence show that most men didn't marry until the age of 30, leaving a large population of male youth and single men living in a predominantly male society. The Florentine government reacted by establishing organizations such as the Office of Decency and the Office of the Night to combat and investigate homosexual behavior.

Room 304, 4:55 p.m.

Donna A. Lehman

Professor Mark Higbee

Bush v Gore: A Lesson in Constitutional Democracy

This project provides interpretation and analysis of the proposition that "the legitimacy of the [U.S.] Constitution ought to derive solely from its utility as an instrument of democratic government." (R.A. Dahl 2003, *How Democratic is the American Constitution?*) Using examples from past presidential elections, specifically the Bush – Gore contest of 2000, the analysis indicates that despite structural inequities of democratic principles within the Constitution, remedies exist to perceived breaches of the public trust. Those remedies, however,

require large measures of political will, which are very difficult to muster in a partisan political landscape.

Room 204, 2:15 p.m.

Kristina A. Lininger

Professor Kathleen Chamberlain

Henry Rowe Schoolcraft and Michigan's Native Americans

Henry Rowe Schoolcraft greatly influenced Michigan history. An Indian agent, he worked extensively with Chippewa tribes, writing books on the studies of Ojibwa language and Chippewa culture. Through his own lobbying and with the help of powerful friends, Schoolcraft's influence and power increased within Michigan and throughout the United States. How did Schoolcraft's power impact the displaced Indian tribes that left Michigan? Consequently, how did Schoolcraft's actions towards the Native Americans affect Michigan's history?

Room 304, 3:45 p.m.

Charlye D. Morley

Professor Ronald Delph

Orphans and Obligations in Renaissance Florence

A sexual renaissance brought Church-sanctioned prostitution to the streets of Florence with the goal of suppressing homosexuality. What resulted was a generation wrought with lust, greed, and unwed mothers murdering their own children. Those lucky enough to survive infancy only to be abandoned crawled through the Florentine streets as *gittatelli* and *trovatelli*: throwaways and foundlings. As infanticide and child-abandonment became an epidemic, the people of Florence turned to their Christian faith and humanist teachings to commission the Ospedale degli Innocenti: an innovative orphanage that turned discarded infants into educated children and ultimately hard-working and honorable Florentine citizens. This paper explores why orphan care was so important to the Florentines and why providing a home and education to parentless children became a universal responsibility in Renaissance Florentine society from the fourteenth to sixteenth centuries.

Room 304, 5:15 p.m.

Anna F. Pierre

Professor Ronald Delph

Was it Idolatry? A Study of Renaissance Florence Image Worship

Since antiquity, people have worshiped deities and have constructed images or representations of these deities; the people of Renaissance Italy were no exception. Using a comparative approach, this paper explores Florentine image worship and religious practices in the 13th-16th centuries. The Florentines of this time period worshiped sacred images of their God and his saints, and they believed that these images were powerful and animate. To them, God manifested his power when he used one of the sacred images to perform a miracle, heal someone, or show wrath to those who disrespected him or the saints. These miraculous occurrences furthered the belief of Florentines that they were not practicing idolatry when venerating their sacred images.

Room 304, 4:35 p.m.

Lorinda F. Rausch

Professor Ronald Delph

The Jews of Quattrocento Florence: Moneylending and Replacement by the Monte di Pietà

The Jewish community in Florence had secured their economic place as moneylenders between 1437 and 1496, being granted a monopoly over the business of making cash advances to the working class. Why, after six decades of money-lending practices, did the Florentines attempt to displace the Jews from their occupation while simultaneously expelling them from the community? This turn against the Jews occurred because the powerful Medici rulers, who had supported this privilege, were no longer in power; anti-Semitic preaching was happening throughout the city; and the money-lending of the Jews was displaced by the

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establishment of the Monte di Pietà. What was not taken into consideration was where the initial Monte funds would come from. Ironically, the Jews would lend to the very institution that sealed their fate for expulsion.

Room 304, 4:15 p.m.

Julie Salo

Professor Philip C. Schmitz

The Bombing of a Nation: A Study of the Weather Underground

The Weather Underground was a radical student anti-war organization created in the late 1960s in opposition to the Vietnam War. The Weather Underground, in an effort to end the conflict in Vietnam and bring the war home, began a bombing campaign across the United States with targets such as the Pentagon, the U.S. State Department Building, and the U.S. Capitol. Within a few years of its creation, many Weather Underground members were living hidden from the law as fugitives. Meanwhile, J. Edgar Hoover's FBI stepped up their efforts to capture the Weather people, many of whom were on the "Ten Most Wanted" list. This research project is a study of the Weather Underground from its inception to its demise and examines the issue of domestic terrorism in the United States.

Room 320, 3:45 p.m.

Bridget E. Sekuterski

Professor Joseph Engwenyu

Constructive Engagement: The Relationship between the United States and South Africa

The researcher investigated the United States' relationship with South Africa during the Cold War/ apartheid era. The research was conducted and presented in chronological order of Presidential administrations. Special emphasis was placed on the failed policy of Constructive Engagement that was created by Chester Crocker, the Assistant Secretary of State for African Affairs, during the Reagan Administration.

Room 320, 2:45 p.m.

Department of Mathematics

Celeste L. Bogan

Professor Andrew Ross

Do We Raise The Bar? Math Placement Guidelines at EMU

We examine the success of students in EMU developmental mathematics classes, compared to their placement test or ACT/SAT scores. Should we change the placement guidelines? Is there a general score that determines whether a student should be placed in a full 5 credit Math 097 course or a 3-credit A/B course sequence? We also incorporate students who place out of developmental math courses. What happens after a student's first Math class? At what point is a bottleneck observed? Are the current prerequisites and guidelines effective for student success? In other words, should an adjustment be made to the overall rules to ensure that students achieve their goals in the Math Department?

Room 204, 4:15 p.m.

Li Sun

Professor Tanweer Shapla

Assessing Risk of an Exposure Factor in Developing a Disease in Presence of Confounders

The relative risk (RR) is one of the most useful epidemiological indices to measure the association between a risk factor and a disease outcome. While the direct estimation of RR is not available for a case-control study, the odds ratio (OR) has been used widely as an approximation to RR in health research. In assessing the relation between the risk factor and disease outcome, it is recommended to estimate the adjusted odds ratio in order to control the confounder factors involved in the study. The Mantel-Haenszel odds ratio is one of the most popular effect

measures to study the disease-exposure relation in presence of confounders. In this study, we revisit the inference procedure based on unadjusted and MH-type estimator of odds ratio. A real-life example of a case-control study on myocardial infarction and oral contraceptive use is presented to illustrate the underlying procedure in making inferences for the association between disease and exposure factors.

Room 204, 4:35 p.m.

Xiejuan Wu

Professor Tanweer Shapla

Modeling Data Using Multiple Logistic Regression

Logistic regression is one of the most popular techniques for biostatistical research which models log odds of an event by a linear predictor. In a binary logistic regression, the dependent variable is dichotomous and the explanatory variables are categorical, continuous, or both. A logistic regression equation can be used to predict the probability of occurrence of an event by fitting a logistic curve. The regression coefficients in the regression equation are used to estimate the odds ratio for each explanatory variable in the model. In this presentation, inference procedures relating to parameters in the logistic regression model will be revisited, and real life examples will be presented for interpretational purposes.

Room 204, 4:55 p.m.

Department of Music and Dance

Ivan I. Ivanov

Professors Kimberly Cole and MeeAe Nam

Soliloquies (The Clarinet, Spring, 1979)

Without a doubt, Leslie Bassett's "Soliloquies" is one of the finest examples of twentieth-century writing for the clarinet. Bassett's compositions have won many awards such as the Pulitzer Prize (1966), The Prix de Rome (1961-1963), and a Naumburg Recording Award (1974). His works have been performed by the Philadelphia, New York, Boston, Los Angeles, and Chicago orchestras, among many others. "Soliloquies," for unaccompanied clarinet, is a four-movement virtuosic work. Bassett's uses extend musical techniques for clarinet performance such as multiphonics (when more than one sound is played simultaneously) as well as extreme dynamic ranges, fast and aggressive articulated passages, and impressive technical flourishes. The first movement is energetic and aggressive, the second movement is lovely and lyrical, the third movement is abrasive and contentious, and the final movement is expressive. "Soliloquies" requires great imagination and fantasy to convince the audience of its majesty and glory, and I am pleased to perform this piece and to introduce it to others.

Room 320, 1:55 p.m.

Dawn D. Schell

Professor Donald Babcock

Correct Tonguing Technique For Beginning Brass Instruments

This article catalogs various articulation syllables used by accepted brass pedagogues. It should be used as a reference when teaching beginning brass players to begin (articulate) notes using their tongues. Taking into consideration that each student varies in coordination and intuition as well as in tooth, bone, and tissue structure, not all articulation syllables will work for each player. Individual student factors including body size, posture, mouthpiece size, embouchure, tongue level, and mouthpiece pressure influence articulation and are included.

Room 320, 1:35 p.m.

2010 Graduate Research Fair

Rachel E. Zirk

Professor Daniel Foster

A Creative Approach to Teaching Beginning Violinists Based on Music Learning Theory

This creative project based on the research and Music Learning Theory (MLT) of Edwin E. Gordon further develops the work, "Sing, Move, and Play!" presented in the 2009 Graduate Research Fair. The work includes primary chord progressions in all tonalities, a variety of rhythmic content, and careful attention to developing correct technique for beginners. Prior to the project, the researcher analyzed existing beginning violin methods, which were found lacking in basic MLT pedagogical elements. The only MLT-based method for particular instrument is Music Moves for Piano by Marilyn Lowe. The premise for this work is that music should move for all instruments.

Room 320, 2:15 p.m.

Department of Physics and Astronomy

Charles M. Borener

Professor Diane Jacobs

Measuring the Acceleration Due to Gravity in a Sophomore Physics Lab

Many college students have difficulty observing that acceleration due to gravity is a constant when analyzing the motion of a cart down an inclined air track. They often cannot make the connection that it is gravity pulling the cart down the incline. This is unfortunate as the results of the measurement are usually excellent. We have written two different experiments in which the students drop an object and analyze its motion. Our goal was to not sacrifice accuracy while ensuring greater understanding of the physics. We gave the students a short quiz before and after the lab to assess comprehension of the concepts. As a control, the quiz was also given to several lab sections where the incline plane method is still used. We will discuss the outcomes of the assessments and correlate them with conceptual understanding exhibited in the laboratory reports.

Poster Presentation: Room 310, 4:00 p.m.

Robert Jacobs

Professor Patrick Koehn

Study of Sputtering Effects Through the Development of an Ion Gun to Simulate Solar Wind

Understanding the process of sputtering is important in order to accurately predict the evolution of materials as they are bombarded with ions. The greatest natural occurrence of ion sputtering is the bombardment of objects in space by the solar wind. The goal of this project was to design an ion gun to simulate the solar wind for low energy sputtering experiments. The ion gun utilizes a gas source and produces ions with kinetic energies from 100 eV to 30 keV. This project encompasses the simulation, creation, and testing of an ion gun. The current and future research opportunities this ion gun produces will help to create a better model of the effects of sputtering by low energy ions and thereby enable scientists to better predict the interactions of the solar wind with objects in space.

Room 104, 5:15 p.m.

Department of Political Science

Jo Ann Catalfo

Professor James Ivers

Specific Education Components in Washtenaw County Head Start Lead to Increased Percentage of Children Receiving Extended Dental Health Services

My objective was to determine if implementing an oral health education program at Washtenaw County Head Start will increase the number of children going to the dentist and receiving follow-up dental care. Data were collected from Head Start preschool for two years for the group without education and three years for the group that received

education. The information was provided by the child's dentist and put into Access to track. Results showed children who received dental education were more likely to go to the dentist and receive follow-up treatment than those who did not receive the educational component.

Room 350, 1:35 p.m.

Edward Davis

Professor James Ivers

In the Event of a Recession, Would States in the "Rustbelt" Have Lower Fund Balances than States in the "Sunbelt"?

From January 1, 2000, until January 1, 2010, the U.S. has seen two recessions. During the second recession, the fall in the economy not only hurt financial markets in the United States but also contributed to loss of property values, and the State and Local governments felt the pinch. The intent of this presentation is to draw from a sample of cities in 10 states and to determine whether fund reserves or fund balances as a proportion of general fund spending are greater in Sunbelt States than they are in Rustbelt states during the period of interest.

Room 350, 1:15 p.m.

Camille A. Gillespie

Professor Claudia Petrescu

Culture and Organization

Managers often have a difficult time trying to change the behavior of subordinates and can encounter resistance that appears to be unreasonable. Communication problems and misunderstandings occur between departments and/or group members that don't seem to make sense from a rational perspective. Culture and leadership can be viewed as being interrelated. Leaders create cultures when they create groups, and, once established, they determine the criteria for leadership. But if a culture becomes dysfunctional, it is the leader's responsibility to perceive this and manage evolution in such a way as to secure the group's survival in a changing environment. Cultural understanding is desirable for everyone but most essential for leaders.

Room 350, 1:55 p.m.

Megan K. Johnson

Professor Jeffrey Bernstein

Differential Use of Heuristics among Political Experts and Novices

There are notable differences between political experts and novices in terms of political thought. The literature is rife with examples of cognitive dissimilarity between experts and novices including differences in the ability to perceive and synthesize political information and differences in information-processing strategies. This study seeks to expand on this research by employing a think-aloud methodology to explore differences between political experts and novices in their use of heuristics. It is hypothesized that individuals identified as experts will use heuristics more often and more effectively than their less sophisticated counterparts.

Room 350, 4:15 p.m.

Asif A. Rohela

Professor Sukru Koyluoglu

Senior Centers in America

This paper creates a road map for senior center directors to follow in order to operate a productive center and outlines the basic services a center should provide, while suggesting guidelines for allocation of funding to accomplish a center's basic goal of providing social- and health-related services to seniors. This paper will include justifications for a municipally operated senior center. The paper has three major sections: (1) justification for a senior center within a community, (2) maintaining an effective organizational culture to provide the best services to the community, and (3) maintaining the interest of the community by making the senior center into a destination for people to visit.

Room 350, 4:35 p.m.

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Laura A. Shue

Professor Raymond A. Rosenfeld

Recovery-oriented Systems of Care: Policy Recommendations for the Washtenaw Community Health Organization

Funding challenges, poor treatment outcomes, and increased system fragmentation are forcing publicly funded substance abuse treatment systems to change the way they fund and deliver services. Recovery-oriented Systems of Care (ROSC) have been implemented as a solution across the nation, as both community and statewide policy initiatives. This analysis outlines the advantages and weaknesses of ROSC as a policy alternative for the Washtenaw Community Health Organization, concluding with potential challenges for ROSC adoption and implementation.

Room 350, 2:15 p.m.

Department of Psychology

Tiffany Abrego

Professor Carol Freedman-Doan

Sex Talk: Religious Adolescents' Sex Talk With Their Parents

Researchers have discovered that when adolescents have frequent, comfortable interactions with their parents about sex, they are more likely to delay sexual debut, use condoms more consistently, and have fewer sexual partners. What has not been addressed is how the tone that the parent sets for the conversation translates to the adolescent's comfort level in discussing these topics. This presentation addresses the sexual topics that have been discussed and the tone and comfort level of these conversations. Participants for this study were 148 adolescents, ages 13 to 18, who were enrolled in a faith-based sexual education program. Additionally, the sexual activity and religiosity of the adolescents was related to parents' discussion of certain sexual topics.

Poster Presentation: Room 310, 2:15 p.m.

Ashley Boys

Professor Stephen Huprich

Dysfunctional Personality Traits and their Relationship to Physical Therapy Outcome

Few studies have looked at personality traits and their relationship to physical therapy outcome. This study examined dysfunctional personality characteristics and how they are related to patients' level of improvement at their discharge from physical therapy treatment. Participants completed questionnaires at their first three physical therapy appointments, and therapists answered questions that asked them to rate the patients on several dimensions. Results indicated that patients who displayed dependent personality features were perceived by their physical therapists as being more cooperative; therapists tended to rate narcissistic individuals as having less successful treatment outcomes. Patients with higher scores on Dysfunctional Detachment were more likely to be viewed as difficult to work with by their physical therapists.

Poster Presentation: Room 310, 2:15 p.m.

Jillian B. Carey, Teresa J. Lynch, Kevin N. Alschuler, and Michael J. Mendelow

Professor Flora Hoodin

The Long-term Effect of Adolescent Idiopathic Scoliosis (AIS) on Quality of Life (QoL) in Adults

Few studies examine differential effects of adolescent AIS treatment (structured observation, bracing, or spinal fusion surgery) on long-term QoL in adults, and those that do are contradictory. Our web study examined differences in QoL among treatment groups and as compared to individuals with healthy backs (HB) and chronic lower back pain (CLBP). Adults were recruited via AIS websites and at a Midwestern. Overall, QoL scores for AIS groups did not differ significantly from each other or the CLBP group on the SF12, and all groups were

comparable on the general health subscale. However, AIS groups reported worse physical functioning, physical role, bodily pain, and vitality than HB. AIS surgical and braced groups reported worse social functioning, role interference from emotional problems, and mental health than HB. Results suggest adult QoL does not differ significantly by treatment type. However, QoL of adults with AIS is comparable to adults with CLBP, and both report worse QoL than individuals with HB. Our study highlights the importance of assessment and treatment to improve the QoL of individuals with AIS into adulthood.

Poster Presentation: Room 310, 2:15 p.m.

Amanda Fezzey

Professor Carol Freedman-Doan

Factors in Early Childhood Associated with Deviant Behavior in Adolescence

This study examined the relationships between various child, parent, parenting, and peer factors in early childhood and later deviant behavior and association with "deviant" peers in adolescence. Using data from the Childhood and Beyond (CAB) project, a longitudinal study of child self-perception and achievement in a largely white, middle class population (n=551), analyses were conducted using child and parent survey data from early elementary through high school. Preliminary analyses revealed that lower levels of child self-esteem, lower levels of clear and reasonable family rules, and lower positive affective parent-child relationship scores in early childhood were all significantly associated with higher deviant behavior scores in adolescence. In addition, lower positive affective parent-child relationship scores in early childhood were significantly associated with higher association with "deviant" peers in adolescence. Consistent with other findings in the field, these results suggest that certain aspects of a child's early environment may significantly impact later social functioning in adolescence.

Poster Presentation: Room 310, 2:15 p.m.

Bethany S. Gourley

Professor Flora Hoodin

Adolescent Idiopathic Scoliosis (AIS) Quality of Life (QoL) Assessment: Online or on Paper?

For AIS, a spinal deformity, QoL is an important aspect of treatment outcome. The SRS-22r, an AIS disease-specific QoL measure, is psychometrically sound in paper-and-pencil format. Our study examined its psychometrics when administered online. Via scoliosis websites, 311 AIS adults were recruited [mean age 40.3 + 13.5 years; 95.2% female; 89.7% white]. They completed the SRS-22r (assessing functioning, pain, self-image, mental health, and satisfaction with management), the Oswestry Disability Index (ODI) (assessing physical disability, social restriction, and pain) and the SF-12 (assessing general physical and mental QoL). SRS-22r floor/ceiling effects were low (<6.4%) for all domains except satisfaction with management (<10%). Internal consistency was strong ($\alpha \geq 0.80$) in all domains except pain ($\alpha = .38$). Concurrent validity ($\geq .73$) was moderate-strong relative to similar SF-12 and ODI domains. Overall, online and paper administrations had comparable psychometrics, suggesting that administering SRS-22r online could aid in ongoing QoL assessment to track long-term AIS treatment outcomes.

Poster Presentation: Room 310, 2:15 p.m.

Katherine L. Guyon

The Effects of Depression on Maternal Perceptions of Infant Temperament

Professor Alissa Huth-Bocks

The validity of maternal ratings of infant temperament has been a subject of study for quite some time. The purpose of this study is to explore the effects of depression on a mother's view of her infant's temperament. Depression was measured in 120 primarily low-income, unmarried pregnant women during pregnancy (T1) and 3 months after birth (T2) using the Edinburgh Postpartum Depression Scale. Maternal perceptions of infant temperament were assessed at T2 using the Infant

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Characteristics Questionnaire. It is hypothesized that mothers who are depressed at T2 will rate their babies as having a more difficult temperament when they also showed signs of depression at T1. Results are expected to increase knowledge about possible influences on maternal reports of infant temperament.

Poster Presentation: Room 310, 2:15 p.m.

Valentina Ivezaj

Professor Karen K. Saules

Post-Bariatric Patients in Substance Abuse Treatment: Perceptions of Etiology and Future Recommendations

Recent evidence suggests that post-bariatric surgery (BS) patients are overrepresented in substance abuse (SA) treatment programs; however, little is known about why this phenomenon is occurring. SA treatment patients with BS histories participated in a study examining the onset of SA relative to the timing of their BS. Qualitative interview data were used to evaluate participants' perceptions of the etiology of their SA problems and their recommendations for treatment providers working with BS patients. Four themes emerged regarding SA etiology: unresolved psychological problems, addiction substitution, faster substance metabolism with more intense effects, and increased pain medication availability. Three themes for future recommendations emerged: counseling, increasing education of SA risks post-surgery, and "honesty" of patients and staff prior to BS. Finally, trajectories of SA development relative to BS will also be depicted.

Poster Presentation: Room 310, 2:15 p.m.

Sierra Iwanicki

Professor Dean Lauterbach

Social Support as a Moderator on the Relationship between Childhood Conduct Disorder and PTSD

Research suggests childhood conduct disorder (CD) is a risk factor for posttraumatic stress disorder (PTSD). However, the mechanism of risk transmission is unclear. Social support is well documented for its protective effects in the prevention and recovery from PTSD, and lack of social support is a major risk factor for the development of PTSD. Yet only one study, a combat-related investigation, has examined social support as a mediator of the relationship between CD and PTSD. The purpose of this study is to examine social support as a moderator variable between CD and PTSD through a secondary analysis of the National Comorbidity Survey Replication, a stratified, probability clustered sample of the United States population. It is hypothesized that trauma-exposed individuals with a history of conduct disorder reporting lack of perceived social support are more likely to endorse symptoms of PTSD than those who report a greater sense of perceived social support.

Poster Presentation: Room 310, 2:15 p.m.

Daniel Jones

Professor Dean Lauterbach

Methodological Issues Associated with Online Data Collection

Online survey tools like SurveyMonkey have become common for psychological research and can be convenient and useful for research in which self-reported data are appropriate. Use of an online survey system raises several unique methodological issues, particularly in the management of partial or incomplete data and of duplicate participants. To demonstrate some of these issues, several cases of incomplete ($n = 26$) or duplicate ($n = 3$) participation from a study examining the relationship between a history of trauma and aggressive behavior ($N = 232$) will be discussed. The researcher proposes a simple "taxonomy" of these cases, which may assist in cleaning and organizing data. In addition to formal statistical methods used to manage missing data, several strategies appear to be useful in helping the researcher detect and systematically discard duplicate data and make decisions about fully duplicate participants.

Room 352, 1:55 p.m.

Andrea B. Kiss, Chelsea D. Dean, Wei C. Hsiao, Yung T. Chen

Professor Steven Huprich

Object Relations Uniquely Predicts Borderline Personality Disorder Symptoms over Emotional Dysregulation, Impulsivity, and Negative Affect

Extensive research on the etiology of borderline personality disorder (BPD) suggests that there is a broad array of factors contributing to the onset of this disorder. For instance, prior research established that emotional dysregulation (ED), impulsivity (IMP), and negative affect (NA) are important markers of BPD. Other studies have identified that a non-nurturing home environment leads to the development of problematic interpersonal relationships often referred to as object relations (OR). Research on the development of BPD is robust; however, no existing studies have evaluated the relative predictive power of emotional dysregulation, impulsivity, negative affect, and object relations. The current study looks at the sequential predictive powers of the object relations relative to emotional dysregulation, impulsivity, and negative affect. Preliminary results suggest that object relations are important predictors of BPD above and beyond more biologically determined markers like emotional dysregulation, impulsivity, and negative affect.

Poster Presentation: Room 310, 2:15 p.m.

Eric F. Miller

Professor Tamara Loverich

Determining Whether Primary Focus Matters in Mindfulness Interventions

This study investigated how to increase access to the attentional states of mindfulness, decentering, and flow by comparing distinct mindfulness interventions with an active control. Internally focused mindfulness (IFM) training and externally focused mindfulness (EFM) training were compared to a behavioral stress reduction control. An undergraduate student sample completed two 1-hour group-training sessions with a week of self-guided practice between them. Results of a repeated measures MANOVA showed significant differences in the acquisition of mindfulness, decentering, and flow. A pairwise comparison of the significant between-within interactions revealed that the IFM group showed a medium effect size on all measures at Time2. The EFM group also increased significantly in mindfulness. This is the first study to demonstrate that mindfulness training may increase access to flow states.

Room 352, 2:15 p.m.

Aimee Moore and Susan Bowyer

Professor Renee Lajiness-O'Neill

Brain Correlates of Direct Versus Averted Gaze Examined with Magnetoencephalography (MEG) in Autism: Latency of Onset

Despite difficulties with social cognition and nonverbal communication, a limited number of neuroimaging studies have examined the neural correlates of direct versus averted gaze in individuals with Autism Spectrum Disorder (ASD). To examine potential aberrant connectivity, brain activation during direct versus averted gaze was compared in individuals with autism and matched controls using Magnetoencephalography (MEG), a noninvasive technique that maps magnetic fields arising from cortical electrical activity. Brain activity was analyzed with MR-FOCUSS, a current density technique. Latency of brain activation was measured during direct gaze and averted gaze. Differences between ASD's and controls in latency of activation are hypothesized to occur with averted versus direct gaze and may be dependent on left versus right gaze procedures, consistent with hemispheric differences in neuronal processing.

Poster Presentation: Room 310, 2:15 p.m.

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Natalie Morris and Alfred Mansour

Professor Renee Lajiness-O'Neill

Neural Correlates of Direct Versus Averted Gaze Examined with Magnetoencephalography (MEG) in Autism: An Examination of Normalized Amplitudes

Autism Spectrum Disorder (ASD) is characterized by deficits in social interaction, verbal and non-verbal communication and the presence of stereotyped behaviors. To examine neural correlates associated with ASD, brain activation during direct versus averted gaze was compared in individuals with autism and matched controls using Magnetoencephalography (MEG). Based on purported deficits in theory of mind in ASD, differences in amplitude of activation within the prefrontal cortex and the superior temporal sulcus (STS) region are hypothesized to occur using the direct versus averted gaze paradigm. Higher amplitudes in ASD subjects are expected to occur in right averted gaze versus left averted gaze, given a visually dominant left hemisphere. Brain activity was analyzed with MR-FOCUSS, a current density technique. Given the greater autonomic response associated with direct versus averted gaze, those cortical regions with limbic connections are likely to show greater differences between ASD and the controls.

Poster Presentation: Room 310, 2:15 p.m.

Amy Olszewski, Seth Warschausky, Pamela Dixon Thomas

Professor Renee Lajiness-O'Neill

Differences in Social Integration Among Children with Disabilities

This study examined differences in social integration of children with congenital neurodevelopmental conditions (ND), traumatic brain injury (TBI), and physical impairment (PI), compared to neurotypicals (TD). One hundred and forty-three children (ND=51, TBI=14, PI=18, TD=60), ages 6-12, were examined. Friendship characteristics and quality were investigated with measures of social networks, social behaviors, and friendship attributes. Post hoc analyses showed significant differences between children in the ND and TD groups but not in TBI or PI. Among children with different types of disabilities, there are significant differences in friendship characteristics but not in friendship quality. Findings support the need for continued emphasis on programs that support the social development of children with disabilities.

Poster Presentation: Room 310, 2:15 p.m.

Gregory S. Pouliot, Deron Wirt, and Reino Bruner

Professor Steven Huprich

Construct and Convergent Validity for Two Measures of Borderline Personality Disorder

While many measures are available for assessing Borderline Personality Disorder (BPD), the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-II) remains the gold standard for use in personality disorder research. A second diagnostic tool based on the DSM-IV criteria for BPD, the Personality Disorder Inventory-IV (PDI-IV) is a semi-structured interview that has received less attention from researchers, despite its merits as a measure of BPD. A previous analysis of data suggested that the PDI-IV is a reliable and valid measure of BPD, although more students met criteria for a BPD diagnosis using the PDI-IV than with the SCID-II. However, it should be noted that the prevalence rate of BPD in this undergraduate sample was lower than reported elsewhere (Trull, 1995). Thus, the purpose of this study was to determine the psychometric properties of the PDI-IV in a clinical population. Participants consisted of outpatients recruited from a university psychology clinic, an outpatient hospital treatment facility, and a community mental health clinic. Individuals were interviewed using the BPD sections of both the PDI-IV and the SCID-II and completed measures of object relations, affective lability and intensity, anxiety, depression, and impulsivity for use in construct validation. Results suggested that the BPD scores from the PDI-IV were correlated with the construct validation measures in ways that were expected. Additionally, PDI-IV scores had good convergent validity with the

scores on the SCID-II. This suggests that the PDI-IV is a valid measure of BPD in clinical outpatients.

Poster Presentation: Room 310, 2:15 p.m.

Matthew A. Poinsett

Professor Tamara Loverich

Correlates of High-Risk and Aggressive Sexual Behavior

This study examined the relationship between high-risk sexual behavior, aggressive sexual behavior, aberrant sexual experiences, family environment, parental monitoring, delinquency, and peer relatedness. Participants were 384 Eastern Michigan University students completing the Comprehensive Sexual Experience Survey (CSES), an online questionnaire. As hypothesized, high-risk and aggressive sexual behavior positively correlated with aberrant sexual experiences and delinquency. Also as expected, high-risk and aggressive sexual behaviors negatively correlated with parental monitoring. Peer relatedness was not significantly correlated to high-risk or aggressive sexual behavior. Hierarchical regression analysis indicated that family environment and aberrant sexual experiences were significant predictors of aggressive sexual behavior in males. Notable gender differences were reported at each level of analysis.

Poster Presentation: Room 310, 2:15 p.m.

Summar H. Reslan

Professor Karen Saules

Binge Eating Disorder and Associated Psychiatric Comorbidity Confer Increased Risk of Physical and Mental Health Care Utilization on College Campuses: Results from a National Sample

Binge eating disorder (BED) is common on college campuses, but little is known about its association with physical and mental health care utilization. We estimated relative risk of past year mental and physical health care utilization as a function of BED alone and in combination with other psychiatric comorbidity (binge drinking, cigarette smoking, anxiety, and depression). The sample, which included 8,597 college students drawn from 15 colleges and universities, was 58.9% female and 62.2% Caucasian, with the majority (63.5%) in the 18-22 year old range. Results of logistic regression analyses indicated that BED alone conferred a nearly two-fold risk for past year use of psychological services and also significantly increased the likelihood of seeing a health care provider in the past year. Future research should evaluate whether prevention efforts targeting binge eating may reduce demand on campus resources available to address students' physical and mental health needs.

Poster Presentation: Room 310, 2:15 p.m.

Christopher R. D. Roberts, Thomas A. Schmitt, Andrew Luchner, and Eamonn Arble

Professor Steven Huprich

Utility and Complications Associated with the Bifurcation of Pathological Narcissism

This study sought to investigate whether two types of narcissism common in the clinical literature, grandiose (overt) and hypersensitive (covert), could be empirically detected. A large sample (n = 927) of clinical and nonclinical undergraduate and graduate students completed two measures of the aforementioned constructs: the NPI and the HSNS. Confirmatory factor analysis did not yield good fit statistics for a one-factor solution, though a slightly better two-factor model was obtained. Latent class cluster analysis detected four distinct groupings of individuals based on relatively high and low scores for both types of narcissism. Pearson correlations of both measures with a measure of hope and agency indicated that the NPI was positively correlated with social behavior, religion, academic achievement, and athletic achievement, which was not the case for the HSNS. These findings support the utility of the overt and covert constructs, although pathological narcissism may be more complex than just these two dimensions.

Room 352, 1:15 p.m.

Rachel M. Sienko

Professor Karen Saules

Binge Eating and Self-Concept among College Students

Binge eating disorder (BED) is characterized by symptomatology similar to bulimia nervosa, though there is an absence of compensatory behavior. BED may precede the onset of bulimia. Interpersonal sensitivity (IPS) is linked to bulimia, but there is a lack of literature on its relation to BED. One hundred and ninety-eight undergraduates completed an online survey assessing weight, eating habits, alcohol use, depression, self-harm, and IPS. The sample is 83.2% female, with a mean age of 21.2 years. BED criteria were met by 5.8% of participants, consistent with previous studies. It was hypothesized that participants who scored highly on self-consciousness and fear of negative evaluation measures would be more likely to have both BED and depression. Results showed that high scores on only fear of negative evaluation were significantly associated with BED and depression. Results suggest that fear of negative evaluation may be an important focus of treatment for BED as well as bulimia.

Poster Presentation: Room 310, 2:15 p.m.

Ana K. Tindall, Melissa D. Swartzmiller, and Kristine Cramer

Professor Alissa Huth-Bocks

The Association between Maternal History of Child Maltreatment and Recognition of Infant Emotion

This study will examine the possibility that the experience of abuse during childhood interferes with a woman's ability to recognize others' emotions, in particular, infants' emotions. It is speculated that childhood maltreatment disrupts an individual's recognition of one's own emotional experiences, as well as other people's emotional experiences. As women transition into motherhood, it is possible that this type of history impairs a mother's ability to form an attachment to her infant, in part based on detachment and/or distorted perceptions of the infant. One hundred and twenty female participants were enrolled in the study during their third trimester of pregnancy. Women were interviewed during the third trimester, when their infants were 3 months old, and when their infants were 1 year old. Measures assessing maternal mental health, quality of relationships with participants' parents during childhood, and maternal perceptions of infant emotions based on infant facial expressions will be examined.

Room 352, 1:35 p.m.

Ashley A. Wiedemann

Professor Karen K. Saules

Substance Use Trajectories of Post-Bariatric Surgery Patients Enrolled in Substance Abuse Treatment

High rates of substance abuse treatment admissions have been observed among post-bariatric surgery patients. It is unknown, however, whether substance use problems typically precede, co-occur, or arise subsequent to bariatric surgery. To advance our understanding of this phenomenon, we conducted chart reviews on 73 post-bariatric surgery admissions to inpatient substance abuse treatment. The majority sought treatment primarily for alcohol (62.3%), an additional 9.4% for alcohol plus another drug, 13.2% opiates, 7.5% benzodiazepines, and 7.6% other. Among alcohol users, 61.9% engaged in heavy use prior to their bariatric surgery. Relative to those admitted for other addictions, those with alcohol dependence were more likely to have had heavy substance use prior to surgery (65% of alcohol dependent cases vs. 30.8% of non-alcohol dependent cases reported onset of heavy use of some type of drug/alcohol prior to the surgery, $p < .05$). Greater pre-surgical screening of substance use and educating patients about post-surgical risks is warranted.

Room 350, 5:15 p.m.

Department of Sociology, Anthropology, and Criminology

Maya P. Barak

Professor Marilyn Corsianos

“Dirty Work” and Life Saving on the U.S.-Mexico Border: Moral Contradiction and Identity Construction Among U.S. Border Patrol Agents

This presentation attempts to understand Border Patrol identity construction through the lens of “dirty work.” I first offer a brief history of Border Patrol and argue that Border Patrol agents perform “dirty work,” negatively marking some BP activities and those who perform them. Next, I focus on the ways BP agents construct their identity—one of Rescuer as opposed to Enforcer—in response to their conflicted position and the institutionalization of this identity by Border Patrol. Such an analysis sheds light not only on the U.S. Border Patrol and the organization's self-perceptions but also on public perceptions of Border Patrol and the ways these perceptions shape Border Patrol's self-image. Furthermore, an examination of Border Patrol “culture,” the social facts that shape Border Patrol identity, and some inherent conflicts of border patrolling together facilitate a critical analysis of Border Patrol mandates, methods, and missions.

Room 350, 3:45 p.m.

Ryan L. Helms

Professor Gregg Barak

Armies of Ideology: The Rise of Paramilitary Organizations in the Sudan

Over the past two decades, there has been an outgrowth of atrocities in Africa related to or directly involving private militias, rebel groups, or other paramilitary organizations. Historically, these conflicts and the ultimate objectives of militias and other opposition groups are either unclear or notoriously complex, sometimes involving disputes dating back to the colonial period. My research aims are to detail the events that brought about the violence so as to give the reader a complete portrait of the history leading up to the atrocity itself and finally its consequences. The goals of this paper are to (1) describe events in detail involving civil/private militias as involved in gross human rights violations and/or international conflicts; (2) explain through historical chronology the cultural, political, and social conditions that led to the formation of individual militia; and (3) to explore the conditions in which these militias and ideologies were born.

Room 350, 2:45 p.m.

Jessica M. Kruger

Professor Gregg Barak

Genocidal Rape in the Former Yugoslavia

This presentation explores the history of the conflict in the former Yugoslavia and the ensuing violence against its civilian women. The objective of this paper is to examine the international sexual crimes that took place during the Balkan conflict. A brief history and explanation of wartime rape is discussed, as well as the international criminal and humanitarian laws that were involved in the legal processing of the former Yugoslavian war crimes. In particular, the International Criminal Tribunal for the Former Yugoslavia (ICTY) was developed, and it specifically addressed rape as a tool of war, which allowed for the prosecution of those individuals responsible for the wartime rape. By labeling collective wartime rape as a war crime against women, the ICTY was also first to carry out such an unprecedented endorsement.

Room 350, 3:25 p.m.

2010 Graduate Research Fair

Michele M. Kuzila

Professor Gregg Barak

Child Soldiers: War Criminal or Casualty?

Child soldiers have participated in some of the greatest atrocities our world has experienced. Some of these children were abducted from their families and forced to engage in hazardous activities. To gain their obedience, their capturers subject them to horrific acts of violence. Conversely, other children were not coerced to join their state's army or militia and voluntarily participated in committing gross violations of human abuse. An area of debate is how international law or tribunals should deal with child soldiers. Should child soldiers be prosecuted and/or required to pay reparation for their crimes? Or should child soldiers be reintegrated into society? This presentation is based upon a review of competent literature and will provide an overview of the forced/non-forced recruitment methods for child soldiers, explore the application of international law and treaties related to child soldiers, and outline recommendations for reintegration of child.

Room 350, 3:05 p.m.

Department of Women's and Gender Studies

Erika M. Behrmann

Professor Paul Leighton

The Lion and the Lamb: Stephenie Meyer's *Twilight* and Its Abusive Nature, A Literary Analysis

This presentation is a literary examination of Stephenie Meyer's bestselling book, *Twilight*, in the context of teen-dating violence. In order to change public attitudes on teen-dating violence, one must challenge current media trends in which abusive dynamics become normalized or glamorized. Although *Twilight* has become a pop culture phenomenon, there has been criticism that the main character's relationship possesses elements of abuse. This research project explores the relationship between the story's two protagonists, Bella and Edward, and examines how their relationship advocates teen-dating violence. A summary of the literature on teen-dating violence as well as the internalization of media by teens will be discussed. Finally, using the Domestic Abuse Intervention Program's Teen Power and Control Wheel, examples taken from *Twilight* will be discussed in detail as to why Bella and Edward's interactions embody an abusive nature and how readers become desensitized to abuse because of it.

Room 302, 3:05 p.m.

Nicole April Carter

Professor Paul Leighton

For Colored Girls Who Have Considered Dialogue When the Sexual Assault Was Enough

African American female adolescents are bombarded with discourses that define their sexual behavior. These dichotomous scripts insinuate that they are either asexual or oversexualized and fail to leave room for behavioral diversity. When acquaintance rape is attempted or actually occurs, African American females are often cognitively and linguistically ill-equipped to recognize that an assault has actually taken place because these discourses deny females the ability to delineate their sexuality for themselves. The initiation of dialogue during adolescence can counter conflicting notions of sexuality, as it is understood interpersonally and institutionally. Using the feminist methodological approach of dialogic consciousness-raising will dismantle erroneous sexual scripts and thus transform confusing discourses about black female sexuality. Dialogue will engender a sense of sexual empowerment among African American females that will disassemble the years of silence and control that has been mandated by a larger American society.

Room 302, 2:45 p.m.

Taylor Hayden

Professor Kathryn Ziegler

Gender Problems in the 2008 Election Coverage

The 2008 election presented a unique challenge for members of the media, with more women and people of color running for election and viewed in a serious manner than in the past. The media had an obligation to give equal coverage to all candidates; instead, journalists consistently covered Hillary Clinton and Sarah Palin with demeaning sexist coverage, dehumanizing both candidates through objectification. The misogynistic coverage of the female front-runners contributed to their failed campaigns, but both women conveyed gender differently in an attempt to become elected. Additionally, Palin in many ways contributed to her sexist portrayal of extreme "femininity" as a maternal force and an object of desire. Clinton's and Palin's gender performances represent a classic double bind: because they were women fighting for a traditionally male position, they had to make decisions about their gender performance in an attempt to avoid being automatically discounted for not being the "correct" gender.

Room 300, 5:15 p.m.

MaryAnn Kozlowski

Professor Paul Leighton

The Construction of Masculinity and Enforcement of Femininity Through Reproductive Control

This presentation examines the construction of masculinity and femininity through control of a woman's reproductive rights. It examines the aspects of socially constructed gender roles that allow and perhaps encourage various forms of abuse against women, including control of reproduction. Control over female reproductive rights is in accordance with the expectations of the masculine gender role, as the role demands action and aggression. At the same time, the use of reproductive control is a means to force adherence to the female gender role, enforcing femininity and ensuring passivity. Reproductive control can manifest in various forms but is often overlooked as a method of domestic abuse. This presentation intends to highlight this type of abusive behavior while illustrating that it is a linear extension of masculine and feminine gender roles.

Room 302, 3:45 p.m.

Deborah C. Leonard

Professor Paul Leighton

Sex Trafficking in the United States

Human trafficking is one of the oldest crimes in history, and recent economic and societal changes have contributed to a rapid expansion of this problem. Trafficking of women and children for sex is a form of modern-day slavery that threatens the lives of millions of people around the world. The United States is one of the largest destination countries for traffickers. The government has only recently begun to adopt legislation to combat the problem, and political bickering and jurisdictional conflicts have delayed possible solutions. The recent U.S. efforts to eliminate sex trafficking have had positive results, but efficacy of those policies pales in comparison to those adopted by other countries. Further recommendations are discussed.

Room 302, 3:25 p.m.

Michell Reynolds

Professor Linda Pritchard

African American Women and HIV/AIDS: Tracing an Epidemic

The analytical comparison of the incidence of HIV as a leading cause of death concerning race and gender was based on the question: "What does the incidence of HIV as a leading cause of death look like over time for African American women in comparison to African American men, White men, and White women?" Using the Center for Disease Control and Prevention annual death charts from 1987 to 2005, the study graphed the raw numbers of HIV deaths and the ranking of HIV as a number one cause of death for these demographic groups ages 25-34 and 35-44. It appeared as though gender was the primary factor

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when looking at the raw numbers' graphs. However, the ranking of HIV deaths' graphs illustrated that race was the primary factor which revealed that African American women ages 25-34 have the highest incidence of HIV as the leading cause of death over time.

Room 300, 4:55 p.m.

Department of World Languages

Maren Benn

Professor Rosemary Weston-Gil

Spanish-Creole characteristics in the dialect of people with African origins in Port Limón, Costa Rica

This research project examines the dialect of the population of African heritage in Port Limón, Costa Rica. This dialect resulted from the cultural blend of peoples from Jamaica, Barbados, Trinidad and Tobago, and other Caribbean islands that migrated to the Atlantic coast region of Costa Rica in 1872. Such a dialect is different from the language spoken in the rest of the country because of its British English language base. Issues regarding attitude toward this dialect in Costa Rica are addressed in this investigation. The application of sociolinguistic and post-colonialism theories is used in order to illustrate not only its social identity but also the historical background of its development. The author hypothesizes that external factors such as language dominance, societal stigma, and Costa Rican governmental policy contribute to the decrease in its use.

Room 222, 5:15 p.m.

Lace C. Fang

Professor James Perren

To be Native-like or Intelligible: Perspectives on Teaching Pronunciation for English as an International Language

This research explores the perspectives of non-native English-speaking English language learners and native English-speaking pre-service teachers of English to speakers of other languages (ESOL) on a proposed pronunciation syllabus. This controversial syllabus for speakers of English as an International Language emphasizes intelligibility (being understood) over native-like pronunciation. It teaches only the most important elements of English phonology that contribute to intelligibility with other NNS while omitting other elements of English phonology that are difficult to master and only marginally contribute to intelligibility. This research reveals perspectives of both target groups and gives further insight into how these views may affect the trends of classroom teaching going forward.

Poster Presentation: Room 310, 2:15 p.m.

Tetiana Grytsenko

Professor Wendy Wang

What is Multicultural Education in the USA?

Although scholars have done a lot of work in defining the scope and meaning of multicultural education, contemporary multiculturalists still have different views about how to define the boundaries of multicultural education. To address the common misconceptions about multicultural education and to develop a deeper understanding of this phenomenon, analysis of various interpretations of multicultural education and their interconnections at different developmental stages is needed. This paper focuses on exploration of definitions of multiculturalism in education, analyzing the changes in American society that have influenced multicultural education. Since its conceptualization, multicultural education has developed from appreciating solely racial and cultural differences and similarities to analyzing complex hierarchical systems of domination and oppression based on interrelation of race, ethnicity, social class, gender, environmental issues, and so on. Implications of these findings are discussed in relevance to the content of multicultural education.

Room 204, 2:45 p.m.

Akiko Harada

Professor Hitomi Oketani

Japanese Language Learner's Proficiency Assessment

OPI (Oral Proficiency Interview) is a standardized procedure for a global assessment of speaking ability that was developed by the ACTFL (American Council on the Teaching of Foreign Languages). Unlike other assessments that aim to measure achievement, OPI aims to measure proficiency. It is conducted not only in English but also in many other languages. In this project, I will conduct a 15-30-minute interview with Japanese language students and then analyze it in terms of phonology, morphology, syntax, socio-linguistic features and appropriateness, changing nature of language, and dispositions. Through this project, I will also discuss the procedures as well as teaching methods to improve learners' proficiency in Japanese language classes at college.

Room 204, 1:55 p.m.

Dan Hopper

Professor Wendy Wang

Applying Gardner's Multiple Intelligences to the Instruction of Idiomatic Language

Howard Gardner's theories of multiple intelligences (MI) have given ESL teachers the chance to reexamine the way languages are learned in the classroom. Idiomatic and figurative language present a particular hurdle to the ESL student, a hurdle that may be overcome through the application of MI-enlightened teaching strategies. This paper discusses possible benefits of using MI-sensitive teaching methods in the ESL classroom during the instruction of idiomatic content, followed by suggestions for research on the efficacy of employing such teaching strategies.

Poster Presentation: Room 310, 2:15 p.m.

Kimberly A. Kulhanek

Professor Margrit Zinggeler

Reunification and the Wall that Remains

When the Berlin Wall fell twenty years ago, Germany was full of hope for the future. Deutschmarks were handed out to East Germans, and the West welcomed them with open arms. However, the initial enthusiasm and excitement has faded as the reality of reunification was faced with the modernization of the state and the economy (solidarity support of \$775 billion). Vast differences such as employment, wealth, lifestyle, and political beliefs remain between West and the East. Nostalgia for the former socialist system surfaced, like guaranteed jobs, low rent, and less differentiation between social classes, as well as the resentment of capitalism. The question remains: Can the German people on both sides knock down the metaphorical wall in their minds?

Room 204, 3:45 p.m.

Bernard Nkuyubwatsi

Professor Wendy Wang

Podcasting for English Language Learning and Teaching in Rwanda

Podcasts of cutting-edge technologies have been recently tried in education, and language learning in particular. These tools have proved to be wonderful for learning/teaching listening and speaking. Podcasts have enabled educational practitioners to disseminate recordings of lectures and other materials to students. The successful application of these technologies in education is influenced by the access to a broadband Internet, which is apparently a serious limitation in the developing countries. However, podcasts can be more easily accessible than any other learning materials in Rwandan higher learning institutions, where institutional libraries are poorly equipped and do not correspond to the number of clients they are supposed to serve. Their open availability online and playability on mobile devices, the most ubiquitous technologies among tertiary learners in Rwanda, make it possible to use podcasts in this context. A thoughtful design of courses that embed the use of podcasts that are available on the web and the creation of podcasts by learners themselves can improve English

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language listening and speaking skills among Rwandan university students in a cost-effective way. In this session, the presenter discusses the applicability of podcasts to improve English language listening and speaking learning in Rwandan higher learning institutions.

Room 204, 3:25 p.m.

Krista M. Osborne

Professor Wendy Wang

Emersion Pathways: Willingness to Communicate, the Right to Speak, the Spiral of Silence, and Bridging Cultural Moorings

Presented is a theoretical model of the interplay between Willingness to Communicate (WTC), the Right to Speak (investment vs. motivation), and the Spiral of Silence. Knowledge of L1 Cultural Moorings is perceived as an intrinsic key in the process of bridging transitions, not only within L1 settings but also between L1 and L2 cultures. Language is culture; therefore, the possible pathways and effects of one's public discourse, respective to assimilation and empowerment, are examined.

Poster Presentation: Room 310, 2:15 p.m.

Judith Sachs

Professor Wendy Wang

Factors Affecting the Intelligibility of Foreign-Accented English

As the U.S. undergoes significant demographic changes in ethnicity, effective cross-cultural communication skills are imperative to succeed personally and professionally. To date, there has been little research examining native speaker intelligibility of foreign-accented English. The presenter reports on a survey of university students regarding 1) attitudes toward foreign-accented English, 2) strategies employed to facilitate its intelligibility, 3) opinions regarding the communication burden in cross-cultural interactions, and 4) the extent to which native English speakers view understanding foreign-accented English as an important skill. The findings of this study demonstrate the relationships between the attitudes, strategies, responsibility for communication, perceived importance of understanding foreign-accented English, exposure to foreign-accented English, international experience, and foreign language instruction. A better understanding of these relationships contributes to the development of curricular and pedagogical initiatives to assist native speakers in understanding multiple varieties of spoken English and thereby facilitating effective cross-cultural communication.

Room 204, 3:05 p.m.

Kay E. Stremler

Professor Betsy Morgan

Effectiveness of Vocabulary Strategies Teaching on Use

Use of vocabulary learning strategies helps in recognizing and dealing with new words in reading materials. Use of a word in writing requires the author to not only recognize the word and understand its meaning, but also to use appropriate collocations, grammatical patterns, and word forms. Because of this complexity and the fact that good learners typically use a variety of strategies, multiple strategies for learning words from the Academic Word List (AWL) are taught throughout the term in a course designed for English language learners. This action research study evaluates whether target academic vocabulary use in ESLN515 student essays changes over the semester. This presentation describes two sections of this class that emphasize different vocabulary acquisition strategies and compares the degree to which students in each use the target vocabulary in their writing.

Room 204, 1:35 p.m.

College of Business

Department of Accounting and Finance

Matthew B. Hammond

Professor Zafar Khan

Determinants of Timely Graduation at Eastern Michigan University: An Empirical Study

A major trend at U.S. colleges is the decreasing number of students who complete their college education in four years. This research analyzed factors impacting timely graduation of students at Eastern Michigan University. A random sample of students enrolled in the COB 200 course in the academic year 2003-04 was tracked to identify whether they graduated in four years. The overall four-year graduation rate was 34%. Moreover, discriminant analysis results indicated that credit hours taken, transfer students, and the COB 200 instructor had a significant impact on timely graduation. Implications of results and further research opportunities are discussed.

Room 352, 3:05 p.m.

Meiqin Lu

Professor Angela Hwang

Survey of IFRS Accounting Practices of Pharmaceutical Companies

More than 100 countries around the world currently require or permit International Financial Reporting Standards (IFRS) reporting in 2009. When U.S. companies convert from U.S. Generally Accepted Accounting Principles (U.S. GAAP) to IFRS, they face great challenges as well as opportunities to make choices on financial reporting policies. A survey of leading European pharmaceutical companies that used U.S. GAAP prior to the IFRS adoption was conducted to evaluate their first-time adoption of IFRS practices. The survey results are structured into three aspects and discussed in this thesis: first, IFRS 1 optional exemptions at transition date; second, key accounting differences from IFRS to U.S. GAAP reconciliation; and the third, choices of alternative accounting methods allowed by IFRS. These results not only provide benchmark information but also provide U.S. companies a cost-effective pathway in making their reporting choices in the near future when U.S. companies convert from U.S. GAAP to IFRS.

Room 352, 2:45 p.m.

Department of Management

Betsy B. Behm

Professor Mary Vielhaber

Best Practices to Assess and Improve Crisis Management Communication Plans

In the last decade, an increase in crisis situations in schools has created a need for crisis management communication plans so the faculty, students, and support staff can act quickly and effectively during a crisis. This study began with a review of the literature to determine current best practices with crisis management communication plans and includes an analysis of one school's crisis response plans as well as data collected from four interviews of school officials who currently serve on the school crisis response team. After analyzing the plans and comparing them to the crisis communication plan recommendations from the literature, the researcher concluded that the school's current plans are thorough, complete, and effective. Specific recommendations to enhance the plans include additional staff training, improving the debriefing process following the crisis, and providing additional support for the staff and students in the aftermath of the crisis.

Room 320, 5:15 p.m.

Cherida Dawn Boyles

Professor Christine Day

Social Intelligence: Social Competencies for the Transitioning Worker

The purpose of this paper is to describe a framework for conceptualizing the role that social skills play in the success of individuals transitioning back into the workforce. It is suggested that social skills—specifically the ability to read others accurately, make favorable first impressions, adapt to a wide range of social situations, and be persuasive—have a major impact on the transitioning worker's ability to successfully re-enter the job market.

Room 320, 4:15 p.m.

Deborah J. Jablonski

Professor Christine Day

Cost Reduction: Making the Right Decisions in “The Great Recession”

Almost overnight, ABC found that massive cost reductions were necessary to survive and stay in business in 2008 and 2009. The medium-size company has various locations in Michigan, Ohio, and Indiana. This was a test, if ever there was one, to measure how past and future decisions would make or break a business. Automotive industry sales in the U.S. were down in 2009 compared to last year. Past day-to-day operating decisions were made without having a huge negative impact on the companies' bottom line. Many companies had a huge war chest to pull resources from in the event that some catastrophic event should happen. That all changed when the stock market took a downturn. It would take major cost reductions for ABC to remain competitive in this volatile economic climate.

Room 320, 4:35 p.m.

Erika L. Koski

Professor Stu Tubbs

Utilization and Implementation of the Predictive Index® (PI) for Global Leadership Development

This presentation will explore how the Predictive Index (PI) is used in Global Leadership Development. Specific topic areas that will be covered include the history of PI, reliability and validity of the tool, the PI process, the four PI drive factors and what they mean, utilizing PI in leadership development, leadership styles, PI Case Studies/an Organizational Testimony, implications and applications, and limitations of the tool.

Room 320, 4:55 p.m.

Melissa K. Zochowski, Divya A. Patel, and Stephanie R. Peterman

Professor Crissie Frye

Human Papillomavirus Vaccine Intention among Female College Students

Genital human papillomavirus (HPV) is the most common sexually transmitted infection in the U.S., with adolescents (ages 15-19) and young adults (ages 20-24) at highest risk, yet little is known regarding their intention to undergo HPV vaccination. This study examined data collected from 222 females ages 18-26 attending a university-based gynecology clinic. Participants were randomized to receive HPV specific education plus a reminder letter on HPV vaccine uptake. Demographics, medical and sexual history, HPV-related knowledge and personal beliefs, and intention to undergo vaccination were also collected. Ninety-six (43.2%) intended to undergo HPV vaccination, 69 (31.1%) did not, and one fourth were unsure of their intent. Females who were sexually active and those who did not have private health insurance were significantly less likely to undergo vaccination. Interventions to increase HPV vaccine intention and, ultimately, uptake should address personal HPV-related beliefs in addition to broader barriers to vaccination.

Poster Presentation: Room 310, 4:00 p.m.

Department of Marketing

Mohit Bindra

Professor Harash Sachdev

Mapping of the Aftermarket Auto Parts Industry in the U.S. and its Significance

This presentation focuses on the Aftermarket auto parts industry in the U.S. The mapping process includes various key suppliers, distributors, retailers, and end-consumers in aftermarket auto parts industry, and how the suppliers have managed their global supply chains in collaboration with the OEM's or Big Auto Assemblers to meet the competition and ensure quality standards and high level of customer service. In this industry, demand is unpredictable for the body parts (resulting from collisions) of cars currently on the roads and also because an increase in the average life cycle of passenger cars has impacted the parts availability and its manufacturers. In order to point out the contrast between two different economies, a comparison of the U.S. Aftermarket Auto Industry with India's Aftermarket Auto Industry is presented through the mapping process. Last, I will highlight the viability and challenges involved in implementing supply chain management practices in dealing with the planning and control of total materials flow from suppliers through end-users.

University Gallery, 1:35 p.m.

Namita Wasan

Professor Anne Balazs

Timber Supply Chain in the United States and India

This research assesses overall supply chain in timber industry concentrating on the markets of the United States and India. I will develop a supply chain map of major suppliers and customers located inside and outside the countries and show how they are interlinked to one another. My research will also attempt to capture the differences between both markets on the basis of industry trends and characteristics that show how both of the markets are showing changing trends in the consumption, production, and import of timber and timber products.

University Gallery, 1:15 p.m.

College of Education

Department of Leadership and Counseling

Thyagarajan V. Ammachathram

Professor David Anderson

Extent of Support Services to Quota-based Students in Public Higher Educational Institutions in India

The purpose of this study was to identify the extent and impact of various institutional support services offered to quota-based students in Indian higher education. The study emphasized the past socialization behaviors that affected the quota-based students' educational endeavors and examined the impact of institutional practices on these students. This study also examined the impoverished background of Schedule Caste/Schedule Tribe and Other Backward Caste students based on Banks's key concepts in terms of origin, race, ethnicity, income levels, and previous educational equity and its correlation with their performance and success at public institutions in India. Edgar Schein's organizational culture model assisted the researcher in understanding various cultural variances of the quota and non-quota based students. Fisher's three stage model of “anticipatory socialization” and “Role management, Change and Acquisition, Mutual acceptance, Adaptation and Metamorphosis” was adapted in the study to analyze various socialization strategies. The results of this study have provided a better understanding to Indian public institutions of effectively guiding quota-based students in their institutions and have recommended successful strategies to develop programs to ensure improved graduation rates and help to gain better educational equity among quota-based students in the higher educational system of India.

Room 330, 1:55 p.m.

2010 Graduate Research Fair

Carin W. Barber

Professor James Barott

Culture, Surprise, and Sensemaking: Examining Undergraduate Students' Matriculation Processes

This ethnographic research focuses on developing a cultural knowledge of hometown community culture. While previous research examined how college affects students, this research reverses the approach and investigates how the students and their hometown community values actually affect the college community. This research approach gives faculty, staff, and administrators the ability to investigate the cultural characteristics of students' hometowns. To investigate these topics, I conducted in-depth interviews with 21 diverse students to learn about their matriculation process and how hometown culture(s) affected their entry into Eastern Michigan University.

Room 330, 2:45 p.m.

Le'Shay Dandridge

Professor Dibya Choudhuri

Parental Influence

Possessing intelligence is not the only factor that contributes to children's academic achievements. This paper focuses on the effects of parental influence on the academic success of their children. I will cover different factors that play key roles in children's educational performance, including parental influence and parent and family factors that relate to academic success. Parent training programs are designed to help parents support their children's learning, and the impact of these programs on academic success is an important topic to consider because it relates to the community counseling profession.

Poster Presentation: Room 310, 2:15 p.m.

Christine Deacons

Professor Marlena Bravender

Strengths and Shortcomings of Learning Communities

This literature review examines learning community studies published in the last 5 years and the best practices identified within to help students transition from high school to college. The transition from high school to college can be very difficult for students due to lack of K-12 preparation, access to academic support, and absence of early intervention mechanisms as well as other influences. It is widely accepted that learning communities are designed to help students transition through these difficulties. This review focuses on the strengths and shortcomings in key components of the interventions and assessment of short- and long-term effects. The discussion will include suggestions for universities considering establishing and assessing new or current learning communities for specific populations with respect to type, purpose, and evaluation.

Poster Presentation: Room 310, 2:15 p.m.

Jimmy L. Dolson

Professor Ella Burton

Professional Development and the K-12 Operating Budget

This action research project develops a plan to establish a funding level for professional development at Jackson Christian School (JCS), a non-public faith-based school located in Jackson, Michigan. The resulting action plan suggests a process-based approach to determining a teacher training budget that supports the school's strategic objectives.

Establishment of the plan is based on researching multiple sources. The project researches the statistical correlation between faculty development budgets in Michigan's K-12 public schools and student performance on the Michigan Merit Exam (MME). Results of this correlation indicate no relationship between funding levels and student achievement on the MME. The project also reveals the average funding level for school districts located in Jackson County to be less than 1% of operating budgets. Finally, a literature review investigates funding levels for professional development in other states and countries, in Advance Placement (AP) and International Baccalaureate (IB) schools, and in non-educational industries.

Room 330, 3:25 p.m.

Kenneth S. Frierson

Professor Marlena Bravender

Romanian System of Higher Education

The complex system of higher education in Romania has undergone progressive reform over the past two decades. With the emergence of new institutions, both private and public, increases in enrollment, and the overthrow of the Ceausescu regime, education in Romania is experiencing increasingly positive effects but has also seen drawbacks. Understanding the desires and needs of students, monitoring academic rigor and performance, and reorganizing the intention of learning has given the Ministry of Education in Romania a daunting task. The structural comparison between the United States' system of higher education to that of Romania examines the values and intention of education in a student-centered environment.

Poster Presentation: Room 310, 2:15 p.m.

Katherine J. Girard

Professor Ronald Williamson

Retention Variables in Community Colleges: A Quantitative Study Utilizing the CCSSE Tool to Determine whether Rural, Suburban, and Urban Community Colleges Contrast Significantly in Relation to the CCSSE Benchmarks

Retention is an issue that has been facing higher education for years. Many authors have studied its causes and effects. Attrition has been attributed to a multitude of factors, including age, ethnicity, institution variables, socioeconomic status, and available resources. One author, Tinto, discusses how attrition is affected by social and academic integration of the student at the university level. Others build on this message and attempt to resolve retention through related means. This study addresses the question of whether there is a difference between possible retention variables reported for students attending a community college based on its location, specifically for rural college students. The Community College Survey of Student Engagement (CCSSE) is used to evaluate educational institutions ranked by Carnegie Classification as rural, suburban or urban in nature. The CCSSE benchmarks are analyzed to determine if any significant differences are present.

Poster Presentation: Room 310, 2:15 p.m.

Inna Gorlova

Professor David Anderson

Expanding Entrepreneurial Education

In today's world, entrepreneurialism is considered an engine that drives the economy (Jack & Anderson, 1999). Higher education institutions are forced to get more tightly coupled with the knowledge economy through technology transfer, innovations, and creation economic and social products (Etzkowitz, 2003; Clark, 1998; Kuratko, 2003). Entrepreneurial education goes beyond just preparing students as business owners and penetrates into different disciplines across the university curriculum (Tiessen, 1997). The aim of this ongoing research project is to explore the best practices of teaching entrepreneurialism to non-business students at comprehensive universities. The researcher sought to look at how university faculty infuse entrepreneurialism into teaching and learning, how non-business colleges attempt to prepare future practitioners who acquire deeper understanding of the changing and uncertain world and reflect creatively and responsibly in their professional and personal lives. Data for this study were collected through published scholar materials, universities reports, and media.

Poster Presentation: Room 310, 2:15 p.m.

Melissa Ann Gratinger

Professor Dibya Choudhuri

Counselors-in-training and the Process of Selecting a Counseling Theory of Choice

Counselors are trained in a variety of theoretical orientations. These theoretical frameworks help counselors conceptualize clients' problems

2010 Graduate Research Fair

and aid in the treatment planning process by outlining specific intervention strategies. The counselors-in-training learn of a variety of theories and throughout the counseling program are asked to think about which perspectives they may adopt as future professionals. Despite the vast research on the application of treatments based in various theories, there is little research on the process of how the counselor-in-training selects a theoretical framework. Throughout the counseling program, counselors-in-training may experience pressure to select a theory. This research study aims to identify the process by which counselors-in-training in a graduate-level counseling program adopt a theory of choice in various stages of the program and whether that choice changes. This study will look at students in the early stages, middle stages, and end stages of the counseling program to measure the process of selection.

Poster Presentation: Room 310, 2:15 p.m.

Jessica Hale

Professor David Anderson

Assessing and Stimulating Quality in Online Threaded Discussions: Rubric Validity and Reliability Testing

This study tests the validity and reliability of a rubric created to assess quality in online threaded discussions. The participants in this study consist of faculty members: experts with extensive experience with online threaded discussions and operant users with varying experience levels for 6 different institutions. Using the Delphi method, experts evaluate and develop the construct validity of the rubric. Operant users, assigned to either the experimental or control group, applied the rubric to 2 sets of online threaded discussion samples. Members of the experimental group receive a rubric training sequence prior to using the tool. Correlational, multiple regression and generalized linear modeling analysis are used to analyze test-retest reliability, inter-rater reliability, and the impact of external rater factors on reliability. The outcome of this study is a tool that can be used by instructors to evaluate the quality of student contributions to threaded discussions consistently and objectively.

Room 330, 1:15 p.m.

Tamekia McCauley

Professor Ella Burton

Using NWEA MAP Testing to Track Cohort Growth

This study examined the academic growth of the 7th grade at Taylor Exemplar Academy. The proficiency of some members within the cohort was overshadowing that of the lesser performing students. The class of 54 students was divided into three groups based on the number of years of attendance at the academy. Further subcategories were broken down based on socioeconomic status, support services received, gender, and ethnicity. Using the Northwest Evaluation Association's Measure of Academic Progress, the study found that as a student matriculated through the academy, NWEA MAP scores increased in all areas. The results of this study will enable the instructional staff at TEA to target those students within each cohort who are performing below grade level.

Poster Presentation: Room 310, 2:15 p.m.

Sheryl McGriff

Professor Martha T. Tack

Faculty of Color in Religiously Sponsored Colleges and Universities

Predominantly White universities, including those with a religious affiliation (e.g. Jesuit/Catholic), seek to recruit and retain African American and other faculty of color to support institutional diversity goals. Yet a tension exists between the need to perpetuate the religious identity of the institutions and the challenge to diversify. Along with mastering normal faculty work responsibilities of teaching, research, and service, faculty of color contend with higher education climates that are not always hospitable. Additionally, those faculty members in predominantly White faith-based institutions may also be accountable for adherence to faith-based missions and associated service. Nascent

research on faculty diversity in religious universities in general exists. Research on the experiences of faculty-of-color generally, and on African American particularly, in religious sponsored institutions is non-existent. This poster will review the demographics, explore recruitment challenges faced by administrators, and examine the factors prospective faculty should consider when applying to colleges/universities with a religious affiliation.

Poster Presentation: Room 310, 2:15 p.m.

Ramona B. Meraz

Professor Eboni Zamani-Gallaher

Attraction and Experience: Analysis of Residents of University-Linked Retirement Communities

While offering retirees and senior citizens opportunities for engagement on college campuses is not a novel concept, a newer trend that involves retirement living on campus is emerging. One of the more innovative ways higher education is engaging retirees is through the creative practice of university-linked retirement communities (ULRC). ULRCs are a relatively new and have been growing in popularity since the mid 1980s; ULRCs now exist on more than 50 campuses across the United States. The ULRC concept is one that meets both the needs of retirees and the university. This presentation overviews the trend of ULRCs as well as the in-progress analysis and findings concluded from dissertation research. The research was conducted at three distinct ULRCs located in the Northeast, Midwest, and South and analysis includes excerpts from 46 participants. This research employed a qualitative, interpretive, ethnographic approach utilizing a series of individual life-history interviews, observations, and artifact collection as the main content for data analysis. The researcher will present insights on how the conceptual framework that drew upon psychosocial theories of aging, including activity, role, continuity and life course theory, led to a deeper understanding of residents' attraction to and lived experiences in a ULRC.

Room 330, 4:15 p.m.

Charles Muwonge

Professor David Anderson

Values-based Charter Schools for Catholic Inner City Schools: A Program Evaluation

This research creates an evaluative tool to assess the Washington D.C. Archdiocesan Values Based Charter Schools (VBCS) experiment. Are VBCS a viable alternative to failing inner city Catholic schools slated to close? Over 162 Catholic schools slated to close could benefit from a successfully executed Value Based program. Program evaluation of academic success and process of integration of vulnerable youth from the private and public sector uses mixed research methods. The program evaluation articulates academic processes (curriculum, pedagogy, and professional development) and the outcomes (knowledge, skills and disposition) to determine degree to which stated goals are evident in student achievements.

Room 330, 4:55 p.m.

Mary E. Osborne

Professor David Anderson

Transforming Data into Wisdom: A Developmental Model of Knowledge Creation within Higher Education Institutions

Establishing institutional effectiveness has beleaguered U.S. higher education institutions for 25 years. One key component is the organization's effective use of data in decision-making. A model of this transformation that includes environmental and institutional influences is proposed and tested. A survey gathers data on institutional context, transformation processes, and external factors associated with the data transformation process related to effective decision-making. Structural Equation Model statistics will provide the analytical platform for the research. The end result will be a guide for the attainment of effective data-informed decision-making in higher educational institutions.

Room 330, 1:35 p.m.

2010 Graduate Research Fair

Michael D. Parise

Professor David Anderson

Internationalization in the Military: Learning from History

Today's military mission has evolved over decades, with emphasis on gaining international support through implementing cultural training. Today's armed forces must be prepared for conflicts at a moment's notice anywhere in the world and must have an understanding of global cultures and its languages. A study of these aspects will increase a soldier's knowledge, enabling cooperation from many varied cultures and resulting in a peaceful resolution. Internationalization training in the areas of culture, politics, environment, religion, and the role of the media can be applied to any foreign operation, military or civilian, and can determine the outcome. These lessons learned require early training and commitment from the government and citizens.

Room 330, 2:15 p.m.

Kristy A. Pearson, Alicia Apperson, Joseph Moore, and Amanda Geraci

Professor Jessica Hale

Digital Natives: Today's Generation and Their Impact

The generation born between 1986 and 1994 has been called "digital natives"; these students live in a world where there have always been Personal Identification Numbers, laptops have always fit into backpacks, and cyberspace has always existed. This generation has been labeled important by Howe and Strauss because they are slated to be the next great generation. Digital Natives are said to learn differently because of their technology-rich culture. They are said to be active learners, proficient in multitasking and dependent on communication when it comes to accessing information or interacting with others. The purpose of this study was to demonstrate how the education system has altered to accommodate the Digital Native. Trends observed among Digital Natives include how they interact with each other using tools such as text messaging, e-mails, and social networking sites, such as Facebook and Twitter. The information found in the research suggest faculty, staff, and student affairs professionals need to instruct this generation using supplementary technology to preserve and sustain their attention.

Poster Presentation: Room 310, 2:15 p.m.

Brittin A. Pollack

Professor Eboni Zamani-Gallaher

Workforce Development: The Role of Community Colleges

According to a recent report from the Department of Labor Statistics (2009), the number of unemployed workers has increased from 7.5 million to 15.4 million in the last two years. Many of these displaced workers are enrolling at community colleges to acquire the skills needed to re-enter the workforce. This research project will look at how community colleges are rising to meet the needs of this growing population and what specific services and programs are being offered. Data collection will consist of on-site observations and interviews with student services leaders and other key personnel from at least one rural, one suburban, and one urban community college in Michigan. Current workforce development programs will be explored and evaluated. Recommendations for future programming will be provided.

Poster Presentation: Room 310, 2:15 p.m.

Stacey M. Pratt

Professor Jessica Hale

Transition to College: Student Self-Regulation and Motivation in Academic Achievement

The transition from high school to college often implies a shift towards more defined study habits and self-regulatory practices for students. Therefore, if academic support services neglect to train academically at-risk students in self-regulatory behaviors and intrinsic motivation, a growing number of diverse student populations will not receive the necessary help to stay in college. Using current research on role of self-regulatory practices and intrinsic motivation in college student academic achievement the researcher identified four key factors:

learning strategies and performance recognition, self-efficacy, gender and ethnic differences in specific self-regulatory behavior, and institutional structure as it relates to self motivation. By understanding factors that impact academic achievement, academic support services and parents will be better able to assess effective contributions to the scholastic benefit of their current and future students.

Poster Presentation: Room 310, 2:15 p.m.

Paul Salah

Professor Ella Burton

Understanding the Implications of Student Socialization, Organizational Culture, and Student Suspension

Families living in lower socioeconomic communities are confronted with many issues that public school teachers and administrators are not. Minority students are often poor and underperform academically. This presentation will highlight the relationship between a child's socialization, school organizational culture, and the implications of the two as they relate to student suspension. A great deal of literature has been written about student suspension, specifically related to socialization. Socioeconomic status, race, and familial hardship are often cited as predictors. The literature regarding organizational culture as it relates to student socialization and ultimately suspension has not been studied to the same extent. Why are poor minority students suspended frequently from school? Does a relationship exist between a child's home socialization and suspension? What relationship exists among organizational culture, student socialization, and suspension? These questions will be examined throughout the presentation.

Room 330, 3:05 p.m.

Aditi M. Sengupta, Allison Boone, Saroya Jamal, Catherine Lenaway

Professor Marlena Bravender

An Overview of the Higher Education System in India

With strong economic growth over the past two decades, dynamic development of its political system and the second largest population in the world, India has become increasingly important in the global marketplace. Much of the continued growth and potential competitiveness of India will hinge on the future of one significant element: education. A basic understanding of some important issues pertaining to higher education in India in comparison to the United States, in addition to recommendations for future tertiary education within the country, may lead to an understanding why India is becoming a fast emerging global hub for higher education and technical training for future generations.

Poster Presentation: Room 310, 2:15 p.m.

Tamara N. Stevenson

Professor Eboni Zamani-Gallaher

Role, Race, Resilience: African American Faculty at Public Community Colleges

African Americans remain disproportionately underrepresented in the faculty ranks at institutions of higher education. The role of faculty is critical to the quality and exchange of teaching and learning, particularly at community colleges. Only seven percent of American college and university professors are African American. While nearly half of African-American undergraduates attend community colleges, there is an underrepresentation of African American faculty in two-year colleges (Harvey, 1994; NCES, 2009). The extant literature suggests that having a racially diverse faculty that is representative of the student population can enhance student retention and campus climate. This presentation shares preliminary findings from research in progress on the experiences of African American faculty members at public community colleges. Critical Race Theory, Racial Battle Fatigue, and Role Theory inform the conceptual framework guiding the study. The presenter will share emerging patterns stemming from the data, in particular the impact of racialized collegiate contexts.

Room 330, 4:35 p.m.

2010 Graduate Research Fair

Christine Woods

Professor Yvonne Callaway

Groups: Addressing the Needs of the 21st-Century Student

Michigan's educational systems face an increasing challenge in educating students to compete in a global economy. Students need to acquire a skill set that includes not only excellence in academics but strong interpersonal and intrapersonal skills. Schools must rise to this challenge in spite of rising operating costs and decreased funding. This presentation includes an overview of the Michigan Comprehensive Guidance Model for middle and high school students and presents group counseling modalities to better prepare our 21st century students for success academically, socially, and in future careers.

Room 330, 3:45 p.m.

Department of Special Education

Nayda G. Carmona

Professor Myung-Sook Koh

The Overrepresentation of CLD Students in Special Education

This study deals with the intersection of Culturally and Linguistically Diverse (CLD) students and special education. It examines the overrepresentation of CLD students in special education programs in the U.S. and addresses approaches to the testing of CLD students that leads to the misplacement of these students into special education programs. CLD students and those CLD students with disabilities should be properly assessed with the cooperation of the ESL Department, Special Education Department, Bilingual Department, and Assessment teams.

Room 204, 1:15 p.m.

Ann Holland

Professor Gilbert Stiefel

Person-Centered Planning for Persons with Disabilities

Person-centered planning is a widely used approach to planning the futures of persons with disabilities, and its use is increasingly encouraged by public policy. There has been some research on the effectiveness of person-centered planning, but many of these studies do not meet the standards of high quality research. While it appears that most researchers and advocates for person-centered planning would agree that a person-centered plan is based on the interests and goals of the person for which the plan is created, there is no universally accepted definition of person-centered planning or what it must, as a minimum, involve. It is not yet clear if person-centered planning is truly effective.

Poster Presentation: Room 310, 2:15 p.m.

Joshua B. Madding

Professor Ana Claudia Harten

The Impact of Audio/Visual Materials on Patient Education

My presentation will show the results of a research study designed to determine the impact of video learning as opposed to written information with regard to Aphasia education. This study is part of an effort to improve upon ways of educating family members about the diagnosis and treatment options of this disease. Subjects will watch a short educational video that I designed about Aphasia and then complete a survey highlighting its specific benefits/weakness as a modality for learning. This project was designed as a first step examination of the benefits of video to educate within the field of speech language pathology. Since nothing of this nature is currently on the market, an exploration of its effectiveness may be of great benefit to our field.

Poster Presentation: Room 310, 2:15 p.m.

Amanda Schramski

Professor Sarah Ginsberg

Graduate Speech-Language Pathology Students' Reactions to the Transition from Academic to Clinical Coursework

This qualitative research study examines the transition between academic and clinical coursework during the graduate education of speech-language pathologists. The goal of the study is to gain a better understanding of the graduate students' experiences as they begin their first supervised clinical practicum. During this transition period, it is common for graduate students to experience great stress and anxiety. I expect to gain knowledge of exactly what aspects of the transition are responsible for these feelings. Through interviews with graduate students at Eastern Michigan University who recently transitioned into their clinical practicum, I collected data to make sense of the feelings and experiences that the graduate students endure and what aspects of the transition are responsible for their cause.

Room 330, 5:15 p.m.

Department of Teacher Education

Jennifer N. Conrad

Professor Pat Pokay

Examining the Correlation Between Extracurricular Activity Participation and Student Performance

This literature review set out to examine the relationship between extracurricular activities and academic performance. Four different categories of extracurricular activities were evaluated and interpreted. These categories included fine arts activities, community-based activities, academic programs, and athletics/sports teams. Fifteen different articles were examined and reviewed to make the appropriate conclusions regarding the correlation between extracurricular activity participation and student academic performance. No extracurricular activity stood out more than another in affecting students' academic performance. Each research article related both positive and negative effects on students' academic performance. Some of the researchers could not find conclusive evidence for one position or another. Many of the methods used within each of the studies have the option to be duplicated. The studies marked with the most limitations should be duplicated and compared against the original study to further explore and understand this topic.

University Gallery, 4:15 p.m.

Randall D. Cooper

Professor Pat Williams-Boyd

Maleness and Education: Male Identity and Educational Implications

The phrase "Boys will be boys" is commonly used in reference to the actions and choices that a boy makes, serving as an excuse or rationale for said action or choice. How can there be such a general and universal understanding of what it means to be a boy or act like a boy or make the choices of a boy when each individual boy is unique with different thoughts, feelings, and emotions? The purpose of this study is to look at what it means to be a boy and what effect this meaning has on the educational choices of a boy. Societal constructs of masculinity may be limiting boys' educational options. Through reviewing current and past research, this study has been done utilizing grounded theory research. An ethnographic look at the male population from the perspective that the male population is its own subculture within the context of a much larger societal culture helps to provide greater insight into the world of males. This is a grounded theory study using literature and collected data to construct a working theory from which further research can develop and evolve regarding the meaning of being male and how this meaning affects the choices and decisions that a male makes.

University Gallery, 2:15 p.m.

2010 Graduate Research Fair

Regina M. George

Professor Lynn Nybell

Supporting First-Year Student Success

The first year attending a university is often an overwhelming experience for the young adult. It is especially challenging for students of color attending a predominantly White institution and for first generation college students. The priority of academic tasks may be lost in the compelling demands of a new environment. Some students may even find themselves on academic probation at the end of the first semester. How can the university best respond to the unique needs of the first-year student? What is the role of advising, and how can it be most effective? What strategies within the classroom support the success of the first-year student? This presentation will consider some programs and practices and their impact on engaging learners.

University Gallery, 3:45 p.m.

Megan E. Greene

Professor Mary Rearick

The Effect of Nonlinear Text on Engagement and Reading Comprehension of Students with ADHD

Attention Deficit Hyperactivity Disorder (ADHD) is a psychiatric disorder that affects a large number of students of varying age groups in elementary school. Newmann, in a 2008 review, estimates that 35% of all students have ADHD (p. 6), which corresponds with an estimated two children in every typical US classroom. Given the large number of children diagnosed with ADHD and the acknowledged deficits these children show in reading comprehension and overall academic achievement, it behooves us as educators to find ways to support these children. This literature review explores technological accommodation that may boost the achievement of these students. Specifically, the review investigates the use of nonlinear text in intermediate elementary school classrooms and the effects of nonlinear text on reading comprehension of students with ADHD. Further, this research will include the results of one or more qualitative studies within an elementary school classroom, comparing the engagement and comprehension of students with and without ADHD as they complete tasks in both linear and nonlinear text.

University Gallery, 4:35 p.m.

Imandeep K. Grewal

Professor Robert Carpenter

Model Minority: Unpacking the Fiction: Academic Achievement among Asian American Students

The U.S. Census Bureau projects a 153% increase over the next four decades in the number of people who identify themselves as "Asian" in the U.S. population, much higher than the projected 44% increase in the overall population. With this dramatic demographic shift, it is important to examine the trends in academic achievement among Asian American students. However, the census category of "Asian" collapses many different peoples into one homogeneous group despite significant differences in geographic origins, immigration histories, and socioeconomic status. Educators and policy-makers persist in stereotyping all Asian American students as "academic overachievers," leading to a limited and narrow understanding of the academic achievement and school experience of many Asian American students. This presentation focuses on how the many ethnic, family, and individual variables shape the educational experience of Asian American students and suggests a new classification system that reflects the tremendous diversity of the Asian American population.

University Gallery, 3:05 p.m.

Serhiy Kovalchuk

Professor Christopher Robbins

The Teachers of Stalinism and Neoliberalism

In his interview with Herbert Wells, Joseph Stalin (1937) stated that "education is a weapon whose effects depend on who holds it in his hands and at whom it is aimed." Under Stalin's regime, teachers became instruments of the ideological transformation and economic

revolution of the society. They were held accountable for the introduction of knowledge and experience that would facilitate the transition to communism and industrialization and foster blind obedience to the Communist Party. In the U.S. current teachers have become captives of No Child Left Behind and other educational policies aimed at implementing neoliberal agendas of the state. This study has analyzed ideological and functional homologies between the Stalinist revolution in the USSR education and the neoliberal revolution in the U.S. education and how teachers became instruments of these processes.

University Gallery, 4:55 p.m.

Vanessa A. Lancaster

Professor Patricia Pokay

Relationships among Technological Forms of Communication Learning and Social Development

This review of research examines relationships among technological communication, learning, and social development. In order to keep educational fields current, one must understand the value technological communication has with students inside and outside of classrooms. The research in this review is intended to assist educational professionals in assessing what motivates, pressures, and academically stimulates students using various forms of technological communication. With a greater understanding of available research, educational professionals may adapt pedagogy in order to remain current and eliminate obsolete teaching methods.

Poster Presentation: Room 310, 2:15 p.m.

Janet L. Mayotte

Professors Robert Carpenter and Joe Bishop

Early Childhood Interactional Classroom Design for Promoting Rich Vocabulary Development

Despite early childhood literacy initiatives across the nation, many young students still enter school behind their peers in vocabulary development. The purpose of this research is to study early childhood classroom environments within southeastern Michigan to explore the efficacy of four research-based interactive classroom vocabulary enhancing methods. It is hypothesized that early childhood education students will demonstrate significant gains in vocabulary development with consistent adult/child interactions involving 1) literacy-rich classroom materials, 2) interactive literacy media/technology, 3) shared book reading experiences, and 4) socially situated vocabulary episodes. These interactive components used together within the classroom can promote rich vocabulary development for all young students.

Poster Presentation: Room 310, 2:15 p.m.

Caroline M. Peltz

Professors Peggy Alford-Trewn and Joe Bishop

The Relationship of Nel Noddings' Theory of Care and Lev Vygotsky's Sociocultural Theory to Mentoring in Nursing Education

The need to increase the amount of empirical research in the area of mentoring in nursing education, stimulated by the shortage of nurses who represent the changing diversity of the population in the United States, prompted this discussion. Schools of nursing are not retaining and graduating students who represent our society's population. Many graduates who are from diverse backgrounds are not successful on the first attempt on the national licensing exam to become a registered nurse. Nel Noddings' ethic of caring and Lev Vygotsky's sociocultural theory offer some insight and key concepts that could be successfully used in the development of a mentoring model in nursing education that would support the racial and cultural diversity of society to academic and professional success. The need for nurse educators to explore areas of research in mentoring is emphasized.

University Gallery, 2:45 p.m.

2010 Graduate Research Fair

Scott C. Roark

Professor Toni Stokes Jones

An Evaluation of the Impact of Student Response Systems on Student Achievement

Student participation is a key component to a student's academic success by engaging the student in cognitive activities, peer interaction, and teacher mentoring. However, encouraging students to participate is a difficult task because of feelings of embarrassment or lack of motivation. Furthermore, teachers may find it difficult to incorporate participatory activities in lessons because of time constraints and ineffective measurements of student learning. Still, participation is an important pedagogy for student learning, and integrating multi-media technology can encourage students to be active learners. This evaluation study tests whether using a student response system fosters participation in an effort to increase learning and academic scores by allowing students to engage in activities anonymously and take part in peer instruction, as well as giving the teacher the opportunity to modify instruction when learning gaps are evident.

University Gallery, 1:55 p.m.

Azibo K. Stevens

Professor Deborah Harmon

The Experiences of African American Males in Higher Education

African American males have made tremendous contributions to society yet are persistently vilified in the media. This is due, in part, to the African American male being one of the least studied and consequently least understood groups in the United States. We decided to conduct a qualitative research study of African American males in an educational setting to derive how these negative portrayals have impacted their experiences. This was done through individual interviews and a focus group.

University Gallery, 3:25 p.m.

Jason Windes

Professor Christopher Robbins

Collective Memory, National Narrative, and Truth(s) within Contexts

This presentation will briefly outline how national narratives formed by modern nation-states help to influence the collective memory of groups of people. An important part of defining a people of a nation is to also define what makes someone the "Other." Unfortunately, these intellectual boundaries have effects beyond the written word as different nations make claims to the same physical territories, as well as the truth. I examine these challenges using the example of Turkish and Armenian narratives of early 20th-century Anatolian history and argue that there can be no progress towards a new way forward until we begin to develop what Henry Giroux calls a critical pedagogy of representation in order to help learners understand the existence, genealogy, and contexts of multiple Truths.

University Gallery, 5:15 p.m.

Huayun Xu

Professor Joe Bishop and Professor Peggy Alford-Trewn

John Dewey, China, and Education for Democracy

This presentation focuses on John Dewey's philosophy and its relation to China's social movement and education. A brief introduction of Dewey's thoughts is conducted at first, moving from individual and community to democracy and the importance of education through inquiry for preparing children for democratic community life. After that, Dewey's trip to China in the early 20th century is presented, and its impact on Chinese social pioneers is discussed. Although Dewey's trip had little effect on the Chinese society during that time, the hope for democracy in modern China attracts further research interest. Dewey's philosophy is found to be close to Confucian ideas—both support inquiry as a method for the purpose of associated living. It is expected that the educators of today's China would reconsider the

commonalities between Dewey and Confucius and take postmodernist concern about social justice while approaching China's democracy in both of its education and social system.

Poster Presentation: Room 310, 2:15 p.m.

College of Health and Human Services

School of Health Promotion and Human Performance

Andy Burghardt

Professor Chris Herman

An Examination of the Mortality Rates of Professional Wrestlers

Over the past few years, much attention has been given to the occurrence of premature deaths in professional wrestling. The purpose of this study was to determine whether mortality rates for professional wrestlers were in fact inconsistent compared to the general population. A comprehensive review of age, BMI, cause of death (if applicable), and age at death (if applicable) of more than 650 male and female wrestlers who were active between 1984 and 2009 was completed. Using published mortality rates from the CDC, mortality rates of the general population were compared to the wrestlers by age, time period, and cause of death for both males and females.

Poster Presentation: Room 310, 4:00 p.m.

Brandon Cholette, Mary Wegzyn, Michael Miller, Adam Wohl, Travis Faulkner, Brett Wells

Professor Brenda Riemer

Eastern Michigan University Tennis Courts

As is the case with many other schools, Eastern Michigan University's recreational tennis courts have been removed due to various construction efforts on campus. Our group focused on a plan to rebuild tennis courts for both EMU and the community. Through our research, we discovered a proper location for the new facility. We also developed a site plan, budget, and corporate sponsorship opportunities. In addition to our efforts, we wanted to stress the importance of introducing a "green" revolution here at EMU. To date, our construction projects on campus have not mentioned many efforts to preserve our environment. Therefore, this initiative is intended to spark environmental awareness throughout the university and community.

Room 302, 4:55 p.m.

Ronald L. Gibbs

Professor Christine Karshin

Muscle Dysmorphia and Steroid Prevalence Among Adolescent Males

The purpose of this study will be to determine the prevalence of muscle dysmorphia among high school-aged male students, ages 14-18. Factors such as sport participation and the type of sport participation will be measured. A 48-item survey will be disseminated to participating male students at Lincoln High School in Ypsilanti, Michigan. Questions about body image, exercise frequency, sport participation, and steroid use will be asked. Descriptive statistics will include prevalence of muscle dysmorphia as well as frequencies and distributions of demographic data. Additional analyses will be conducted to identify differences in muscle dysmorphia between athletes and non-athletes. Chi-squared tests will be used to determine differences in frequencies among steroid use and sports, as well as differences in frequencies among steroid use and grade level and symptoms of muscle dysmorphia and type of sport played.

Room 302, 4:15 p.m.

Joshua P. Gordon

Professor Stephen J. McGregor

High Resolution MEMS Accelerometers to Compare Running Mechanics between Trained and Untrained Runners

This study investigates the use of accelerometers as a means to assess running mechanics. High Resolution Accelerometers allow us to see the acceleration in 3 different axes. These axes (Vertical, Anterior-posterior, and Medial-Lateral) are then used to compute the Euclidean resultant, giving us a means to approximate total acceleration, i.e. total movement in each incremental running stage. The values used for comparison came from the Root mean Square (RMS) of the final minute of each stage for each axis. Acceleration economy values were established using computed RMS of acceleration relative to speed. While subjects were completing the incremental treadmill test, expired gasses were collected and analyzed using a portable metabolic cart. The data recorded showed trained runners exhibited less acceleration in all axes and overall better acceleration economy. However, despite decreased acceleration values, energy expenditure was not different between groups, revealing there was no energy sparing mechanism displayed by the trained runners and an exact reason is not known.

Poster Presentation: Room 310, 4:00 p.m.

Tim Muth

Professor Stephen McGregor

Increased Oxidative Contribution to Multiple Wingates after 28 Days of Herbal Supplementation in Untrained Individuals

Reactive oxygen species (ROS) are highly reactive molecules that play several essential roles in cell signaling but also have the potential to cause severe damage to macro molecules (lipids and proteins), membranes, and various other tissues throughout the body. ROS are primarily produced in the mitochondria in association with the electron transport chain in times of abnormal fluctuation of oxygen tension outside (above or below) of resting levels. Anaerobic exercise has been shown to induce these fluctuations in oxygen tension and therefore provide the basis for increased ROS production. Greens+™ is a supplement shown to affect the function of mechanisms preventing ROS induced damage and increasing mitochondrial function. This study was designed to explore the claims of this product in a human model in a non-invasive fashion.

Room 302, 4:35 p.m.

School of Health Sciences

Brian A. Collins, Rebecca Aeschliman, Karen Toon, Janis Paul, Betsy Saylor, Nicole Kantola, and Marcie Kerr

Professor Gretchen Dahl Reeves

The Effect of an Integrated Play Group Program on Social Behavior in Children With Autism Spectrum Disorders

Children with autism spectrum disorders are less likely than their peers to share attention, imitate, and initiate social interactions with others, thus having a deleterious effect on their social skills. Play is a medium through which children learn about objects, cause-and-effect, social behaviors, and communication skills. The purpose of this research project is to examine the Integrated Play Group model as an intervention in a school setting to improve social behaviors in children with severe autism. Playgroups meet twice a week where three typical peers interact and model social play skills for two children with autism. Videotapes of play sessions are also reviewed to examine interactions among players in the play setting. This study could also be a blueprint for reproducibility in larger studies.

Poster Presentation: Room 310, 4:00 p.m.

Corrie D. Cox

Professor Anahita Mistry

Examining the Evidence for the Use of Meal Replacements as an Effective Means of Short-Term and Long-Term Weight Loss

Weight loss and maintenance is necessary in order to prevent or minimize weight-related risk factors of disease, abnormal biomarkers, and added physical stress to the human body. Effective weight loss strategies, such as meal replacements, are needed in the community for people to maintain weight loss over a long-term period. Meal replacements (MRPs) are a high quality alternative to whole food and provide enough macro/micro nutrients to obtain optimum nutrition. In addition, they provide an affordable, convenient structured meal plan and can still provide variety in a diet. Furthermore, they generate improvements in certain biomarkers of disease risk, provide a promising strategy for treating obese patients with type-2 diabetes, and have a high satisfaction rating. This review summarizes past and current evidence on the use of meal replacements as a weight loss/weight maintenance strategy.

Poster Presentation: Room 310, 4:00 p.m.

Janan Daniel

Professor Valerie Howells

Building The Group: Three African American Women's Journeys to Academia

This poster presentation will report the findings of an ethnographic study that examines the experiences of African American female professors in the occupational therapy field. The everyday lives of participants are explored as well as the micro and macro cultures in which they live and work.

Poster Presentation: Room 310, 4:00 p.m.

Charlene Jamula, Maria Clary, Denise Pijor, and Margaret Walsh

Professor Gretchen Dahl Reeves

Adolescent Project on Self-Injury

This study is being conducted to examine sensory processing, body awareness, and self-concept among 13- to 17-year-old girls with major mood/affective disorders. Three groups are being compared: a control group composed of typically developing adolescent girls and two experimental groups including adolescent girls seeking outpatient psychiatric services for a major mood/affective disorder. The first group consists of adolescents who self-mutilate, and the second consists of participants without a history of self-mutilating behavior. This research study utilizes four assessments: the Sensory Profile, the Piers-Harris 2, the Body Investment Scale, and the Draw a Person: Screening Procedure for Emotional Disturbance. A physiological test is also performed to evaluate heart rate, temperature, and respiratory rate of participants after being presented with various sensory stimuli.

Poster Presentation: Room 310, 4:00 p.m.

Thomas W. Litzler

Professor Richard Douglass

Solutions for Improving Medical Services in Rural and Outlying Areas

This paper examines the economic forces that distribute healthcare services in concentrated areas and leave other areas underserved. The analysis discusses the theories behind this disproportionate distribution and the effects on the respective markets. Then the author outlines a multi-phased solution, which is broken into three elements. First, increase the supply of professionals who practice in rural areas. Second, utilize the Patient Centered Medical Home model to engage patients to become more attentive to their own care, and do so in retail or customer friendly settings. Finally, increase the use of Telemedicine to both leverage improvements to patient coverage and care and to help physicians remain in touch with peers and major medical centers.

Room 302, 5:15 p.m.

2010 Graduate Research Fair

Mona Ottum

Professor Alice Jo Rainville

Approval of Rebiana, an Extract of Stevia, Transforms the Non-Caloric Sweetener Market

On December 17, 2008, the United States Food and Drug Administration issued two “no objection” letters for generally recognized as safe (GRAS) status for use of rebiana, a refined extraction of the stevia plant, in foods and beverages as a non-caloric sweetener. Rebiana is the first naturally occurring non-caloric sweetener to be approved for use as a food additive. In less than a year, this “natural” food additive has captured over 11% of the non-caloric tabletop market and is being commercialized at an astonishing rate by food industry powerhouses such as Cargill, Whole Earth, and McNeil Nutritionals. Since two thirds of adults in the United States are either overweight or obese and 13% have diabetes, this product provides an important option for consumers, which must be understood by dietitians and other health care professionals. This poster presents the history, chemistry, metabolism and safety research, and commercialization of rebiana.

Poster Presentation: Room 310, 4:00 p.m.

Julie K. Roy

Professor Anahita Mistry

The Nutritional Adequacy of a Gluten-Free Diet

Celiac disease is an autoimmune disease characterized by an immune response to the gliadin section found in the protein gluten. The inflammatory response causes intestinal destruction of the small intestine microvilli, where most dietary nutrients are absorbed. Therefore, the continuous ingestion of gluten may cause malabsorption of essential nutrients and cause further health complications. The only treatment for Celiac disease is patient compliance to a gluten-free diet. Research shows that the typical gluten-free diet is lacking folate, B vitamins, iron, calcium, fiber, and total grain servings and is excess in total and saturated fat. This presentation will examine the key studies on the gluten-free diet that evaluate nutritional adequacy. These studies have been reviewed to enhance dietitian and patient knowledge of the gluten-free diet and to inform food manufacturers of nutrients that are lacking in the typical gluten-free diet so their products can be reformulated or fortified.

Poster Presentation: Room 310, 4:00 p.m.

School of Nursing

Susan Karasinski

Professor Virginia Lan

Sepsis Cascade: Describing Nurses Knowledge at a Community Hospital

Patients with sepsis may progress quickly to severe sepsis and septic shock. Nurses at the bedside are in an optimal position for screening and quickly intervening to prevent sepsis cascade. However, nurses' knowledge of sepsis cascade has rarely been explored. The purpose of this study was to describe and explore nurses' knowledge of sepsis cascade in adult patients at a community hospital in southeastern Michigan. A questionnaire developed by Robson, Beavis, and Spittle (2007) regarding knowledge of sepsis cascade and early goal-directed therapy was administered to a convenience sample of 60 nurses from medical, surgical, oncology, telemetry, and intensive care units, rehabilitation units, and emergency departments. Results showed that the respondents were somewhat knowledgeable (range 33%-88%, mean = 68%, SD = 11%) regarding the sepsis cascade but clearly need further education regarding identification of septic patients, diagnostic tests, and treatment based on the Surviving Sepsis Campaign (SSC).

Room 104, 3:45 p.m.

Opal Patricia Lesse

Professors Joe Bishop and Mary Sue Marz

Application of Karl Marx and Jean Watson Theories

Homelessness has a pernicious association with a lack of education and ill health. Without education, one cannot obtain work that is sufficient to support adequate housing for themselves and their families. Being homeless, in turn, often results in children and adolescents receiving inadequate education, since residence is required for school registration. The homeless rarely seek health care, due to cost, lack of access, and shame felt from their living situation. Many minor illnesses therefore progress to major health issues that are treated inadequately. Social philosopher Karl Marx recognized this struggle for the worker in his writings about alienation and the governing societies within class struggles. Nursing theorist and educator Jean Watson recognized the need for caring and compassion within the homeless community for physical and psychological reasons. She saw that involvement of healthcare providers with homeless shelters and communities that support them could be the beginning of hope for the homeless. This paper integrates two theoretical perspectives into a concept of understanding of the homeless, their health issues, and their struggle to get out of the homeless downward spiral.

Poster Presentation: Room 310, 4:00 p.m.

Carmen A. Stokes

Professors Peggy Alford-Trewn and Joe Bishop

Applying Marxism and Critical Race Theory to the Phenomenon of African American Student Nurse Attrition

Attrition rates are as high as 85% for minority nursing students. This contributes to a workforce that is not representative of the current U.S. patient population, which may inevitably contribute to health disparities. The goal of this paper is to explore racism as a factor contributing to attrition from a Marxist and Critical Race Theory (CRT) perspective. Racial discrimination, specifically at school, often results in a variety of negative outcomes such as decreased academic achievement and ability, decreased sense of self (concept, efficacy, esteem), and higher rates of anger and depression. Racism is woven into the narrative quilt of the United States. It is impossible to comprehend the magnitude of educational disparities without recognizing its impact. By establishing an understanding of the multiplicity of attrition variables from a philosophical, political, and social perspective, nurse educators can begin to develop strategies that combat attrition and result in retention of African American nursing students.

Room 104, 3:25 p.m.

School of Social Work

Andrea A. Lentz and Lori Wasson

Professor Elvia Krajewski-Jaime

Washtenaw County Head Start's Annual Self-Assessment Validation System

The presenters will discuss findings in Washtenaw County Head Start's Annual Self Assessment Validation System. The purpose of this evaluation was twofold: (1) To assess compliance with performance standards by schools funded by the Washtenaw County Head Start Program, and (2) To assist in the planning of training and assistance needed by these schools to improve and strengthen the provision of services to families and children served by the Head Start Program. The assessment monitors the compliance of individual Head Start sites in covering a number of systems and services such as Nutritional Services, Disability Services, Family and Community Partners, Health and Safety, and Early Childhood Development. Data were collected utilizing interviews of staff and parents, classroom observations, and document reviews. After reviewing all material, the review team discusses areas of non-compliance with the performance standards. Each site has a 30-day window to develop a corrective action plan, which is submitted.

Room 350, 4:55 p.m.

2010 Graduate Research Fair

Morgan M. Williams and Kathy A. Stewart

Professor Russ Olwell

Girls' Leadership in Middle Colleges

This research aims to identify and address the social and emotional needs of middle college students. A needs assessment conducted for 109 students identified students' primary needs and interests in areas of Self-Defense, Stress Management/Emotional Support, Nutrition, and Depression. Development of an after-school leadership/support group is the first intervention strategy to address these needs. Additional programmatic enhancements and community and systems interventions will be employed.

Poster Presentation: Room 310, 2:15 p.m.

College of Technology

COT Doctorate

Sen Song

Professor Weidian Shen

Study and Development of a Technique to Evaluate Corrosion Resistance of Coated Magnesium Alloys

Magnesium alloys are increasingly used in the manufacturing industries due to their exceptional high ratio of strength over weight. However, further expansion of the applications is limited by their weakness in corrosion resistance. Generally, surfaces of the magnesium alloys need to be treated and coated to suppress the corrosion. Thus, the quick and correct evaluation of corrosion resistance of the coated magnesium alloys is critically important to the development of magnesium alloys and their applications. The study will use a relatively newly developed technique, AC/DC/AC, which takes much less testing time to achieve the result and has met success in evaluation of corrosion resistance of coated steel and aluminum alloys, to evaluate corrosion resistance of magnesium alloys, and compare the results with several traditional evaluation methods. The study will provide guidelines for development of a reliable and high-efficient technique used to evaluate corrosion resistance of coated magnesium alloys.

Room 104, 4:55 p.m.

School of Engineering Technology

Agnishikha Choudhuri

Professor Shinming Shyu

Using Collaborative Methods in Classroom Design

This project developed out of the 2009 Open Architecture Challenge: Classroom. The project required a classroom design to be developed in partnership with a school. Taking this on as an independent project, the design team collaborated with a local charter school, New Beginnings Academy in Ypsilanti, Michigan. The team had eight classroom sessions with 25 students of fourth and fifth grades. Over two and a half months, the students explored the ideas of spaces and their functions. They were also introduced to the concept of design and how design decisions could impact the quality of their learning environment. Through a series of drawing projects and classroom activities, the students identified and communicated their needs to the team. The final submission to the Open Architecture Challenge was an integration of their input and the design team's observations and research findings.

Kristin R. Godard

Professor Shinming Shyu

Building Automation Systems

Building automation systems (BAS) are key when implementing energy reduction strategies into the design of a facility. The use of BAS in a facility lowers energy use, increases the occupant's comfort, and also allows off-site building control. BAS systems include temperature control, lighting control, security control, and other mechanical systems. This study will explore the use of BAS in a facility, which

design strategies should be used to achieve optimal comfort, and cost and energy savings.

Room 301, 2:15 p.m.

Ayse Hancer

Professor Vijay Mannari

Formulation of Soy-based UV Coatings Using Acrylated Soy Methyl Esters as Reactive Diluents

Acrylated soy-methylesters (ASME) are renewable sources that are environmentally friendly and may reduce the impact of global warming. In this presentation, ASME will be evaluated as reactive diluents in free-radical UV-cure coatings. Replacement of conventional reactive diluents from standard UV cure formulation with ASME in 10, 25, 50, 100% will be studied, and mechanical properties such as (a) viscosity effect, (b) film properties, and (c) acrylic conversion will be evaluated. Two types of UV coatings will be studied: epoxy-based and polyurethane-based UV clear coatings.

Room 104, 4:15 p.m.

Brian S. Holman

Professor Shinming Shyu

Net Zero Homes

This presentation takes a look at what is needed to create a Net Zero home, exploring energy efficient technologies necessary for implementation. I will also discuss innovations related to power consumption, technologies, trends, and human behaviors that reflect typical usage and will look at current and future projects implementing Net Zero technologies. I will make some comparisons of sustainable technologies with building standards serving as references and background.

Poster Presentation: Room 310, 4:00 p.m.

Holly Llewellyn, Farahnaz Eslami, Yazeed Alghamdi, and Arpit Sharma

Professor Muhammad Ahmed

The Swiper

The swiper is a floor-cleaning device that dries the floor while mopping. This device alleviates several issues that businesses manage while caring for wet floors. The most common issue is the danger of slip and fall accidents to customers and employees that may occur while the floor is wet after cleaning. Our modern mop is based on an existing cleaning device that uses wet cloths to wash the floor. We have attached a dryer to blow in the direction of the floor after the wet cloth has been "swiped" across the floor.

Poster Presentation: Room 310, 4:00 p.m.

Karyn E. McKey

Professor Shinming Shyu

Children and Their Environment: How Housing Design Impacts Children's Well-being and Cognitive Development

A child's live-in and physical environment can shape his or her cognitive development, self-identity, self-esteem, and performance in academics. There are several factors of a child's live-in environment that can have a negative impact on a child's development. These factors include, but are not limited to, noise, crowding, housing quality, neighborhood quality, and toxicology of building materials. I am interested in exploring this topic and applying my findings to future projects.

Room 301, 1:15 p.m.

Kirapat Pakjamsai

Professor Jamil Baghdachi

High Temperature Resistant Coatings and Composites

Polymeric aromatic polyimides are characterized by their high temperature resistance, electrical conductivity and structural integrity but rather poor flexibility and film forming properties. Such polymers

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have found applications as a high-temperature adhesive in a number of aerospace and electronic end-uses. The aim of this project is to prepare hybrid organic-inorganic polyimide resins that can be formulated into high temperature coatings for thermal managements in thin films and composites. The hybrid organic-inorganic polymers were synthesized from 1, 2, 4, 5-Benzenetetracarboxylic anhydride (PMDA) and 4, 4'-Oxydianiline (ODA) via thermal imidization of amine-terminated polamic acid oligomers. The amine-functional imide oligomers were then reacted with octa (propylglycidyl ether) polyhedral oligomeric silsesquioxane, and silanol-functionality silicone resin to produce film-forming compounds that showed tenacious adhesion to metals. Modification with polydimethyl siloxane resulted in increased solubility and flexibility. Thermogravimetric analysis (TGA) showed that the hybrid polymers had excellent thermal stability with a 10% and 40% mass loss at 500 and 700 C.

Poster Presentation: Room 310, 4:00 p.m.

Jigarkumar B. Patel

Professor Vijay Mannari

Exploring Green Material Technology: Photo-curable Nano-composite Coatings from Soybean Oil

Organic-inorganic hybrid (OIH) nano-composite materials have become increasingly important due to their remarkably improved performance properties for a myriad of applications. In the recent years our ability to manipulate OIH structures at nano-scale has enabled us to design and fabricate materials with well-defined properties. Use of vegetable oils and their derivatives to fabricate advanced OIH materials may be a very useful route for sustainable development. This poster will present development and application of photo-curable materials derived from soybean oil and their applications in advanced UV-curable OIH coatings.

Poster Presentation: Room 310, 4:00 p.m.

Senthilkumar Rengasamy

Professor Vijay Mannari

Novel Bio-based Acrylate Oligomers for Sustainable Coatings' Applications

Bio-based coating materials have emerged as environmentally friendly alternatives to petrochemical-based ones due to their sustainability, lower carbon footprint and often lower cost. Acrylated vegetable oils and their derivatives are increasingly preferred for advanced photo-curable coatings due to a number of technical and commercial benefits. Novel families of vegetable oils-based acrylate-functional monomers/oligomers have been derived from epoxidized soybean oil and epoxidized soy-methyl ester, using 2-hydroxyethyl acrylate. This research poster will present our novel approach for synthesis of acrylated soy-monomers/oligomers with low viscosity and high acrylate content. Synthetic strategy and characterization of UV-cured coating systems based on these soy oligomers will be highlighted.

Poster Presentation: Room 310, 4:00 p.m.

Darlene D. Rosati

Professor Shinming Shyu

Attaining Urban Resilience: Can American Cities Escape a Blight Future?

One of the greatest dangers facing American cities today is the threat of collapse. Metropolitan areas must respond to their increasing carbon footprints, dependence on fossil fuels, and the impact created by the depletion of natural resources, leaving Americans with the need to discover innovative ways to change. The success of the resilient city depends upon its "built-in" systems that can adapt to changes, such as diversity of transport and land-use systems and multiple sources of renewable power. Benefits of the resilient city include greater physical and emotional well-being, ease of movement in higher density locations, walkable mixed-use communities that have accessible transit options, better food that is locally produced, efficiency of energy resources, affordability, access to natural environments, healthier

indoor environments, and a much greater awareness of local urban areas, enabling Americans to have a greater sense of place and identity.
Room 301, 3:25 p.m.

Aesha S. Shah

Professor Vijay Mannari

Study of Structure: Property Relationship in Polyurethane Coatings

Polyurethane (PU) is a unique polymer that offers great mechanical properties like elasticity, toughness, and durability responsible for its wide application in automobile, coating, upholstery, and construction areas. Mechanical properties of polyurethanes can be controlled by manipulation of chemical structure and morphology. This poster highlights our study of mechanical properties of a series of PU coatings as a function of a) polymer backbone structure and b) cross-linked density (XLD). Mechanical properties are characterized by Dynamic Mechanical Analysis (DMA), Thermo gravimetric analysis (TGA), bulk hardness, MEK rub test, and Abrasion resistance. Theoretical and experimental cross-linking densities (XLDs) have also been compared. This study provides useful model to tailor properties of PU coatings for specific end-use applications.

Poster Presentation: Room 310, 4:00 p.m.

Sara E. Sharpe

Professor Shinming Shyu

Solar Panels: A Residential Pro or Con?

As the "green" trend begins to catch on in our national community, one begins to wonder how evolving technology can be applied to residential structures. Furthermore, are these technologies actually worth their expense? Solar panels are just one of the technologies to generate energy for private or community structures. Although they promote the "green" movement and energy efficiency, is the technology ready for the residential scene? Numerous potential users are concerned about understanding the technology; others are precautionous because of the financial aspects. The amount of research needed to make an informed decision on the topic is time-consuming and important to the final decision. So just how does a homeowner decide which route to go? This presentation will serve as a brief introduction to solar panels and a discussion of how to decide if they can be applied to a structure, as well as the top three options for home owners, their financial aspects, and the technological needs of the instrument.

Room 301, 1:55 p.m.

Susan D. Sheffer

Professor Shinming Shyu

Sustainable Interior Environments

Sustainable interior environments can be established through the removal and reduction of known harmful building and finish materials in the indoor environment. Identification of the existing harmful materials and the recommended alteration procedures will improve the interior environment by achieving sustainability for the future. Maintenance scheduling and monitoring is also a necessary element for the sustainability of the improved indoor environment. Removal or established corrective measures can eliminate further contamination of the indoor environment for the sustainable interior. Improved environmental conditions for building interiors are achieved with sustainable material selections and procedures. Sustainable interior building improvements benefit the occupants residing in the structure and do not adversely impact the external environment.

Room 301, 3:05 p.m.

Jessica L. Sterling

Professor Shinming Shyu

Geothermal Systems

I will present new research in geothermal systems and explain how they are becoming a new trend in sustainability and energy efficiency. I will discuss the design of geothermal systems and how they can be used in residential settings. I will discuss the cost versus benefits of geothermal

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systems that are in the market and the design of the geothermal systems.

Room 301, 1:35 p.m.

Chunlai Sun

Professor Jamil Baghdachi

Design, Development, and Characterization of Self-Healing Coatings

The development of self-healing materials has the potential to significantly impact the coatings and related industries by enhancing coatings' performance and longevity. In an effort to mimic self-healing functions in living systems, here we report the development of polymeric coating systems that are stimuli responsive and possess the ability to self-heal. The most attractive feature of this system is that the factors that cause the most damage to the coating, such as humidity, exposure to high temperatures, and so on, are the same factors that initiate self-healing phenomenon. This property is unique since the extent of the healing is proportional to the magnitude of the damage, that is, release on demand. It was confirmed that the simulated natural aging or mechanical damage triggered the release of healing agents, repaired the damage, and enhanced overall coating properties. The healing performance was assessed through observation of improved key coating properties, enhanced mechanical and surface properties, and substantial improvement in corrosion resistance compared to standard polyurethane coatings.

Poster Presentation: Room 310, 4:00 p.m.

Scott R. Zavada

Professor Vijay Mannari

Novel Organic-Inorganic Hybrid Nano-Composite Coatings by UV-Initiated Sol-Gel Process

Organic-inorganic hybrid nano-composite coatings were produced using silane-functional urethane precursors and photoacid generators. Upon exposure to UV-light, the silanes hydrolyze and condense to form a cross-linked film. The effects of formulation and processing parameters on the various physical properties were determined by using a Design of Experiment process. This included determining the effects of combining the silanes with titanium isopropoxide. The coatings produced had a soft, elastomeric feel with low T_g and excellent adhesion to the polycarbonate substrate. This method of using UV-exposure to force the in-situ silane hydrolysis and condensation is an alternate to traditional sol-gel processing, where aqueous solutions of silanes are allowed to hydrolyze prior to application.

Room 104, 4:35 p.m.

School of Technology Studies

Alireza Aghamohammadi

Professor Samir Tout

Software Insecurity Distribution through Social Networking

Virtually connecting with family members, friends, and colleagues in cyberspace has become a way of communication and collaboration among many Internet users. Social interaction is not a new concept because social network analysis has been used in social science disciplines and even in the medical field. More recently, social networking has become a topic in computer science and information security fields. Many researchers have focused on cyber networking and information security to address some of the challenges, but there are still many risks associated with the use of social networking sites. One of the main risks of cyber networking is software insecurity distribution, which simply means that software insecurities can propagate through social networks of a computer user. This paper focuses on various techniques and methods used by hackers that cause software insecurity distribution through social networking.

Room 301, 5:15 p.m.

Joe F. Bauer

Professor Carol Haddad

Theory to Practice: How One Technology Management Student Implemented a Final Project in "The Real World"

This presentation discusses a technology implementation plan created as a final project in one of the presenter's technology management courses with the intention of implementing it at his workplace, an IT department at a different major midwestern university. The plan was based on Haddad's strategic partnership approach, and key elements were utilized in the final draft and during the implementation of the technology. The core philosophy of the strategic partnership approach is joint planning with all parties who will be impacted by the technology's implementation. This approach resulted in some surprisingly successful results. Theory and practice are tightly linked, and it is important that the theories of technology management taught in a classroom are practical and relevant to today's working environment. In an ideal world, a technology implementation plan created in an academic setting would easily transition to the workplace. This presentation follows the twists and turns the document took from classroom through to implementation on the job.

Room 301, 2:45 p.m.

Prasad S. Bhatkhande

Professor Subhas Ghosh

Phase Change Materials in Textiles

The process of going from one physical state to another, such as a solid to a liquid and vice versa, is called phase change. Textiles that have automatic acclimatizing properties during their phase change are called Phase Change Materials (PCM). Thermal energy storage (TES) is the temporary storage of high or lower temperature energy for later use. Phase change materials possess the ability to change their state with a certain temperature range. Textiles containing PCM react immediately with changes in environmental temperature and the temperature in different areas of the body. When a rise in temperature occurs, the PCM microcapsules react by absorbing heat and storing this energy in the liquefied phase change material. When the temperature falls again, the microcapsules release this stored heat energy, and the phase change material solidifies again. Using PCM can significantly enhance the thermal insulation properties of the cold protective clothing materials.

Room 302, 1:15 p.m.

Louis S. Daher

Professor Samir Tout

Information Security in the Small Business Environment

In today's interconnected digital business environment, even micro businesses face rapidly changing Information Assurance needs. A continually evolving information environment creates ongoing technical challenges. Organizations have to constantly make new choices about the best practices to mitigate current and emerging information security vulnerabilities. Small businesses (SBs) have even more challenging decisions to make, because they do not have the resources or resilience to withstand computer security risks and often do not even have either the expertise or the resources to identify and reduce those risks. SBs need simple, straightforward strategies to identify and mitigate common information assurance risks. This research will examine what information, tools, or services SBs may find readily available to help them address some Information Assurance needs and will focus on a limited number of security topics that SBs need to consider, by addressing five common vulnerabilities and threats: malicious code, stolen/lost laptops or mobile devices, spear phishing, unsecured wireless networks, and finally insider threats. Small businesses will be able to identify basic Information Assurance needs from which to build a solid Information Security platform.

Room 301, 4:55 p.m.

2010 Graduate Research Fair

Diana L. Hough

Professor Susan Gregory

Restaurant Triple Bottom Line: Will Customers Pay Green for Green?

This research will investigate the perceptions of guests to green sustainability practices in the restaurant industry to determine if guests value those practices, thus increasing the organizational Triple Bottom Line. The term *triple bottom line* has been used to refer to an organization adopting performance standards and practices that take into account its economic, social, and environmental activities (Dwyer, 2005; Elkington, 1997). A structured survey using a Likert-type 5-point scale with statements relating to Level of Importance, Statements of Green Practices, and Demographics was distributed to guests to fill out while dining. The survey instrument was sent to four different upscale casual restaurants, part of the same restaurant group, in three different Midwestern states. The usable study sample was 501. Correlation and regression analysis was used to answer the questions and describe the strength of the relationship of guest perceptions and attitudes concerning cost sharing of restaurant green practices.

Poster Presentation: Room 310, 4:00 p.m.

Vikas P. Joshi

Professor Subhas Ghosh

Development of a Unique Flame-retardant Textile Fabric Using Spiro Cyclic Pentaerythritol Diphosphoryl Chloride Chemistry

Most fire-retardant chemistry developed earlier exhibits toxicity problems and is easily removed during laundering. This study aims to develop nontoxic flame-retardant fabric using spiro cyclic pentaerythritol diphosphoryl chloride (SPDPC) as a flame-retardant component applied on the textile substrate. A feature of SPDPC is the six-member cyclic phosphate structure, which contributes to its high yield during synthesis and its general stability apart from its tendency to form char when heated. Synthesis of SPDPC was done in lab reaction kettle by reacting pentaerythritol and phosphoryl chloride. Further reaction of SPDPC with cotton was carried out in dimethyl formamide (DMF) at various mass ratios. Treated cotton will be tested for its flame-retardant and tensile strength properties. This will produce a fire-retardant fabric without any toxic substances. This will benefit many communities as well as combat army personnel.

Room 302, 1:55 p.m.

Anthony J. Layton

Professor Denise Pilato

Hot Water

Steam laws, regulations, and standards were slowly adopted in the United States between 1816 and 1915, but the rate at which these were adopted was not fast enough to prevent serious steam accidents. This paper examines various steam traction (tractor) companies and asks how steam traction manufacturers promote the safe use of their equipment. To do this, primary sources will be examined. Trade catalogs dating back to 1893 and other steam tractor ephemera will be analyzed. The purpose of this presentation is to identify ways in which consumers were educated about their steam tractors.

Room 301, 4:15 p.m.

Hui-Ying Lin

Professor Susan Gregory

Green Standards State by State: Shades of Green

As the world changes due to human activities, more governments, businesses, and individuals are willing to take actions to save the planet. One such action is to go green, and this has become a hot topic in the hospitality industry. This research introduced green concepts and information about national green hospitality organizations, green certification programs state by state, and simple actions that hospitality organizations can implement in going green. The research also indicated the benefits a certified corporation may receive and encouraged operators to continue to seek new green ideas.

Room 302, 2:15 p.m.

Dorothy K. McAllen

Professor Phillip Schmitz

The Role of Knowledge Transference in the Sustainability of Technological Growth

A large portion of today's technology is based on an event in American history that set the course for not only our level of technological achievements but also the processes used to advance and implement new technologies. This event was the defeat of Nazi Germany at the end of World War II, the immigration of more than 1600 German scientists to America after 1945, and the seizure of almost 30,000 German patents, copyrights, trademarks, and patent applications as wartime reparations. America began to evolve into a nation of innovations – buying creative ideas and outsourcing our research, designs, and manufacturing. Yet today, only sixty-five years later, America finds itself dependent on foreign technologies, and American industries must increasingly purchase inventions and technologies from foreign sources to stay competitive globally. This research examines the role embedded knowledge played in those industries that benefited directly from the seized World War II technology.

Room 301, 4:35 p.m.

Natalie R. Reynolds

Professor Subhas Ghosh

An Essential Addition to Your Apparel: Essential Oils

This study focuses on the application and retention of aromatherapy essential oils onto a fabric surface for the purpose of improving the lifestyle of the consumer. The essential oils are applied to the fabric surface subsequent to a treatment of sol-gel. The sol-gel treatment creates small cavities wherein the essential oils can be held and released over a period of time. The effectiveness of the product will be tested analytically as well as by observation. This study will also incorporate a literature review of recent similar studies and give a strong foundation for other applications in addition to fragrance.

Room 302, 1:35 p.m.

2010 Graduate Research Fair

Oral Presenters by Location and Time

Session I: 1:15-2:30 p.m.

Room 104

1. **Ran Li**
Chemistry
2. **Mahalakshmi Kotichukkala**
Chemistry
3. **Sarika Parmathy**
Chemistry
4. **David Sitar**
Chemistry

Room 204

1. **Nayda Carmona**
Special Education
2. **Kay Stremler**
World Languages
3. **Akiko Harada**
World Languages
4. **Donna Lehman**
History and Philosophy

Room 208

1. **Lauren Roberts**
English Language and Literature
2. **Urmila Bilgi**
English Language and Literature
3. **Angela Languiness**
English Language and Literature
4. **Sandra Beals**
English Language and Literature

Room 222

1. **S. Hettiarachchi Gamage**
English Language and Literature
2. **Mfon Udoinyan**
English Language and Literature
3. **Hunter Lockwood**
English Language and Literature

4. **Susanne Vejdemo**
English Language and Literature

Room 300

1. **Lisa Storc**
Communication, Media, and Theatre Arts
2. **Brian Golden**
Communication, Media, and Theatre Arts
3. **Sarah Mark and Max Wartel**
Communication, Media, and Theatre Arts

4. **Sarah Smarch**
Communication, Media, and Theatre Arts

Room 301

1. **Karyn McKey**
School of Engineering Technology
2. **Jessica Sterling**
School of Engineering Technology
3. **Sara Sharpe**
School of Engineering Technology
4. **Kristin Godard**
School of Engineering Technology

Room 302

1. **Prasad Bhatkhande**
School of Technology Studies
2. **Natalie Reynolds**
School of Technology Studies
3. **Vikas Joshi**
School of Technology Studies
4. **Hui-Ying Lin**
School of Technology Studies

Room 304

1. **James Miller**
Geography and Geology

2. **Amanda Tremba and Brenna Moloney**
Geography and Geology

3. **Adam Cook, Kirsten Freiberger, and Derek Spinei**
Geography and Geology

4. **Xining Yang**
Geography and Geology

Room 320

1. **Martin Somber**
Art

2. **Dawn Schell**
Music and Dance

3. **Ivan Ivanov**
Music and Dance

4. **Rachel Zirk**
Music and Dance

Room 330

1. **Jessica Hale**
Leadership and Counseling

2. **Mary Osborne**
Leadership and Counseling

3. **T. Ammachathram**
Leadership and Counseling

4. **Michael Parise**
Leadership and Counseling

Room 350

1. **Edward Davis**
Political Science

2. **JoAnn Catalfio**
Political Science

3. **Camille Gillespie**
Political Science

4. **Laura Shue**
Political Science

2010 Graduate Research Fair

Room 352

1. **Christopher R. D. Roberts, Thomas A. Schmitt, Andrew Luchner, and Eamonn Arble**
Psychology
2. **Ana K. Tindall, Melissa D. Swartzmiller, and Kristine Cramer**
Psychology

3. **Daniel Jones**
Psychology

4. **Eric Miller**
Psychology

University Gallery

1. **Namita Wasan**
Marketing

2. **Mohit Bindra**
Marketing

3. **Scott Roark**
Teacher Education

4. **Randall Cooper**
Teacher Education

Session II: 2:45-4:00 p.m.

Room 104

1. **Greg Norwood**
Biology
2. **Catherine Wiesner**
Biology
3. **Carmen Stokes**
Nursing
4. **Susan Karasinski**
Nursing

Room 204

1. **Tetiana Grytsenko**
World Languages
2. **Judith Sachs**
World Languages
3. **Bernard Nkuyubwatsi**
World Languages
4. **Kimberly Kulhanek**
World Languages

Room 208

1. **Adam Mitchell**
English Language and Literature
2. **Kelli Massa**
English Language and Literature
3. **Caitlin Conn**
English Language and Literature
4. **Joseph Lieberman**
English Language and Literature

Room 222

1. **Kelly Waldschmidt**
English Language and Literature
2. **Jessica Kander**
English Language and Literature
3. **Abdulhamit Arvas**
English Language and Literature
4. **Brad Romans**
English Language and Literature

Room 300

1. **Diviin Huff**
Communication, Media, and Theatre Arts
2. **Emily Patton**
Communication, Media, and Theatre Arts
3. **Kenton Jones**
Communication, Media, and Theatre Arts
4. **Callie McKee and Sandra Baughman**
Communication, Media, and Theatre Arts

Room 301

1. **Joe Bauer**
Technology Studies
2. **Susan Sheffer**
Engineering Technology
3. **Darlene Rosati**
Engineering Technology

Room 302

1. **Nicole Carter**
Women's and Gender Studies
2. **Erika Behrman**
Women's and Gender Studies
3. **Deborah Leonard**
Women's and Gender Studies
4. **MaryAnn Kozlowski**
Women's and Gender Studies

Room 304

1. **Stephen Holowicki**
Geography and Geology
2. **Yiman Song**
Geography and Geology
3. **Rachel Foshag**
History and Philosophy
4. **Kristina Lininger**
History and Philosophy

Room 320

1. **Bridget Sekuterski**
History and Philosophy
2. **Carly Bower**
History and Philosophy
3. **Dennis Caldwell**
History and Philosophy
4. **Julie Salo**
History and Philosophy

2010 Graduate Research Fair

Room 330

1. **Carin Barber**
Leadership and Counseling
2. **Paul Salah**
Leadership and Counseling
3. **Jimmy Dolson**
Leadership and Counseling
4. **Christine Woods**
Leadership and Counseling

Room 350

1. **Ryan Helms**
Sociology, Anthropology, and Criminology

2. **Michele Kuzila**
Sociology, Anthropology, and Criminology

3. **Jessica Kruger**
Sociology, Anthropology, and Criminology

4. **Maya Barak**
Sociology, Anthropology, and Criminology

Room 352

1. **Meiqin Lu**
Accounting

2. **Matthew Hammond**
Accounting

3. **Byron E. Heads, Puyu Liu, and John Markus**
Computer Science

4. **Xiaoxia Lu**
Economics

University Gallery

1. **Caroline Peltz**
Teacher Education

2. **Imandeep Grewal**
Teacher Education

3. **Azibo Stevens**
Teacher Education

4. **Regina George**
Teacher Education

Session III: 4:15-5:30 p.m.

Room 104

1. **Ayse Hancer**
Engineering Technology
2. **Scott Zavada**
Engineering Technology
3. **Sen Song**
Engineering Technology
4. **Robert Jacobs**
Physics and Astronomy

Room 204

1. **Celeste Bogan**
Mathematics
2. **Sun Li**
Mathematics
3. **Xiejuan Wu**
Mathematics

Room 208

1. **Natalie Tomlin**
English Language and Literature
2. **Kristen Barnes**
English Language and Literature
3. **Bridget Pizzino**
English Language and Literature

4. **Pamela McCombs**
English Language and Literature

Room 222

1. **Jesse Eagle**
English Language and Literature
2. **Robert Stevens**
English Language and Literature
3. **Kelly Bowron**
English Language and Literature

4. **Maren Benn**
World Languages

Room 300

1. **Adam Sheaffer**
Communication, Media, and Theatre Arts
2. **Thomas B. Simon**
Communication, Media, and Theatre Arts
3. **Michell Reynolds**
Women's and Gender Studies
4. **Taylor Hayden**
Women's and Gender Studies

Room 301

1. **Anthony Layton**
Technology Studies
2. **Dorothy McAllen**
Technology Studies
3. **Louis Daher**
Technology Studies
4. **A. Aghamohammad**
Technology Studies

Room 302

1. **Ronald Gibbs**
Health Promotion and Human Performance
2. **Tim Muth**
Health Promotion and Human Performance
3. **Brandon Cholette, Mary Wegzyn, Michael Miller, Adam Wohl, Travis Faulkner, and Brett Wells**
Health Promotion and Human Performance
4. **Thomas Litzler**
Health Sciences

2010 Graduate Research Fair

Room 304

1. **Lorinda Rausch**
History and Philosophy
2. **Anna Pierre**
History and Philosophy
3. **Christian Goos**
History and Philosophy
4. **Charlye Morley**
History and Philosophy
5. **Jordan Carr**
History and Philosophy

Room 320

1. **Cherida Boyles**
Management
2. **Deborah Jablonski**
Management

3. **Erika Koski**
Management

4. **Betsy Behn**
Management

Room 330

1. **Ramona Meraz**
Leadership and Counseling
2. **Tamara Stevenson**
Leadership and Counseling
3. **Charles Muwonge**
Leadership and Counseling
4. **Amanda Schramski**
Special Education

Room 350

1. **Megan Johnson**
Political Science

2. **Asif Rohela**
Political Science

3. **Andrea Lentz and Lori Wasson**
Social Work

4. **Ashley Wiedemann**
Psychology

University Gallery

1. **Jennifer Conrad**
Teacher Education

2. **Megan Greene**
Teacher Education

3. **Serhiy Kovalchuk**
Teacher Education

4. **Jason Windes**
Teacher Education

Poster Presenters in Room 310 by Time

Session I: 2:15-3:30 p.m.

Tiffany Abrego
Psychology

Ashley Boys
Psychology

Jillian Carey, Teresa Lynch, Kevin Alschuler, and Michael Mendelow
Psychology

Le'Shay Dandridge
Leadership and Counseling

Christine Deacons
Leadership and Counseling
Lace Fang
World Languages

Amanda Fezzey
Psychology

Kenneth Frierson
Leadership and Counseling

Katherine Girard
Leadership and Counseling

Inna Gorlova
Leadership and Counseling
Bethany Gourley
Psychology

Melissa Ann Gratinger
Leadership and Counseling
Katherine Guyon
Psychology

Sarah Hayes
Geography and Geology/Historic Preservation

Dan Hopper
World Languages

Valentina Ivezaj
Psychology

Sierra Iwanicki
Psychology

Ann Holland
Special Education
Andrea Kiss, Chelsea Dean, Wei Hsiao, and Yung Chen
Psychology

Vanessa Lancaster
Teacher Education

Joshua Madding
Special Education

Janet Mayotte
Teacher Education

Tamekia McCauley
Leadership and Counseling

Sheryl McGriff
Leadership and Counseling

Aimee Moore and Susan Bowyer
Psychology

Natalie Morris and Alfred Mansour
Psychology

David Nassar
English Language and Literature

Krista Osborne
World Languages

Amy Olszewski, Seth Warschausky, Pamela Dixon Thomas
Psychology

Kristy Pearson, Alicia Apperson, Joseph Moore, and Amanda Geraci
Leadership and Counseling

2010 Graduate Research Fair

Matthew Poinsett
Psychology

Brittin Pollack
Leadership and Counseling

**Gregory Pouliot, Deron Wirt, and
Reino Bruner**
Psychology

Stacey Pratt
Leadership and Counseling

Summar Reslan
Psychology

**Aditi Sengupta, Allison Boone,
Saroya Jamal, and Catherine
Lenaway**
Leadership and Counseling

Rachel Sienko
Psychology

**Morgan Williams and Kathy
Stewart**
Social Work

Huayun Xu
Teacher Education

Session II: **4:00-5:15 p.m.**

Sakina Alem
Biology

David L. Bavers
Biology

Charles Borener
Physics

Andy Burghardt
Health Promotion and Human
Performance

Michael Camilleri
Biology

A. Choudhuri
Engineering Technology

**Brian Collins, Rebecca Aeschliman,
Karen Toon, Janis Paul, Betsy
Saylor, Nicole Kantola, and Marcie
Kerr**
Health Sciences

Corrie Cox
Health Sciences

Janan Daniel
Health Sciences

Nadine El-Ayache
Chemistry

Joshua Gordon
Health Promotion and Human
Performance

Brian Holman
Technology Studies

Diana Hough
Technology Studies

Rochelle Hughes
Biology

**Charlene Jamula, Maria Clary,
Denise Pijor, and Margaret Walsh**
Health Sciences

Reshma Kankanala
Chemistry

**Lauren Koch, Kristi Budwit, Davra
Campbell, Supriya Davuluri, Rajesh
Kiran Kare, and Francis Leong**
Biology

Opal Lesse
Nursing

**Holly Llewellyn, Farahnaz Eslami,
Yazeed Alghamdi, and Arpit
Sharma**
Technology Studies

Robert Loepp
Biology

Rajani Maddi
Chemistry

Mace Mattieson
Chemistry

JoLisa McDay
Chemistry

Kristie Mitchell
Biology

Mona Ottum
Health Sciences

Kiripat Pakjamsai
Engineering Technology

Jigarkumar Patel
Engineering Technology

Senthilkumar Rengasamy
Engineering Technology

Julie Roy
Health Sciences

Saedeh Sepehri
Biology

Keshav Prasad Sah and John Reid
Biology

Karen Sanders and Hasina Saraha
Chemistry

Aesha Shah
Engineering Technology
**Prannda Sharma, Adnan Syed,
Danielle Rosen, and Christine Mella**
Biology

Chunlai Sun
Engineering Technology

Cody Williams
Biology

**Melissa Zochowski, Divya Patel, and
Stephanie R. Peterman**
Management

2010 Graduate Research Fair

Thank you!

The Graduate School would like to thank the many individuals, organizations, and departments whose efforts have made this event a success.

Special appreciation goes to:

Administration

Jon Margerum-Leys, Graduate School
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Faculty Judges

JoAnn Aebersold	World Languages	Linda Isenhour	Management
Muhammad Ahmed	School of Engineering Technology	Elvia Krajewski-Jaime	Social Work
Kristine Ajrouch	Sociology, Anthropology, and Criminology	Beth Kubitskey	Physics
Don Bennion	Teacher Education	Dean Lauterbach	Psychology
Jeff Bernstein	Political Science	George Liepa	Dietetics and Human Nutrition
Joe Bishop	Teacher Education	Aaron Liepman	Biology
Tim Brewer	Chemistry	Jon Margerum-Leys	Teacher Education
Sally Burton Hoyle	Special Education	Nelson Maylone	Teacher Education
Rob Carpenter	Teacher Education	Russ Merz	Marketing
Anne Casper	Biology	Deanna Mihaly	World Languages
Daniel Clemans	Biology	Anahita Mistry	Dietetics and Human Nutrition
John Curran	Mathematics	Tony Moreno	Health Promotion and Human Performance
Elisabeth Daeumer	English Language and Literature	MeeAe Nam	Music and Dance
Janet Fisher	Special Education	Joe Ohren	Political Science
Amy Flanagan Johnson	Chemistry	Kathlyn Parker	Special Education
Subhas Ghosh	Technology Studies	Loreena Parks	Special Education
Xiaoxu Han	Mathematics	Genevieve Peden	World Languages
Ana Claudia Harten	Special Education	Claudia Petrescu	Political Science
Deborah Heyl-Clegg	Chemistry	Pat Pokay	Teacher Education

2010 Graduate Research Fair

Jeff Popko	World Languages	Wendy Wang	World Languages
Robert Rhodes	Orthotics and Prosthetics	Marilyn Wedenoja	Social Work
Brenda Riemer	Health Promotion and Human Performance	Michael Williams	Nursing
Andrew Ross	Mathematics	Diana Wong	Management
Donna Selman	Sociology, Anthropology, and Criminology	Mehmet Yaya	Economics
Sam Shen	Communication, Media, and Theatre Arts		

Room Moderators

Jessica Alexander	Communication, Media, and Theatre Arts
David Anderson	Leadership and Counseling
Gregg Barak	Sociology, Anthropology, and Criminology
Peter Bednekoff	Biology
Jeffrey Bernstein	Political Science
Dan Bonenberger	Geography and Geology
Ella Burton	Leadership and Counseling
Robert Carpenter	Teacher Education
Elisabeth Daumer	English Language and Literature
Christine Day	Management
Ronald Delph	History and Philosophy
Joseph Engwenyu	History and Philosophy
Hedeel Evans	Chemistry
Subhas Ghosh	Technology Studies
Sarah Ginsberg	Special Education
Carol Haddad	Technology Studies
Steve Huprich	Psychology
Zafar Khan	Accounting
Paul Leighton	Women's and Gender Studies
Kimberly Cole Luevano	Music and Dance
Stephen McGregor	Health Promotion and Human Performance
Elisabeth Morgan	World Languages
Sheila Most	English Language and Literature
Sandy Norton	English Language and Literature
Dennis Patrick	Communication, Media, and Theatre Arts
Denise Pilato	Technology Studies
Patricia Pokay	Teacher Education
T. Daniel Seely	English Language and Literature
Hugh Semple	Geography and Geology
Tanweer Shapla	Mathematics
Weidian Shen	Physics and Astronomy
Shinming Shyu	Engineering Technology
Lee Stille	Communication, Media, and Theatre Arts
William Tucker	English Language and Literature
Wendy Wang	World Languages
Annette Wannamaker	English Language and Literature
Patricia Williams-Boyd	Teacher Education

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