

3-24-2008

Graduate Research Fair Program, 2008

EMU Graduate School
Eastern Michigan University

Follow this and additional works at: http://commons.emich.edu/grf_prog

Recommended Citation

EMU Graduate School, "Graduate Research Fair Program, 2008" (2008). *Graduate Research Fair Programs*. Paper 10.
http://commons.emich.edu/grf_prog/10

This Article is brought to you for free and open access by the University Archives at DigitalCommons@EMU. It has been accepted for inclusion in Graduate Research Fair Programs by an authorized administrator of DigitalCommons@EMU. For more information, please contact lib-ir@emich.edu.



10th
Annual

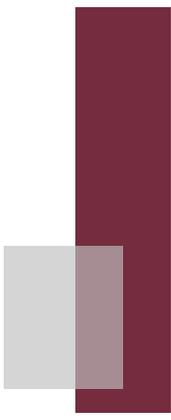
GRADUATE

Research Fair 2008

March 24, 2008

TIFF (LZW) decompressor
are needed to see this picture.

**Program Schedule and
Presenter Abstracts**



Welcome to the Graduate Research Fair

For ten years, this event has showcased the brightest and best of EMU's graduate student scholarly and creative work. In so doing, it has highlighted faculty effort to mentor scholars in a wide variety of academic and professional fields. The results of this effort and the diverse graduate programming offered to EMU's 4,800 students is a joy to behold each year in March.

We are proud that graduate student research kicks off the Week of Excellence, the anniversary of EMU's founding in 1849. This year, more than 180 students will share oral and poster presentations in the format of a professional conference with concurrent sessions and awards for outstanding papers.

A great many people deserve our thanks. First, of course, we want to thank the presenters for bravely disseminating their discovery of new knowledge. We also want to thank the faculty sponsors for shepherding the work, assisting with presentation preparation, and attending to support the effort. We want to thank the faculty room moderators for keeping the sessions on time, the faculty and administrators who judged the submitted papers for award consideration, and the donors who financially contributed to the success of this event. We would like to thank Graduate Council members, whose ideas and guidance help shape the event. I personally would like to thank the Graduate School staff, who work very hard every day, and especially in February and March, to make this annual event a success. And I would like to thank you, the attendees, for spending all or part of the day to applaud and encourage graduate education at EMU. Your participation enables you to speak to the quality of our graduate programs and encourage new students to expand their academic dreams by exploring an advanced degree.

Please join us at 5:30 p.m. in the auditorium for the Sigma Xi speaker, Dr. Jeanette Adams, Chemist at the Library of Congress. We will learn how mass spectrometry is used to address current and past mysteries.

Enjoy the day!

Deb de Laski-Smith, PhD
Dean of the Graduate School (I)

Table of Contents

Index to Presenter Abstracts3

College of Arts and Sciences

 Department of Art5

 Department of Biology5

 Department of Chemistry.....7

 Department of Communication and Theatre Arts.....9

 Department of Economics.....10

 Department of English Language and Literature10

 Department of Foreign Languages and Bilingual Studies14

 Department of Geography and Geology15

 Department of History and Philosophy.....17

 Department of Mathematics.....18

 Department of Music and Dance19

 Department of Physics and Astronomy19

 Department of Political Science.....19

 Department of Psychology.....20

 Department of Sociology, Anthropology, and Criminology24

College of Business

 Department of Accounting and Finance25

 Department of Management25

College of Education

 Department of Leadership and Counseling.....26

 Department of Special Education28

 Department of Teacher Education29

College of Health and Human Services

 School of Health Promotion and Human Performance.....30

 School of Health Sciences31

 School of Social Work.....33

College of Technology

 School of Technology Studies34

 School of Engineering Technology34

Division of Academic Affairs

 Bioinformatics.....36

Oral presenters by location and time37

Poster presenters by time41

Thank you42

Index to Presenter Abstracts

A

Abbas, Andrea 6, 41
 Adams, Kristin 10, 38
 Adams, Catherine..... 10, 37
 Adams, Marcus 17, 38
 Alschuler, Kevin 20, 41
 Amin, Sarjak 34, 40
 Ammachathram, Thyagarajan 26, 40
 Angelella, Nancy 22, 41
 Aris, Tracy 15, 39
 Authement, Michelle..... 31, 41

B

Baiocchi, Tegan 15, 41
 Baldwin, Conan 10, 38
 Barber, Carin..... 26, 38
 Bavers, Kylene..... 21, 41
 Bennett, John 5, 41
 Blough, Christopher..... 19, 39
 Boggs, Abby 16, 41
 Bolster, Theresa 27, 41
 Bradley, Brenda 31, 41
 Bravender, Marlena 27, 41
 Bricklin, Rachel 5, 37
 Brown, Kari 17, 39
 Bryant, Nicole..... 10, 38
 Burwell, Vivian..... 5, 41
 Busa, Michael 30, 38
 Butcher, Jeffrey..... 10, 38

C

Carey, Jillian 21, 41
 Chizek, Lisa 10, 37
 Choudhuri, Agnishikha 35, 39
 Christensen, Eric 12, 37
 Chuang, Ya-ju 14, 38
 Clark de Castillo, Rebecca 26, 39
 Clayton, Melissa 31, 41
 Collings, Amy 22, 41
 Conner, Argenis 33, 37
 Cook, Leah..... 5, 41
 Courage, Anna 28, 40
 Cross, Karen 19, 40
 Crowe, Christopher..... 35, 38
 Czajka, Kasia 25, 37

D

Datta, Indrani
 Dixit, Ninad 35, 41
 DuBois, Rachel 11, 40

E

Earls, Lauren..... 21, 39
 Ehrlich, Monika 11, 40
 England, Dustin 35, 38
 Erdodi, Laszlo 21, 41
 Eussen, Julia 11, 37

F

Fedel, Frank.....30, 39
 Fernando, Roshini 7, 37
 Fontana, Carrie 25, 37
 Fortunato, Leanna 22, 37
 Frank, Kurt 25, 40

G

Goletz, Sarah 11, 40
 Gonzalez-Allen, Maria 29, 39
 Goodhue, Jennifer 11, 40
 Gorlova, Inna..... 27, 38
 Gorney, Hermione 12, 38
 Gray, Andrew 7, 41
 Gu, Hong 35, 41
 Guenther, Kylee 19, 40
 Gutkowski, Kathleen 32, 41
 Gwynn-Powell, Amber 36, 37

H

Habrecht, Elizabeth 5, 41
 Hailey, Latasha 17, 40
 Hale, Jessica 27, 41
 Hammig, Sara 30, 40
 Hammond, Bruce 20, 38
 Hardman, Rob 17, 39
 Henshaw, Erin 22, 37
 Hensley, Chiharu 27, 38
 Hodge, Suzanne 24, 41
 Holewinski, Terrie 32, 41
 Hull, Michael 30, 37

I

Idziak, Betsy..... 31, 41
 Islam, Nasreen 22, 38
 Ivezaj, Valentina..... 22, 41

J

Jacobson, Daniel..... 23, 41
 Job, Jacob 6, 37
 Jobst, Joshua 19, 39
 Joegiono, Linda 18, 37
 Johnson, Nicole 26, 37
 Jones, Jamie..... 12, 39
 Jones, Douglas..... 23, 40
 Joshi, Ravi 36, 39

K

Kakde, Vinod 36, 37
 Karsies, Danielle 32, 40
 Kaufman, Melissa..... 31, 41
 Kerr, Ryan 12, 40
 Klepac, Matthew 25, 39
 Klingler, Caleb 17, 40
 Kluse, Christopher..... 34, 38
 Koenigsknecht, Dace..... 16, 38
 Kolarik, Renae..... 32, 41
 Kowalewski, Scott..... 12, 37
 Krempa, Geoffrey..... 18, 40
 Kurva, Balakrishna 8, 41

L

Laird, Heather 20, 38
 Lenk, Steve 36, 40
 Leslie, Susan 32, 41
 Leu, Wan-En (Joyce) 28, 41
 Leventhal, Christina 32, 40
 Levitt-Phillips, Hava 12, 40
 Lindquist, Jacob 30, 41
 Lu, Yi-Hsin 9, 39
 Lynch, Theresa 20, 41

M

Malburg, Alison 13, 39
 McFarlane, James 20, 38
 McGrath, Kimberly 20, 39
 McIntyre, Allison 32, 41
 McKey, Karyn 36, 41
 McLean, Julie 31, 38
 Mhaskar, Meenal 8, 37
 Molloy, Wendy 18, 39
 Molugu, Vasumathi 8, 41
 Morales, Hannah 10, 37
 Mosser-Desnoyer, Lisa 29, 37
 Munzer, Olivia 6, 37
 Muscato, Angela 32, 41
 Muwonge, Charles 28, 39

N

Naebeck, Ruth 25, 37
 Nagolu, Chakravarthi 19, 40
 Nietrzeba, Jessica 31, 38

O

Osher, Kristopher 33, 41
 Otto, Emily 13, 41

P

Pancoe, Paul 31, 38
 Parker, Daniel 13, 37
 Parker, J. Robert 23, 37
 Paul, Jose 6, 41
 Pawluk, Lesley 23, 41
 Planck, John 29, 39
 Ponnaluri, Sreelatha 6, 41
 Potts, Carolyn 29, 39
 Pouliot, Gregory 23, 41
 Purkiss, Kayti 13, 39

Q

Quinteros, Mercedes 6, 41

R

Ramaraju, Swathi 8, 41
 Ramm-Christensen, Laura 15, 41
 Ratz, Ian 31, 38

Ravelo-McKinney, Elizabeth 15, 38
 Ricciardo, Polly 15, 41
 Rice, Pierre 34, 37
 Rinck, Jacki 15, 38
 Russell, Emily 13, 38
 Rutherford, Adrienne 31, 41

S

Sage, Meriah 9, 37
 Saunders-Scott, David 22, 41
 Schaefer, Marie 33, 37
 Schmidt, Rae Lynn 33, 41
 Sen, Rukmini 33, 41
 Slaughter, Maurice 5, 41
 Smith, Theresa 14, 40
 Soebbing, Sarah 14, 40
 Soltis, Lee Ann 18, 37
 Ssozi, William 28, 38
 Stein, Allison 18, 37
 Stein, Alexis 7, 41
 Stuglin, Steven 9, 39
 Stumpf, Joshua 7, 39
 Sutherland, Emily 25, 37
 Sutton, Julia 20, 40

T

TenEyck, Emily 33, 41
 Thomas, Kim 25, 37
 Thorey, Anke 9, 37
 Torsell, Rebecca 16, 39
 Trapp, Elizabeth 34, 37
 Tuluoglu, Fatmagul 9, 37

V

VanderKlok, Kimberly 31, 41
 Van Veen, Leslie 16, 41
 Velissaris, Nicholas 24, 41

W

Walton, David 18, 40
 Waugh-Fleischmann, Christine 5, 39
 Weidemann, Ashley 22, 41
 Weigel, Richard 28, 41
 Wice, Sarah 24, 37
 Williams, Kate 14, 39
 Wilson, Peter 7, 41
 Winckles, Andrew 14, 39
 Woltmann, Jeannette 29, 40
 Woods, Kathryn 24, 39

Y

Yadav, Sangeeta 34, 38

Z

Zaiat, Mariam 33, 41
 Zhou, Jingjing 25, 40
 Zhu, Ke 19, 40

College of Arts and Sciences

Department of Art

Christine Waugh-Fleischmann
Professor Carole Pawloski

Adinkra Symbology and Art Education Implications for Exploring and Developing Meaning in Personal Context

The researcher explored the making of a textile called Adinkra cloth produced by the Ashanti people of Ghana, West Africa, and worn on specific occasions. The cloth is strip-woven, dyed, and printed with stamped images. The characters depicted on the stamps portray specific messages about the wearer of the garment. The symbols create a codification that could become interesting and informative lesson plans in the researcher's field, K-12 art education. Exploration of these symbols, meanings, and designs, as well as student development of personally meaningful symbology, could later be translated and transformed for use with elementary, middle, or high school art students by implementing the integration and appreciation of another culture and adapting it creatively to explore and include personal meaning.
Room 301, 2:45 p.m.

Department of Biology

Rachel Bricklin
Professor Allen Kurta

Factors Affecting Daily Energy Expenditures in a Peripheral Population of Evening Bats (*Nycticeius humeralis*)

All endothermic animals must balance the energetic costs and benefits of maintaining a constant, high body temperature (T_b). When these costs are small, maintaining a high T_b is worthwhile, but when these costs are high, some endotherms employ other strategies. The evening bat (*Nycticeius humeralis*) has the ability to lower its T_b to conserve energy (torpor). I used temperature-sensitive radio-transmitters to measure the T_b 's of tree-roosting evening bats at the northern edge of their range in Palmyra Township, Lenawee Co., MI. Heat is proportional to temperature, so T_b can be used to determine heat production. Since ambient temperature, rainfall, food abundance, age, reproductive condition, and body mass have all been shown to cause T_b fluctuations in bats, I looked at how these factors correlated with torpor use in this population. I found that a combination of factors affected energy expenditure. As global temperatures rise and wildlife move farther north, physiological data on peripheral populations are critical to understanding how species might be affected by climate change.
Room 300, 9:00 a.m.

Leah J. Cook
Professor Steven N. Francoeur

Effects of Road Salt on Photosynthetic and Enzyme Activity of Stream Biofilms

The application of salt on roads is used to reduce hazardous driving conditions but can pollute nearby aquatic ecosystems. To determine the effects of road salt on stream periphyton, we collected biofilms and stream water and manipulated sodium chloride concentrations (up to 30000 μ S) in the laboratory. Photosynthetic activity was monitored by pulse amplitude modulated fluorometry, and fluorogenic substrates were used to measure leucine aminopeptidase, β -glucosidase, and phosphatase activities. Extra cellular enzyme activities were unaffected by salinity. Elevated salinity rapidly reduced photosynthetic activity. The magnitude of this reduction was dependent on dissolved salt concentrations, and photosynthetic activity recovered quickly after biofilms were placed with salt-free stream water. These results indicate that short-term salt exposure has strong negative effects on autotrophic microbiota and that these negative effects are reversible if salt stress is removed.
Room 310, 11:00 a.m.

Elizabeth Habrecht
John Bennett
Vivian Burwell
Maurice Slaughter
Professors Daniel Clemans and Steven Francoeur

A Survey of Microbial Diversity and the Effect of Eutrophication at Loesell and Paint Creek Wetlands

Wetlands play critical roles in the proper functioning of biogeochemical cycles in our watersheds. Microorganisms such as bacteria and fungi are fundamentally important in driving wetland nutrient cycles. In this study, we examined the microbial diversity of Loesell and Paint Creek wetlands and the effect of varying nutrient levels using culture-independent methods. To determine the dynamics of the microbial community, the bacterial 16S rRNA gene and the eukaryotic 18S rRNA gene were isolated from wetland biofilm samples. These genes were cloned and amplified in preparation for DNA sequencing. Sequences were identified using a variety of bioinformatics techniques and resources. The results of the experiment suggested that the microbial communities of the two wetlands were different. Further, the results suggested that experimental manipulation of nutrient levels affected the microbial composition of the wetland biofilms. Graduate students Sreelatha Ponnaluri, Jose Paul, Andrea Abbas, and Mercedes Quinteros were co-investigators on this project.
Room 310, 11:00 a.m.

Jacob Job

Professor Peter Bednekoff

The Effects of Winter Weather on Carolina Wren Populations in Different Habitats throughout Washtenaw County

Carolina wren (*Thryothorus ludovicianus*) populations have historically reflected the severity of the previous year's winter, especially at the northern edges of their range. Their populations showed marked increases into New England and the Great Lake states until a string of harsh winters in the 1970s decimated their populations north of the Ohio River. Here, I used Christmas Bird Count (CBC) data from 1960-present, combined with weather data from the same time period, to show the relationship between Carolina wren detection and yearly snowfall in Ann Arbor, Michigan. Years with high snow-inch days were correlated with detection decreases the following CBC. I also looked at the effects of habitat type on the Carolina wren population in Washtenaw County with the use of 21 transects in three different habitats: rural, urban, and urban-park. Rural transects had significantly fewer wrens found than the other two, presumably due to temperature/snow differences.
Room 300, 9:20 a.m.

Olivia Munzer

Professor Allen Kurta

Roost Fidelity of Evening Bats (*Nycticeius humeralis*) in Southeastern Michigan

Roosts provide bats with protection from environmental conditions and predators and a site for pup-rearing, hibernation/torpor, and social interaction; therefore, species and individuals may differ in their selection of roosts based upon physiological or behavioral requirements. Bats may switch to a more suitable roost or exhibit intra- and inter-annual roost fidelity as physiological and environmental conditions change. We conducted a two-year study investigating roost switching and roost fidelity of the evening bat (*Nycticeius humeralis*). In Michigan, there is only a single colony of evening bats known, and it is the northernmost colony. During the two-year study, we captured 75 evening bats and radiotracked 46. We confirmed 29 roosts during the study, 13 of which were used in both years. Individual bats exhibited intra-year fidelity. Although understanding the dynamics of roost fidelity and switching is beneficial for management purposes, few studies have investigated the intra- and inter-year roost fidelity of bats.
Room 300, 9:40 a.m.

Sreelatha Ponnaluri

Jose Paul

Andrea Abbas

Professors Daniel Clemans and Gary Huffnagle
(University of Michigan)

Colonization of Germfree Mice with Probiotic Bacteria to Create a Mouse Model for the Human Gastrointestinal Tract

The Altered Shadler Flora (ASF) was made to colonize germ-free mice with microbes that were known to provide the host with essential nutrients and protection from pathogens. The purpose of using the ASF strains was to create a working model of the human gastrointestinal (GI) tract microbiota. With more research coming in, eighteen other key microbes in the GI tract have come into view. The main goal of this study was to incorporate these new microbes with the ASF organisms into the GI tract of germ-free mice to create a defined microbiota for research purposes. Molecular techniques were performed on the GI tract organs of colonized mice and were compared to culture data. Culture data showed that the microbiota demonstrated high levels of colonization, then leveled off after time. This study provides a model of the GI tract and the molecular tools and information needed to measure the microbiota after manipulation.
Room 310, 2:15 p.m.

Mercedes Tatiana Quinteros

Professor Marianne Laporte

Design of a Microscopy-based Screening Method for Stomatal Development Mutant Genes in *Arabidopsis Thaliana*

Stomata are microscopic pores found in the epidermis of the aerial parts of plants. They have a critical role as regulators of gas exchange and water loss between the plant and the environment. The study of stomatal development has great significance, since stomata can regulate water loss, and the control of stomatal behavior offers a good approach for the creation of transgenic plants that use water more efficiently, for future improvement of crops. In addition, stomata represent a good cell model for research of cell patterning, differentiation, and development processes. In this study, a microscopy-based screening method for *Arabidopsis* plants was created to identify mutants and characterize unknown gene functions involved in stomatal development. The results could present a new contribution to the area of functional genomics and to the understanding of stomatal development in *Arabidopsis*.
Room 310, 9:30 a.m.

Alexis Stein

Professor Aaron Liepman

Determining the Function of *Arabidopsis* and *Oryza Sativa* CSL Genes through Heterologous Expression in the Moss *Physcomitrella Patens*

Plant cell walls are dynamic structures composed of cellulose, hemicelluloses, pectins, and proteins that provide structural support and are barriers against pathogens and mechanical injury. Cell walls hold great promise as a source of renewable biomass for the production of biofuels. Much additional research is needed to determine how several cell wall components are biosynthesized before this valuable source of renewable biomass can be fully utilized. The cellulose synthase-like (*CSL*) genes are a diverse family of genes in plants considered possible candidates that encode enzymes, which biosynthesize plant cell wall polysaccharides. This study investigates this hypothesis by expressing *Arabidopsis CSLB*, *CSLE*, and *CSLG* genes and *Oryza sativa* (rice) *CSLH* and *CSLF* genes in *Physcomitrella patens*. The expression of *CSLB*, *CSLE*, *CSLG*, and *CSLH* proteins has been detected by immunoblot analysis. Future projects will focus on determining whether the expression of the *CSL* proteins has altered the cell wall composition of *P. patens*.

Room 310, 9:30 a.m.

Joshua Stumpf

Professor Allen Kurta

A Comparison of Roost Selection between Three Syntopic Species of *Myotis*

Northern long-eared bats (*Myotis septentrionalis*), Indiana bats (*M. sodalis*), and little brown bats (*M. lucifugus*) are uncommon species in the Great Lakes region of North America and coexist at few locations. During the summers of 2006-2007, we radio-tracked northern long-eared bats, Indiana bats, and little brown bats to roost structures in southeast Michigan, in an area that contains one of the largest remaining patches of contiguous forest in an area dominated by agriculture. We then used a recursive partitioning algorithm to examine the differences between the roosts used by the forest roosting species and randomly selected trees within the forest. Indiana bats tended to use trees in later stages of decay with canopies that were further removed from the surrounding forest than randomly selected trees. Northern long-eared bats tended to be more plastic in their roosting preferences than Indiana bats, utilizing a wider range of trees in various stages of decay. Little brown bats roosted exclusively in man-made structures (buildings, bridges, etc.).

Room 330, 2:45 p.m.

Peter Wilson

Professor Cara Shillington

Developmental and Interspecies Differences in Water Retention in Tarantulas

Tarantulas are a widespread and diverse group of arthropods that inhabit a wide variety of climates. This study evaluates the differences in dehydration rates across five species of tarantula, from climates ranging from tropical rain forest to desert/scrubland. Data were also collected comparing water retention among differing age groups within each species. Fully fed and hydrated spiders were placed into a temperature- and light-controlled environmental chamber, and fully dehydrated oxygen was introduced to the chamber. The metabolic rate and absolute humidity of the outgoing gas was collected, and a mass-independent rate of dehydration was derived. Descriptive and inferential statistics were used to determine any significant differences in the results.

Room 310, 11:00 a.m.

Department of Chemistry

Roshini Fernando

Professor Hedeel Guy Evans

Probing the Mechanism of Activation of Dihydroorotase by Aspartate Transcarbamoylase in *Aquifex Aeolicus*

Aquifex aeolicus is an ancient, hyperthermophilic eubacteria that thrives at temperatures close to the boiling point of water. The enzymes that catalyze *de novo* pyrimidine biosynthesis are associated in multifunctional complexes. The activity of one of these enzymes, dihydroorotase, is specifically and entirely dependent on the formation of a complex with aspartate transcarbamoylase, another pathway enzyme. To shed light on the mechanism of dihydroorotase activation by aspartate transcarbamoylase, several techniques were used including site-directed mutagenesis, gel filtration, affinity chromatography and enzyme kinetics. We (1) identify critical residues in a loop that normally occludes the dihydroorotase active site and is displaced in the presence of aspartate transcarbamoylase; (2) show that the enzyme requires one zinc for catalysis; and (3) identify hydrophobic regions necessary for protein-protein interactions.

Room 330, 9:00 a.m.

Andrew William Gray

Professor Deborah Heyl-Clegg

Synthesis and Dye Leakage Assay of Human Islet Amyloid Polypeptide 10-19 with Inhibition by Insulin 13-18

Islet amylin polypeptide (IAPP) is co-secreted along with insulin in the pancreatic islets of Langerhans. During type 2 diabetes mellitus, human IAPP (hIAPP) fibrillizes to form amyloid deposits that are found post-

mortem in more than 95% of people with the disease. However, the actual cause of the disease may be cytotoxicity of the mechanism that forms those amyloid deposits. The self-aggregation of IAPP to form amyloid is inhibited by insulin due to the aromatic Π -stacking at the site where IAPP fibrilizes with itself and binds with insulin. Knowing this, the binding site of hIAPP residues was synthesized, as was the binding site of insulin residues. The ability of hIAPP 10-19 to disrupt membranes was tested using a fluorescent dye leakage assay with the peptide in increasing concentrations to determine the concentration dependence of membrane permeability. Insulin 13-18 was also tested for inhibitory activity.
Room 310, 2:15 p.m.

Balakrishna Kurva

Professor Deborah Heyl-Clegg

Synthesis and Purification of HLVEALYLV, an Insulin-based Inhibitor for Human Islet Amyloid Polypeptide (hIAPP)

Human Islet Amyloid Polypeptide (hIAPP) plays an important role in the pathogenic development of type II diabetes. Small, soluble oligomer forms seem to be more cytotoxic to β cells than mature fibers of hIAPP. In order to understand the mechanism of cytotoxicity of hIAPP to β cells and block its effect, a potential peptide inhibitor was designed. The region of insulin that binds to hIAPP to inhibit its aggregation is HLVEAYLVC. A truncated peptide analog, HLVEALYLV, was synthesized using the double coupling solid phase technique. Dye leakage studies were done in a model membrane system in order to test for inhibitory activity.

Room 310, 2:15 p.m.

Meenal Mhaskar

Professor Hedeel Guy Evans

Protein-Protein Interactions between the Multifunctional Protein CAD and Protein Phosphatase 1

Uncontrolled cell proliferation, a hallmark of cancer, is invariably associated with CAD activation, a multifunctional protein that catalyzes the first three reactions in *de novo* pyrimidine biosynthesis. CAD is up-regulated by Erk1/2 MAP kinase phosphorylation at Thr456 just prior to the S phase of the cell cycle. Subsequent to S phase, CAD Thr456 is dephosphorylated by protein phosphatase 1 (PP1), resulting in down regulation of the pathway. Interestingly, a consensus sequence for PP1 targeting proteins is located immediately adjacent to Thr456, suggesting that the binding of PP1 might mask the MAPK phosphorylation site. Conversely, phosphorylation of Thr456 might impair the binding of PP1. Peptides were synthesized corresponding to residues 444-460 of CAD that encompass both the PP1 consensus sequence and Thr456, as well as two

mutant peptides in which Thr456 was replaced with Ala or Asp. We show diminished binding between PP1 and the Asp mutant, which mimics phosphorylated CAD.

Room 330, 9:20 a.m.

Vasumathi Molugu

Professor Steven Pernecky

Determination of Microbial Metabolites in Rat Cecal Fluid by GC-MS

The purpose of this project is to develop a gas chromatography-mass spectrometry assay to quantify lactic acid, butyric acid, and other short-chain fatty acids secreted from microbial populations in the gastrointestinal tract of rats treated with a defined "diet" of microbial organisms. Variations in the levels of these metabolites and/or the microorganisms that produce them have been linked with microbial infection and allergic airway disease. Early studies to characterize the bis-TMS derivative of lactate using BSTFA were successful, and lactate was identified in germ-free animals and in germ-free animals that had been treated by gavage with a selected group of microorganisms. Butyric acid standard was well-resolved in the chromatogram, but the mass spectrum was not clear because the solvent used to support the reaction made difficult the characterization of the mass spectrum of the TMS derivative of butyrate. Derivatization of butyrate with 2,3,4,5,6-pentafluorobenzyl bromide in acetonitrile in the presence of N,N-Diisopropylethylamine solved this problem. By using this alternative method, we can unequivocally identify and quantify butyric acid by GC-MS.

Room 310, 11:00 a.m.

Swathi Ramaraju

Professor Deborah Heyl-Clegg

Pentapeptide Inhibitors of Human Islet Amyloid Polypeptide as Potential Treatment for Type II Diabetes

The main aim of this work is to develop a good inhibitor for the human islet amyloid polypeptide (hIAPP) protein, which is responsible for the destruction of pancreatic beta cells Type II diabetes. The insulin fragment, HLVEALYLV, makes contact with the hIAPP protein and inhibits its aggregation. The internal pentapeptide sequence ALYLV, which shows good inhibitory properties, was prepared by using single coupling solid phase peptide synthesis. In some analogs, alterations were made to the Y residue, which is thought to interact with hIAPP by pi-stacking interactions. The activity of the inhibitors on model membranes in the presence of hIAPP analog was studied by measuring dye leakage from vesicles using fluorescence spectroscopy.

Room 310, 11:00 a.m.

Fatmagul Tuluoglu

Professor Harriet A. Lindsay

Synthesis of the Bicyclic Core of Pyrrolizidine and Indolizidine Alkaloids

Pyrrolizidine and indolizidine alkaloids are classes of bicyclic natural products whose members have many interesting biological properties. In order to test the structural basis for this activity, we are developing a synthetic strategy that allows for variation of structural features. Specifically, our recent efforts focus on a strategy to form one of the five-membered rings present in these compounds. This strategy, along with similar plans for forming a six-membered ring, will be discussed.

Room 330, 9:40 a.m.

Department of Communication and Theatre Arts

Yi-Hsin Lu

Professor Patricia Zimmer

Crossing the Border of Culture and Heart: Using Theatre as a Medium to Explore Social Issues and Bring Cultural Perspective

Folktales contain the treasure of a society and its culture. Theatre is a great medium for evoking empathy and stimulating thought. Both folktales and theatre also have pedagogical value because they teach not through overt didacticism but through liberating the imagination and providing emotional release. The theatre project "Mountains, Monsters, Sea: Legends of Taiwan" utilizes the frame of story theatre and techniques of interactive theatre to dramatize Taiwanese folktales for American elementary students. The presenter will describe how the play combines folktales, games, music, and songs to both introduce Taiwanese culture and to explore themes such as bullying and kindness. Strategies discovered for directing American actors in the presentation of diverse cultures will be shared. This project offers a new model for working with, discovering, appreciating, and reflecting upon multicultural experience.

Room 301, 1:45 p.m.

Meriah Sage

Professor Jessica Alexander

Exploring Persona, Impacting Literacy

The presenter explores persona (speaker) and how it impacts performance of literature and subsequent comprehension of the text. Can orally interpreting persona impact literacy? The literature performed is not a full account of an event but rather a carefully crafted excerpt that punctuates the presenter's interpretation of the piece's persona. Through performance snapshots of the Newbery Award-

winning novel *The Witch of Blackbird Pond*, the presenter examines our understanding of character, events, and choices as seen through our own varying social and cultural understanding and personal objectives.

Room 301, 9:40 a.m.

Steven Stuglin

Professor Jeannette Kindred

Conscious Tactics for Effectiveness: Comparison of Socialization Strategies in Practice

Entry into organizations involves passage through and engagement in a socialization act, process, or program. These programs can be carefully planned in attempts to achieve certain organization goals with newcomers. To this end, better understanding of the impacts of certain strategies is vital to the informed intentions of socialization planning. Through a two-part methodology, this study dissects two organizations in terms of environmental, temporal, interactional, and literary socialization elements. Each aspect is rated in terms of Van Maanen dyadic continuums. The study then incorporates an ACS and OID instrument to gauge the effectiveness of these socialization programs in terms of affective commitment and organizational identification. Finally the study draws links between different observed socialization strategies and their impact on overall socialization effectiveness.

Room 301, 2:05 p.m.

Anke Thorey

Professor Ray Quiel

The Space between Aristotle and the Bush Administration: Considering the Impact of "Goodwill" on International Relations

Focusing on the Bush Administration's post-September 11 rhetoric, this paper investigates the impact this rhetoric had on the relationship between President Bush and the international community. Of particular interest is the importance of *eunoia* (goodwill) as an aspect of the speaker's *ethos* (credibility). Unlike competence (good sense) and trustworthiness (good moral character), goodwill has not found its way into the modern understanding of Aristotle's concept of *ethos*. A content analysis sheds light on the role the establishment of goodwill played in the overall loss of the Bush Administration's credibility and provides the basis to argue that *eunoia* should be treated as a major component of *ethos* as envisioned by Aristotle.

Room 301, 10:00 a.m.

Department of Economics

Conan Baldwin

Professor David Crary

The Consumption of Durable and Nondurable Goods

The researcher examined the consumption function using regression analysis and descriptive statistics. The study focuses mainly on the consumption of durable and nondurable goods, with these two relatively broad consumption categories ultimately being further disaggregated into seven relatively narrow categories. In addition to the inclusion of income as a determinant of consumption, the possible effects of the unemployment rate, the real interest rate, and inflation on consumption are examined. Also, the effect of the relative price of a particular durable or nondurable good on the consumption of that good is subject to particular attention in the project.

Room 352, 11:30 a.m.

Department of English Language and Literature

Catherine Adams

Hannah Morales

Professor T. Daniel Seely

Child Language Acquisition of Resultative Adjectives in English

Our project investigates the use and comprehension of resultative adjectives in first language acquisition. Resultatives are a well-documented class of adjectives in English that do not attribute inherent properties to a noun but characterize a change of properties. Thus, in the sentence *Bill painted the wall red*, *the wall* became red as a result of Bill's painting. Existing research has devoted a disproportionate amount of attention to the theoretical syntactic and semantic properties of resultative constructions while virtually ignoring them in acquisition studies. Our project has been developed using current psycholinguistic experimental protocols to test resultative adjective comprehension in children aged 3-5 years. The results of our research provide evidence to help characterize certain fundamental similarities and differences between fully formed and developing grammars.

Room 352, 9:00 a.m.

Kristin Adams

Professor Charles Cunningham

“Curtains or Dynamite?”: Socialism in Jack London's *The Star Rover*

Jack London's 1915 novel *The Star Rover* tells the story of professor turned prisoner, Darrell Standing, who goes from a member of the intellectual bourgeois to working class martyr. This presentation focuses on

the prison system, which becomes a metaphor for class conflict. In examining the relationship between the controlling and abusive prison authorities and the solidarity and struggles of the San Quentin inmates, the novel examines the relationship between capitalist hierarchy and the working class. The novel suggests that while socialism has been thus far thwarted by capitalism, the spirit of socialism will triumph.

Room 352, 10:30 a.m.

Nicole Bryant

Professor Elisabeth Daümer

“Isn't that fragile?”: Communication and Change in Muriel Rukeyser's “Waterlily Fire”

Muriel Rukeyser's “Waterlily Fire” functions as a physical entity, bringing the reader into dialogue with the feminine poetic speaker. The poem has a physical body that deconstructs and rebuilds in tandem with its contextual meaning. This changing poetic body is frequently aligned with the speaker's physical body, and her growing knowledge of that body creates a bridge, enabling her to communicate with others. As the speaker realizes herself as woman, she comes to recognize the world as a fluid entity empowered by communication.

Room 301, 10:30 a.m.

Jeffrey Butcher

Professor Christine Neufeld

Abjection in *Heart of Darkness*

This paper applies Julia Kristeva's theory of abjection to Joseph Conrad's *Heart of Darkness*. Abjection occurs only when exclusion from the self takes place, creating the binary *the self/the other*. The paper analyzes the character of Marlow, showing how excessive exposure to the phenomenon of abjection causes one to become desensitized to it; thus one loses the natural human qualities that *the self* has innately inherited. Through Conrad's frame narrative, we witness Marlow lose a sense of separation from *the other* and, as a result, become *the other*—crossing the imaginary border and transitioning from *the subject* into *the object* of abjection.

Room 301, 11:30 a.m.

Lisa Chizek

Professor Doug Baker

Constructivist Learning Through Wikis in the Writing Classroom

The researcher investigated the use of wikis in writing classrooms, exploring both composition and creative writing environments. Observations, notes, and reflections of the researcher's classrooms were used in support of literature to analyze wiki's growing place in the teaching of writing. In particular, the research focused on wikis as collaborative tools in the teaching

of writing, closely linking wikis to constructivist pedagogy. The researcher further contextualized the use of wikis in writing classrooms by highlighting diverse ways wikis could be utilized to enhance student writing and support community.

Room 352, 10:00 a.m.

Rachel DuBois

Professor Annette Wannamaker

Harry Potter and Magical Multiculturalism: Using J.K. Rowling's Phenomenal Series as a Guide for Classroom Discussions of Diversity

Having sold more than 325 million copies, the *Harry Potter* series is an undeniable cultural force in children's literature. While the books are often read as straightforward fantasy-adventure tales, there are myriad opportunities for educators to use the texts to facilitate discussions of diversity, specifically in relation to gender, class, and race. This presentation examines the arguments for and against readings of the Harry Potter series as multicultural texts and presents multiple suggestions for using the books at the elementary and secondary levels.

Room 304, 3:35 p.m.

Monika Ehrlich

Professor Craig Dionne

Passion Breeds Destruction: A Feminist, Revisionist Reading of the Macbeth Marriage

This presentation will offer a reading of the Macbeth marriage that diverges from those dominant in contemporary critical analysis. Working on the premise that the Macbeths are Shakespeare's "most thoroughly married couple," I will read the Macbeth union as a marriage of passion, and Shakespeare's play as a tragedy of passion. Here, *both* Macbeth and his Lady are destroyed by their mutual engagement in a marriage of the heart, as opposed to the more common interpretive trend that reads Macbeth as *the* tragic victim of his wife's ambition. My analysis will draw upon feminist and psychoanalytic criticism of Shakespeare's work, elements of the playwright's biography, and Elizabethan theories of marriage, such as those represented in premodern domestic handbooks and commonplace books.

Room 352, 3:35 p.m.

Julia N. Eussen

Professor Nancy Allen

How Language Affects the Perception of—and Indirectly Defines the Success of—Public Policy

The student researched how the implementation of China's "One-Child Policy" has been presented in the media since implementation in 1979. The primary sources of information were documentaries made for the Public Broadcasting System (PBS) in the United

States and for the British Broadcasting Company (BBC) in the United Kingdom. Additional news sources were articles from the New York Times (1980 – present day) and articles archived on the BBC website. The student took into consideration how language has changed (or not) over time in presentation of this topic and what influences the presentation may have on readers.

Room 352, 9:40 a.m.

Sarah Goletz

Professor Annette Wannamaker

Maternity as Magic: The Search for the Mother in *The Secret Garden*

The speaker examines maternal imagery in *The Secret Garden* using the theory that the feminine *Bildungsroman* features a quest for identity driven by the search for the mother. Using Mary Lennox as the example, the speaker illustrates that the growth from child into young woman with an established identity is dependent upon the holistic transformative powers of several maternal figures. The speaker also addresses the need for the female protagonist to complete her development into young woman through the demonstration of her own, newly acquired, transformative maternal powers upon a surrogate child.

Room 304, 3:15 p.m.

Jennifer Goodhue

Professor Annette Wannamaker

Blurring Genres: Bringing the Feminine Hero into Focus

The researcher explored genre blurring in children's literature as a deliberate act to create new spaces for the existence of the feminine hero. Feminine heroes are a necessary, evolving counterbalance to prevailing hero-tale narratives, which are defined by Margery Hourihan in her book *Deconstructing the Hero* (1997) as those centering around white middle- or upper-class males. As the main example for the thesis, the researcher examined the character of Candy Quackenbush, protagonist of Clive Barker's *Abarat* series, whose bravery, valor, and nontraditional behavior blur the lines demarcating traditional roles for adolescent female characters in fantasy literature. The author argues that Barker, well known as a fiction horror writer for adults, has blurred genres to create a series that blends fantasy, *Bildungsroman*, detective stories, and feminist and Marxist social critiques to provide fertile ground for the birth and success of the feminine hero as an evolving convention in children's and fantasy literature.

Room 352, 3:15 p.m.

Hermione Miles Gorney

Professor Heather Neff

The Clothes Line

This project offers a space of metamorphosis, one of ordinary activity and meditation, connecting us to our elders and the elements. At *The Clothes Line*, water and air change the physical look and feel of material. Cloths have poems written on them, some in water-soluble and some in indelible ink. Intermittent actions of water and air change words and images they convey. The project consists of: *Cloths* of different texture and shape, a used piece of *Clothes line*, a water reservoir *Base* covered with material to suggest ground, *Piping and Sprinkler* to simulate rain, supports of “*Tree*” and *Post, Recirculation pump* to move water, *Fan* to blow air across line, *Timers* to regulate pump and fan, and *Words/poems*, including *Clothes on the Line*, *Sex in the Rain*, and *Gravity*.
Room 301, 10:50 a.m.

Jamie Jones

Professor Elisabeth Daümer

From *The Colossus* to *Ariel*: The Transformation of Voice in Sylvia Plath’s Poetry

My presentation analyzes Plath’s progression and transformation of voice and suggests possible reasons for such a dramatic change in her poetics. In trying to understand Plath as not only a poet but a woman, we must be concerned with her early work as much as her later work. Many critics have read her poetry exclusively in light of her suicide and believe that the change in her voice came abruptly and was intended for shock value alone. My essay opposes this analysis and argues that Plath, through her poetry, progressively liberated herself from the judgment of men, above all her father and husband. Tracing the evolution of Plath’s poetic voice from her early poems of mythology and depression to her mid-career poems of domesticity and grief, and finally to her unforgettable and passionate late poetry, my presentation seeks to illuminate the motives and emotions behind each voice.

Room 304, 2:05 p.m.

Ryan Kerr

Professor Annette Wannamaker

The Father, Son, and the Holy Clone: Re-vision of Biblical Genesis in *The House of the Scorpion*

This research project explores the seemingly contradictory appropriation of creation metaphors in a science fiction novel focusing on a dystopian future. Using Haraway’s “*Cyborg Manifesto*” and Fukuyama’s ideas about posthumanism, this paper frames Nancy Farmer’s *The House of the Scorpion* as a posthuman text dealing with the inevitable questions about humanity arising in a world shaped by cloning and other forms of biotechnology. Using this frame,

the researcher also examines how Farmer uses the language of Genesis specifically to understand and complicate the conception of humanity in her posthuman world. Specifically, it is the author’s contention that Farmer portrays a posthuman, cyborg world in which a revisioned creation metaphor is necessary for humanity to survive and make sense of a strange new world. Without this new creation metaphor, Farmer’s envisioned future cannot be made manageable.

Room 304, 3:55 p.m.

Scott Kowalewski

Eric Christensen

Professor Christine Tracy

Balancing Act: Avoiding Bias and Achieving Balance in Today’s Media Environments

Bias appears to be inherent in today’s media outlets, especially television news. This bias is causing serious cultural, political, and social issues. This presentation looks at two local newscast pieces (regarding the same topic) and studies tone, design, and intent. When media ecology theories, which are the studies of media as environments, and the writings of media ecology theorist Neil Postman, and media literacy theorist W. James Potter are applied to these cases, they clarify and acknowledge the presence of biases. This analysis is critical today and helps public audiences achieve a more critical, thus balanced, approach to viewing news and other mediated experiences. With an awareness of goals and an active participation in mediated experiences, media-users can avoid bias and achieve balance.

Room 301, 9:20 a.m.

Hava A. Levitt-Phillips

Professor Melissa J. Jones

“For so must all things excellent begin”: Reading Pain in Spenser’s *The Faery Queene*

In Book III of Edmund Spenser’s *The Faery Queene*, the “vile enchanter” Busirane abducts the virgin Amoret. Though he cuts out her heart and writes his charms in her own living blood, Amoret withstands Busirane’s attempt to compel her love and emerges from imprisonment into a new level of generative agency. This presentation complicates modern readings of Spenser’s text, which assign agency to the perpetrator of violence, object-status to its victim, and dismiss any productive use-value in the experience of pain. The dialogue between premodern and contemporary discourses of pleasure, pain, and power that I explore interrogates the assumptions of both periods about gendered violence and their consequences as they play out in the imaginative realm and the lived world.

Room 352, 3:55 p.m.

Alison Malburg

Professor Elisabeth Daümer

Parturition: Realigning Women's Role in Society

Mina Loy's poem "Parturition" exposes women's potential for independence and power while highlighting their vulnerability despite and through the agency that they obtain during the labor of childbirth. In my presentation, I shall argue that Loy's treatment of the female body within "Parturition" reflects her understanding of how women's labor to bring forth life allows them to give birth to a new self. Therefore, Loy's treatment of the female body causes the poem to interact polemically with the feminist and political discourses present during the early twentieth century. I will place my discussion within the context of two competing discourses on femininity—social purity feminists and radical sex feminist with an emphasis on parasitism and abjection—that Loy both draws on and critically responds to throughout "Parturition."
Room 304, 2:25 p.m.

Emily Otto

Professor T. Daniel Seely

WH-Movement in English and American Sign Language

Language universals are features of language that appear to be present in all languages of the world, or cross-linguistically. One proposed universal is that of WH-movement. This hypothesizes that WH-movement occurs in all languages, either overtly or covertly, and is leftward. The WH-element is moved from its base-generated position to a specifier of a complimentizer phrase located to the left of its base position. American Sign Language (ASL) is a language that is under debate about whether it contradicts this universal. Two hypotheses have developed: ASL follows this language universal, or ASL differs and the WH-element moves to the right of its base position. WH-movement is also subject to various constraints that restrict the movement of WH-elements. It has been shown that English is subject to these constraints, and it would seem that American Sign Language should also be subject to these same constraints.
Room 310, 2:15 p.m.

Daniel Parker

Professor T. Daniel Seely

Reciprocity in Subordinate VP-Ellipsis

This study reports the results of a psycholinguistic experiment investigating the VP-ellipsis structure in (1a) on the interpretation in (1b). Foley et al. (2003) state that the interpretation in (1b), which I refer to as the reciprocal interpretation, is logically possible but ungrammatical. However, my study suggests that (1b) is in fact a "grammatical" interpretation for (1a), and I argue that this ambiguity is located at the level of the

syntax. I then explore the consequences and implications of my analysis for current theory.

a. Calvin pounced on him because Hobbes did [~~pounce on him~~]

b. Calvin pounced on Hobbes because Hobbes pounced on Calvin

Overall, I provide a formal account of the reciprocal interpretation that supports current efforts in minimalist syntax to reduce the computational processing of referential indexing and minimize the complexity of the syntactic representation.

Room 352, 9:20 a.m.

Kayti Purkiss

Professor Ian Wojcik-Andrews

The Invention of Hugo Cabret: Crossing Genre Lines

The use of different genres in the 2008 Caldecott winner, *The Invention of Hugo Cabret* by Brian Selznick, brings a new approach to the scene of children's literature. Selznick utilizes techniques found in graphic novels, picture books, and film to form a new and exciting genre. Through this amalgamation of genres, Selznick creates a new way for authors to express ideas. Through a discussion of form conveying meaning, the researcher discusses how Brian Selznick's use of various genres in *The Invention of Hugo Cabret* allows him to look at the past of children's literature and, through the combination of various genres, to look toward the future. Brian Selznick's glimpse into the future will give other authors the freedom to create books breaking genre boundaries in the realm of children's literature.

Room 352, 2:45 p.m.

Emily Russell

Professor Christine Neufeld

Linguistic Anxiety in Robert Mannyng of Brunne's "Handlyng Synne"

Much consideration has been given to Robert Mannyng's "Handlyng Synne" and its stylistic importance to English literature, but little attention has been paid to the ways in which it negotiates the anxieties about the power of language that existed in the Medieval church. This gap in the scholarship seems particularly awkward given the apparent preoccupation with this subject within the text. Mannyng often uses cursing as a way to discuss the instability of the church's power and the permeability of the mental and of the spiritual realms. I will look at four exempla in depth in order to fully explore this idea. I've chosen these four tales because they seem to be typical in their construction and content. They also serve to showcase slightly different aspects of the issues surrounding cursing and confession.

Room 301, 11:10 a.m.

Theresa Smith

Professor Annette Wannamaker

What's in a Name?: Language and Power in Three Works of Fantasy Fiction

In the course of their journeys towards autonomy, adolescents must cope with a number of never before encountered tasks, not least of which is the need to learn their places in societal and familial power structures. Adolescents must learn to balance their power with that of their parents and other authority figures. They must begin to make choices that will move them towards autonomy and separate them from the authority figures that had previously controlled them. Philip Pullman's *Lyra*, Jonathan Stroud's *Nathaniel*, and J.K. Rowling's *Lord Voldemort* illustrate the direct link between language and power when they symbolize their burgeoning autonomy by changing their names, thus symbolically murdering their parental figures. By committing these symbolic murders and assuming names of their own choosing, *Lyra*, *Nathaniel*, and *Voldemort* are, in Lacanian terms, utilizing language and the power language commands to assert their own claims to power as adolescents verging on adulthood.

Room 304, 4:15 p.m.

Sarah Soebbing

Professor Phillip Arrington

Selection and Spin: The Reality of Conditional Knowledge in Plato's *Phaedrus*

This paper seeks to update Plato's original notions of the role of truth in writing. In today's world, writing serves many purposes that would have been impossible to comprehend or envision in Plato's time. Instead of knowing the truth about all particular things of which we write, which was Plato's assertion, there are plenty of more modern writing situations where knowing the truth may not be necessary or even possible. Through looking at media, advertising, and the prevalence of "spin" in our society, this essay shows that Plato was really referring to "conditional knowledge" when he used the word "truth" in the context of knowing the truth about a subject truth before writing.

Room 352, 4:15 p.m.

Kate Williams

Professor Elisabeth Daümer

"A Transparent Building": The Metaphysical Panopticon in the Poetry of Sylvia Plath

Using Michel Foucault's discussion of Bentham's Panopticon from *Discipline and Punish*, my paper will focus on Plath's poetry as a struggle against the panoptic gaze that is always watching her and of which she struggles to break free through the characters and voices she creates in her poems. My argument will center on the poems "Mirror" and

"Daddy" to explore Plath as a writer and as a subject in her search for an identity away from the transparent Panopticon that oppressed her and that, as her poetry tells us, oppresses us all.

Room 304, 2:45 p.m.

Andrew Winckles

Professor Laura George

The Prophetic Imagination of P. B. Shelley

In his *Defense of Poetry*, Shelley claims, "Poets, according to the circumstances of the age and nation in which they appeared, were called in the earlier epochs of the world legislators or prophets." Even a cursory glance at Shelley's poetry and political beliefs reveals a keen interest in what is wrong with the world and how to fix it. Most studies, however, fail to assess fully the cultural history of Biblical prophecy. Instead, they have confined their discussions of Romantic prophecy to discussions of prophetic inspiration, futurity, and rhetoric, divorcing the work from its radical impetus for social change and empowerment. The prophetic imagination, as utilized by Shelley, is in fact connected to an ancient tradition of radical challenge to authority. This study examines Shelley's poetry and prose (specifically *The Defense of Poetry*, "Queen Mab," and "The Mask of Anarchy") as intentionally prophetic texts that seek to critique the dominant consciousness of his (and future) times and energize a community of resistance to the status quo.

Room 304, 1:45 p.m.

Department of Foreign Languages and Bilingual Studies

Ya-ju Chuang

Professor Wendy Wang

Acquisition of Attributive Adjective Order by Non-native Speakers of English

To examine the perception and acquisition of the attributive adjective order in English by Taiwanese English language learners (ELLs), the researcher asked a group of Taiwanese ELLs to arrange a variety of pre-selected attributive adjectives in an acceptable order. While the descriptive and statistical data showed that factors such as the associated contexts and interchangeability of adjective categories might affect their choice of the sequencing of the adjectives, the participants sure demonstrated a fairly good understanding of the English attributive adjective order. This finding seems to question the assumption that the acquisition of adjective order is intuitive of only native speakers. Pedagogical implications and suggestions for future research will be discussed.

Room 320, 10:30 a.m.

Laura Ramm-Christensen

Professor Cathy Day

ESL Speaker Pronunciation and Accent Perceptions

This study investigates ESL students' perceptions of their own pronunciation challenges and how they perceive native speaker responses. The significance of speaking with a foreign accent is presented from speaker perspectives, including discrimination and career prospects. Suprasegmental strategies for the ESL classroom, rather than segmental instruction, are suggested to improve intelligibility.

Room 310, 11:00 a.m.

Elizabeth Ravelo-Mckinney

Professor Deanna Mihaly

La Tierra como Elemento de Inspiración en Obras Literarias Latinoamericanas de las Epocas del Romanticismo al Modernismo (Land as an Inspirational Element in Latin American Literature from Romanticism to Modernism)

The researcher investigated the influence of land resources as an inspiration for Latin American prose from the periods mentioned above. Also, the researcher investigated the relationship between the inspiration of the land resources and the socio-economic developments of the Latin American countries during those periods. The analysis of the literature generated from those authors—Andrés Bello, Gertrudiz Gómez de Avellaneda, José Martí, Domingo Faustino Sarmiento, and José María Heredia—had special connotations for Latin American countries and their relation with the rest of the world, revealing the impact of economics on national literatures.

Room 320, 10:50 a.m.

Polly Ricciardo

Professor Carla Damiano

Modern Society's Greatest Influence: The Age of Enlightenment

The Enlightenment Period had a profound effect in Germany and in America. Called "Die Aufklärung" in Germany and the "Age of Reason" in America, both cultures were establishing a new mentality towards the future roles of church and government in their respective countries. These simultaneous events took place in the 18th century. I will show through my presentation the similarities between these concurrent movements and how the ideas created during this time period continue to have a lasting effect on modern society.

Room 310, 9:30 a.m.

Jacki Rinck

Professor Cathy Day

The Adolescent Immigrant and Language Learning

Adolescence is a time of important social, emotional, physical and cognitive changes. In addition to these adolescent changes, immigrant youths must learn to adapt to a new culture. The researcher studied the goals an immigrant has when placed in a new society and the acculturation process, primarily as it concerns the adolescent learner. Studies revealed that stereotypes both affect the placement of the learner within the ESL classroom and the development of his/her identity. Furthermore, classroom relationships, motivation to learn, and ethnic identity, among other things, affect the acculturation process.

Room 320, 11:10 a.m.

Department of Geography and Geology

Tracy Aris

Professor Ted Ligibel

A Cultural Landscape Inventory: Eli A. Gallup Park

The researcher created a Cultural Landscape Inventory (CLI) to assess and record this Huron River landscape, including its cultural and natural resources. Utilizing standards promulgated by the National Park Service, the CLI serves as a tool for preserving and perpetuating the significant characteristics and features of a historic landscape. This includes identifying general treatment plans and establishing preservation goals based on its significance, integrity, and use. Research revealed that as a designed historic landscape, Gallup Park is unlikely to yield important prehistory or historical information regarding the area. However, it retains integrity through its associations with significant events and trends in 20th century, including land use practices shaped by westward expansion, the City Beautiful Movement, and Planned Communities, each making significant contributions to broad cultural patterns in American history.

Room 320, 2:05 p.m.

Tegan D'Arcangelis Baiocchi

Professor Ted Ligibel

Swimming Pools of Wesley Bintz: Form, Function, and Future

The researcher examined the preservation issues concerning Bintz Swimming Pools constructed between 1919 and 1967. Wesley Bintz gained national recognition for his patented ovoid above-ground swimming pool and bath house design, which cost less and used less land area to construct than a traditional sunken swimming pool. Its economical value and Art

Deco design made Bintz Pools recognizable icons in large cities and small villages alike. Today, the same features that made Bintz Pools attractive to communities are leading to their demolition. This study focuses on the identification and approach to problems with restoration and adaptive reuse of Bintz swimming pools, including safety, accessibility, financial, and necessity issues.

Room 310, 9:30 a.m.

Abby Boggs

Professor Ted Ligibel

Conservation and Preservation of Brick Masonry

This poster will address the difficulties associated with conserving, repairing, and preserving brick masonry construction. It will show examples of historic and modern brick work and how reactions with the natural environment and man-made construction cause changes over time. Attention will be placed on how water can cause the most severe case of damage in brick masonry. The poster will also show practical solutions to stop deterioration and restoration practices for brick preservation and repair.

Room 310, 11:00 a.m.

Dace Koenigsknecht

Professor Ted Ligibel

The City of Eaton Rapids Historic Resource Survey Map: Enhanced Data Presentation Utilizing GIS, Access, and HTML

The architectural historian utilized GIS technology to better organize and present historical resource information gathered as an attempt by the City of Eaton Rapids to obtain National Register of Historic Places designation for its downtown commercial district. The scope of the project, originally a classroom assignment, was conceived with the following two goals in mind: (1) To provide personnel at the State Historic Preservation Office with a standardized, legible instrument for the interpretation of historic resource survey data; and (2) to provide the community with an easy-to-use interface that allowed public consumption of, and interaction with, the assembled information. Sources of the data were the city, which offered its GIS parcel layer and an aerial photograph, and numerous historic resource spreadsheets created by EMU graduate students. The final product, an interactive web-browser parcels map, offered a well-organized, standard report displaying historic resource data and photographs for each downtown parcel.

Room 320, 11:30 a.m.

Rebecca Torsell

Professor Ted Ligibel

Monuments Conservation in Central Park

The intern participated in a ten-week internship for the Central Park Conservancy, which was funded through the Kress Foundation. The intern was involved in and completed various conservation activities. The primary task was to perform annual maintenance and preservation for 51 of Central Park's monuments; the majority of these were bronze. Bronze conservation consisted of non-ionic detergent washing and the application of a sacrificial layer of wax on the bronze sculpture surface, which was then buffed. The present and ongoing conditions were closely monitored and documented with field notes and photography. The intern also updated the CPC's Monuments database and formulated new innovations in regard to data entry procedures. Various special projects were also undertaken, including molding broken or replicated monument pieces and pointing on the Bethesda Terrace. D-2 testing was also performed on two masonry monuments.

Room 320, 1:45 p.m.

Leslie M. Van Veen

Professors Ted Ligibel and Henry Aldridge

The Michigan Theater: 80 Years of Community Involvement

The Michigan Theater has served as Ann Arbor's premiere venue for feature films and live shows for eighty years. To celebrate this important milestone, the Michigan Theater Foundation has commissioned a book that will chronicle the theater's colorful history as a movie theater and tell the story of its rescue from the wrecking ball and rebirth as a vibrant showcase for the arts in downtown Ann Arbor. The project will include creating a database listing every film and live event that played at the Michigan Theater since 1928, interviewing the dozens of people who helped to save the building, and reproducing historic and contemporary photographs. The Michigan Theater is a community-based and mission-driven locality that has been restored to its former glory and into one of the greatest historic theaters in the country. This project will maintain the continuity of operation as well as demonstrate the successful evolution of the Michigan Theater.

Room 310, 9:30 a.m.

Department of History and Philosophy

Marcus K. Adams

Professor JoEllen Vinyard

The War Within: Soldiers' Resistance Movement during the Vietnam Era

The Soldiers' Resistance Movement, which took place during the Vietnam War, is perhaps the most important social movement in the history of the American military. Responding to a highly unpopular war, the soldiers of Vietnam began to question their role in what many consider to be a conflict built on lies. While the government expected some resistance, the soldiers' unity of purpose eventually forced the Military to respond. This paper examines the soldiers' revolt as it grew throughout the decades of the 1960s and 1970s, culminating in a protest movement that helped to end the war.

Room 352, 10:50 a.m.

Kari Brown

Professor Ronald Delph

German Wives and Witches

Germany in the sixteenth and seventeenth centuries has been characterized as a hotbed of witch hunting and was infamous for its severe treatment of witches. German women received the brunt of accusation, particularly those who deviated from the accepted societal roles of women. This study explores the question: Why were women who remained outside the traditional gender mold accused of witchcraft? Using a contemporary manual for witch hunters and secondary works on early modern German society, this paper points to evidence of a shift in the role of women from a public to a privatized domestic sphere. German society exalted the married woman who submitted to her husband's authority, nurtured her children, and managed the household. Any woman who did not conform to this role could be and often was accused of witchcraft.

Room 352, 1:45 p.m.

Latasha Berlinda Hailey

Professor Joseph Engwenyu

"Bless Me Father For I Have Sinned:" The Church's Policy of Racialization and the Rwandan Genocide

In 1994, the small African country of Rwanda experienced one of the most horrific genocides known to date. In a country where 90% of its citizens are affiliated with a Christian church, many Rwandans sought protection from the death squads in the numerous churches scattered across the region. Yet the death squads, in conjunction with church officials, utilized those holy grounds as the country's killing

fields. The church's role in the genocide extended past the immediate acts taken in 1994. The researcher will investigate the structure of the colonial state, the church construction of ethnic division, and the church involvement in the genocide in 1994. Through the examination of these three elements of the church practices in Rwanda, the church's sole purpose in Rwanda was to control an entire country through the use of organized religion.

Room 301, 3:15 p.m.

Rob Hardman

Professor Ronald Delph

Rising Dowries, Spiking Nuns

This paper investigates the growth in the number of patrician women who became nuns in Renaissance Venice and Florence between 1425 and 1530. Renaissance Venetian and Florentine marriage patterns reveal that many upper class women were simply priced out of an ultra-competitive marriage market by hyper-inflation, as their families could not afford to come up with the soaring cost of the dowry required to make a suitable match for their daughters. Young patrician women found themselves shunted off to nunneries instead of marrying. While the results were the same, this paper argues that the catalysts behind the inflation and the resulting changes in the gender dynamic in each city were distinctly different.

Room 352, 2:05 p.m.

Caleb Klingler

Professor Steven Ramold

Brighter Hopes: Eastern Michigan University in the Civil War

The American Civil War was a violent and catastrophic event in American History. The horror of the battlefield cannot be fully realized unless witnessed firsthand. Through personal experiences, historians gain valuable insight into the events surrounding the soldiers' experiences. Veterans of the American Civil War faced experiences for which they were not prepared, as the war would prove them inadequate to face the new challenges brought on by the Industrial Revolution. The men of Company E, 17th Michigan Infantry Regiment, formed in 1862, from college students from Michigan State Normal College, proved as ill-prepared for combat as many other soldiers did at the beginning of the war. These men are a valuable case study for understanding recruitment in 1862 and the understanding why they suffered high rates of casualties. Their experiences during the Battles of South Mountain and Antietam in September 1862 illustrate the horrors that the enlisted men faced when lessons from 1861 were not implemented.

Room 301, 3:55 p.m.

Geoffrey K. Krempa
Professor Robert Citino

Reacting to Hitler: The Foreign Policy of Poland, Lithuania, Hungary, and Romania, 1933-1939

The foreign policies of Poland, Lithuania, Hungary, and Romania from 1933 to 1939 were examined through the paradigm of Hitler's major foreign policy achievements. These included his appointment as Chancellor in 1933, the remilitarization of the Rhineland, the *Anschluss* with Austria, the dismemberment of Czechoslovakia, and, finally, the invasion of Poland. Specifically, the reactions of these four nations to German international action and their own respective relationships with each other were examined. It was found that their respective foreign policies ended in failure due to their respective inability to substitute shortsighted national objectives that were focused on regional revision at the expense of their neighbors for regional security directed against German expansionism.

Room 301, 3:35 p.m.

Wendy Molloy
Professor Ronald Delph

From Monastery to Marriage: The Closing of the English Convents

This paper examines the problems of English nuns as they were forced out of the monastic life during the English Reformation and explores why their newfound freedom was not so much a liberating event for these women but rather resulted in placing limitations upon them in sixteenth-century Tudor society. Primary sources such as monastic records, acts, and treatises reveal the numerous hardships and issues facing monastic and religious lay women before and after the Reformation. This study also reveals the different religious roles of Protestant women as wives and as single women. In general, this study underscores the problems concerning the elimination of convents, where women, "freed" from their religious vocation, lost an avenue for agency that English Protestantism did not provide for or replace.

Room 352, 2:25 p.m.

Allison E. Stein
Professor Joseph Engwenyu

West African Griots and Their Struggle to Survive in the Modern World

The researcher investigated the history and profession of West African griots, primarily Senegalese *g w l*, as they are known in this region, and their struggle to survive in modern day Africa. Griots are artists of words. They cover all genres of oral art and can be genealogists, historians, advisors, spokespersons and mediators, exhorters, interpreters and translators, musicians and composers, teachers, or praise singers. Griots have been an important component of West

African culture for centuries. Despite many obstacles, most notably their low rank in the caste system and the invasion and influence of Western culture, they have managed to thwart extinction. The research revealed the survival of the griot is due to the ability of these artists to fuse their traditional artistic styles, customs, and instruments with modern technology and the use of mass media.

Room 301, 9:00 a.m.

David M. Walton
Professor Joseph Engwenyu

Asinamali ("We have no money!"): The Tradition of Independent Labor in South Africa

Independent trade unions in South Africa emerged because of the exclusion of blacks from registered union membership and the general collective bargaining process. The inherent nature of the exploitation of native South African workers placed them in an extremely vulnerable position. While white labor militancy raised the stakes for unions as a whole, their own vulnerability to state and capital, coupled with their complacency towards the plight of the non-white worker, reveal the reasons that the independent South African labor movement evolved as it did. The independent labor movement reflected a growing determination to acquire a permanent place in the new white order by blacks. This hope resulted in a substantial amalgamation of various sectors of the independent trade union movement. The Congress of South African Trade Unions (COSATU) epitomizes this amalgamation. This presentation examines the early phase of development of independent labor organization in South Africa and its effects upon the broader black equality movement.

Room 301, 4:15 p.m.

Department of Mathematics

Lee Ann Soltis
Linda Joegiono
Professor Andrew Ross

Sensor Placement for Distributed Signal Detection in Two Dimensions

This paper explains an algorithm for placing sensors on a two-dimensional field so as to minimize the total distance between the sensors and the fusion center, while keeping the probability of detection over a given field relatively high and the probability of false alarm relatively low. Using MATLAB, we wrote a program that minimizes total transmitted power, subject to a detection probability constraint and a false alarm probability constraint. We conducted computations with different numbers of sensors on a square field with the fusion center located at a corner of the field. We discovered that, as in the one-dimensional case, a uniform placement is often not optimal.

Room 300, 10:00 a.m.

Ke Zhu

Professor Xiaoxu Han

Incentives and Purchase Prices for Motor Vehicles

Constructing price indexes for customer motor vehicles from highly disaggregated data is a challenging problem in both in motor-vehicle financing and applied statistics. In this study, we develop a new approach to this problem. The price indexes for consumer motor vehicles are calculated using data collected from a national sample of dealerships. The dataset contains disaggregated data on actual sales prices and quantities, along with information on customer cash rebates, financing terms, and more. In our work, the actual cash and financing incentives taken by consumers are included in the measurement of consumer vehicle price. On the other hand, the vehicle price indexes are calculated under different assumptions about what constitutes a "new" product in moving from one model year to the next.
Room 330, 3:55 p.m.

Department of Music and Dance

Joshua Jobst

Professor Garik Pedersen

Absolute Pitch Development Through Learned Melodies: A Method

Absolute pitch can be developed in children and adults through the use of aural association, associating the first note of a melody with the pitch one wishes to learn. Absolute pitch, commonly known as "perfect pitch," is the musical ability to perceive auditory stimuli so as to produce and/or label sound(s) without the aid of an external source. Common manifestations of this ability include naming or singing a pitch without a reference or identifying the key of a musical composition. Historically, absolute pitch was considered to be an innate ability. However, recent evidence demonstrates that learned melodies encode in the brain both relative *and* absolute pitch information, thus corroborating aural association as an effective method for developing absolute pitch.
Room 301, 2:25 p.m.

Department of Physics and Astronomy

Chakravarthi Nagolu

Professor Weidian Shen

Studying Scratching Mechanism of the Clearcoats and Improving the Technique and Devices/Materials in Automobile Refinish Work

As the tribological properties of the clearcoats used in the automotive industry are improved, new coats possess much stronger scratch resistance. This change makes body refinishing work difficult. To improve

technique and materials in automobile refinishing work, we carried out mechanical and tribological properties tests on a variety of clearcoats in their original state, as well as at different five stages during the refinishing work, to study the scratching mechanism of the coats in a project sponsored by 3M. The test results will be presented, followed by a discussion of how to improve the refinishing technique and devices/materials.

Room 330, 4:15 p.m.

Department of Political Science

Christopher A. Blough

Professor Dogan Koyluoglu

Fostering Local Government Cooperation: Revenue Sharing Between Local Governments Using Contractual Agreements

The challenge of funding local government services in Michigan has historically placed local government units in direct competition against one another for tax base in a "winner take all" model. The geographic boundaries of incorporation defining Michigan's townships, villages, and cities are often viewed by local government leaders as sacred because the local unit's tax base typically funds 40-60% of the local jurisdiction's operations. Local government leaders have new options, including contractual agreements provided under P.A. 425 of 1984. This presentation features exploratory research employing GIS resources to explain how contractual land transfer in exchange for sharing tax revenues has benefited communities financially, politically, and economically.

Room 320, 2:25 p.m.

Karen Cokley Cross

Professor Jeffrey Bernstein

The Impact of Public School Education Finance Models On Equity: Is There A Best Way?

The research analyzes the impact of education funding structures on the equity of school funding. The study first identifies four primary funding models employed by state governments (foundation, full state, flat grant and guaranteed tax base) and describes the advantages and disadvantages of each, ultimately assessing the equity impact of each funding structure.

Room 300, 3:35 p.m.

Kylee Guenther

Professor James Ivers

Property Taxes and Unemployment Rates: The Slippery Slope of Michigan's Stagnating Economy

The purpose of this research project is to determine if there is a positive correlation between unemployment rates in Washtenaw County, Michigan, and property tax delinquency. This is a very important topic

because unemployment rates in Michigan are the highest in the nation. If a relationship is found between property tax delinquency and unemployment rates, there could be new ways to help keep home owners from losing their homes.

Room 300, 3:55 p.m.

Bruce A. Hammond

Professor Raymond Rosenfeld

Proposed Growth Strategies for the City of Flat Rock's New Economic Development Program

Although the city has experienced tremendous growth in single-family residential construction, Flat Rock's commercial growth has lagged behind. This presentation recommends economic growth strategies for the newly created economic development program for the city of Flat Rock. It identifies four development strategies for local economic development, studies the feasibility of each one of these strategies for Flat Rock, and recommends a Brownfield development plan for redevelopment of older parts of the city.

Room 304, 10:30 a.m.

Heather Laird

Professor Joseph Ohren

Islamic Nonprofits and the Events of 9/11

This presentation investigates how the events of 9/11 affected eight Islamic nonprofit organizations in their ability to raise funds. The study, a time series analysis covering a six-year period from 1999-2005, concludes that, although a number of Islamic nonprofits were closed down by the U.S. Government following the events of 9/11, fundraising revenues for other Islamic nonprofits not targeted for suspicious financial activity increased over the six-year period. The research also points out the need for a comparative study of the effects of 9/11 on fundraising revenues of Islamic (serving Muslims) nonprofits and those with Arabic names but serving non-Moslems.

Room 304, 11:30 a.m.

James McFarlane

Professor Joseph Ohren

The Digital Divide: A Toolkit for Community Leaders

Numerous municipalities across the U.S. are planning and implementing wireless broadband projects. This presentation summarizes existing business models employed by community leaders in implementing such systems, emphasizes the benefits of such efforts, and describes the efforts to develop a wireless system in Washtenaw County, Michigan. Since wireless technology requires complex networking, engineering and precise design in order to work proficiently, this presentation points out the need for the municipalities

to understand and to appreciate all the dynamics of these complexities in order to efficiently implement useful wireless technology.

Room 304, 11:10 a.m.

Kimberly McGrath

Professor Bruce Carroll

The Role of International Education in Social Sciences

Any type of education is a benefit to the individual being educated and to society as a whole. International education adds value to this process in immeasurable ways. However, long periods of foreign study are prohibitive for many students. Study abroad is an underutilized resource that fills a niche between traditional international education and traditional domestic education by opening opportunities for those not able to study internationally for long periods of time.

Room 320, 2:45 p.m.

Julia E. Sutton

Professor Joseph Ohren

Providing Services to Clients with Limited English Proficiency in Compliance with Executive Order 13166

Current and projected shifts in the U.S. population reflect an increase in diversity and language demographics due to recent immigration. Because of this shift, many government jurisdictions, agencies, and private organizations are already experiencing a greater need for translation and interpretation services in order to provide assistance to clients with limited English proficiency (LEP). In response to such changes and federal policy initiatives, organizations have had to revise their policies or initiate new programs in order to cope with the demand. This presentation provides an overview of the current policy environment and policy alternatives for organizations and recommends strategies for addressing this need.

Room 300, 4:15 p.m.

Department of Psychology

Kevin Alschuler

Theresa Lynch

Professors Flora Hoodin and Michelle Byrd

Whom Do Scoliosis Patients Turn to for Support? Does It Matter?

The diagnosis and treatment of the chronic spinal condition Adolescent Idiopathic Scoliosis (AIS) corresponds with a critical period in social development. AIS patients' sources of social support and the resulting effect on their health-related quality of life is unknown, but the visibility of the deformity

and duration of treatment makes the problem evident to others. Participants were 521 individuals assessed for social support, quality of life, disability, and psychological factors. Patients reported significantly higher social support when supported by their spouse/partner or family member compared to their doctor. Low social support was significantly correlated with lower quality of life and higher depression, anxiety, catastrophizing, and pain anxiety. These findings suggest that low social support is a risk factor for mental health problems and should be a concern of medical providers. Graduate student Gregory Pouliot was a co-investigator on this project. *Room 310, 2:15 p.m.*

Kylene Bavers

Professor Alissa Huth-Bocks

Predicting Child Maltreatment

The prevalence and increasing incidence of child maltreatment, along with its negative consequences, is well documented. Research has found related risk factors, but a sufficient intervention model has yet to be identified. This literature review will examine how several factors related to maternal functioning are associated with a woman's risk status with regard to child abuse potential. I will review the literature examining mothers' perceptions of their childhood relationships with parents, expectations about being a mother, perceptions of social support, and child maltreatment potential. One hundred pregnant women are being recruited from southeastern Michigan to participate in a larger study at EMU. Data will be available at a later date to empirically examine relationships between these and other variables. Findings are expected to help facilitate the design of preventive intervention programs. *Room 310, 9:30 a.m.*

Jillian B. Carey

Professors Flora Hoodin and Michelle Byrd

Complementary and Alternative Medicine Utilization in Individuals with Adolescent Idiopathic Scoliosis

Little is known about the utilization of complementary and alternative medicine (CAM) in individuals with Adolescent Idiopathic Scoliosis (AIS). CAM is defined as treatment that is not conventional medical care (CM). Three hundred and three adults with AIS participated in an online survey of health insurance, medical treatment, scoliosis related quality of life, disability, and pain catastrophizing. Results indicated that chiropractic care was the most used CAM treatment, followed by massage, yoga, acupuncture, and others. CAM users reported higher incomes, more pain catastrophizing, greater disability, lower pain-related quality of life, and lower satisfaction with management of their scoliosis. These findings suggest pain is an important factor in CAM use. Additionally, CAM users' lower satisfaction with management suggests adults with AIS may seek CAM treatment

when they find CM insufficient or are generally dissatisfied with CM and CAM options. Graduate students Kevin Alschuler, Theresa Lynch, and Gregory Pouliot were co-investigators on this project. *Room 310, 11:00 a.m.*

Lauren Earls

Professor Alissa Huth-Bocks

The Relationship between Personality and Adult Attachment

This study examined the relationship between the Big Five personality domains of Neuroticism, Extraversion, Agreeableness, Openness, and Conscientiousness from the Five Factor Theory of Personality with Attachment Anxiety and Attachment Avoidance derived from Attachment Theory as applied to adult relationships. Participants were 245 college undergraduates between the ages of 18 and 47 ($M = 22.2$), who represented the gender and ethnic composition of Eastern Michigan University. Results indicated that Attachment Anxiety was significantly positively related to Neuroticism and significantly negatively related to Extraversion, Agreeableness, and Conscientiousness. Results also indicated that Attachment Avoidance was significantly positively related to Neuroticism and significantly negatively related to Extraversion, Agreeableness, Openness, and Conscientiousness. In addition, results indicated that Attachment Avoidance might constitute a separate personality domain beyond the Big Five. Theoretical implications will be discussed. *Room 300, 1:45 p.m.*

Laszlo Erdodi

Professor Renee Lajiness-O'Neill

Differences in Regional Cortical Activation Patterns between Adults with ADHD and Normal Controls during a Continuous Performance Test

This study will investigate differences in cortical activity between adults with and without ADHD using magnetoencephalography (MEG). MR-FOCUSS images of cortical activity will be generated from participants while engaging in a continuous performance test (CPT). It is hypothesized that an overall decrease in activation will be observed in the right inferior parietal cortex of ADHD patients relative to controls suggesting a reduction in the ability to sustain attention and vigilance. Also, ADHD patients will have decreased activation in the cerebellum relative to controls indicating impairment in error detection. Finally, a reverse lateralization pattern is expected across CPT conditions between normal controls and ADHD subjects. Implications of these findings for the etiology and diagnosis of ADHD will be discussed. Graduate students Dan Jacobson, Michelle Gallaway, Wendy Dorman, and Emily Barba were co-investigators on this project. *Room 310, 9:30 a.m.*

Leanna Fortunato

Professor Carol Freedman-Doan

Long-term Predictors of Consistent Condom Use by Adolescent Girls: A Comprehensive Health Behavior Model

In recent years, as the threat of HIV/AIDS has grown, there has been a significant effort to promote safe sexual activity, particularly among young people. Currently, the only effective means of protecting against the continued spread of STDs and HIV among the sexually active is consistent condom use. While there is extensive research that demonstrates the correlates of condom use, there is considerably less research that adequately predicts consistent, long-term condom use. This poster will utilize a comprehensive health behavior model to predict long-term condom use in a sample of adolescent girls in heterosexual relationships. The data are drawn from the National Longitudinal Study of Adolescent Health, which contains three waves of data spanning adolescence through early adulthood. Regression analyses will be utilized to determine the ability of the comprehensive health behavior model to predict consistent condom use from adolescence into young adulthood.

Additional analyses will be conducted to determine if ethnic differences influence the predictive value of the model for various ethnic groups. These data will provide valuable information about the long-term predictors of consistent condom use that can be used to inform the development of effective sexual education programs.

Room 350, 9:00 a.m.

Erin Henshaw

Professor Carol Freedman-Doan

Goals and Challenges of Faith-Based Sex Education Programs: Perspectives of Youth Leaders

This study explored the kinds of sex education programs for youth available in Mainline churches. We wanted to understand program goals, challenges of discussing this issue within faith settings, and youth response to these programs. The sample included Mainline and Evangelical Protestant, Catholic, and Jewish/Unitarian churches/synagogues with memberships over 300 within a 25-mile radius of our area in Southeast Michigan. These criteria produced a potential sample of 73 churches/synagogues. Religious sex education programs are free to explore with adolescents the biological, social, and psychological consequences of early sexual debut, contraceptive use, and multiple sexual partners. This study is the first to examine the kinds of sex and relationship programs conducted in Mainline religious institutions. Findings from this study lay the groundwork to begin a larger study dismantling the components of some of the more frequently used programs to see which components, if any, have an impact on adolescents' sexual behaviors.

Room 350, 9:20 a.m.

Nasreen Islam

Professor Stephen Jefferson

Suicidal Ideation among Asian Americans: The Contributory Roles of Perfectionism and Shame

Although suicide is a tragic event for any ethnic group, recent research suggests Asian Americans may be disproportionately vulnerable to this behavior. Consequently, researchers and clinicians are conducting more research with this population to better understand this trend. Preliminary findings suggest that perfectionism and shame may play a large role in predicting suicidal ideation in this population. However, the exact nature of this relationship is unclear. The purpose of my project is to elucidate the contributory role of these variables in predicting suicidal ideation in Asian Americans. Toward this end, I have hypothesized two causal models. While my first model hypothesizes that shame may moderate the relationship between perfectionism and suicidal ideation, my second model posits that shame mediates this relationship. By explicating these two models, I hope to offer a theoretical framework that inspires more empirical research in this area as well as improving treatment approaches for Asian populations.

Room 352, 11:10 a.m.

Valentina Ivezaj

Amy S. Collings

David Saunders-Scott

Nancy E. Angelella

Ashley A. Wiedemann

Professor Karen Saules

Do Rates and Predictors of Binge Eating Differ by Gender and Race?

The researchers investigated the rates and unique predictors of binge eating for men versus women and for those of different racial/ethnic backgrounds. A web-based survey was completed by 895 college students who fell into White, Black, or Bi/Multi-Racial categories. Chi-square analyses were conducted to compare the frequency of binge-eating behavior, binge-eating symptoms, and binge-eating disorder among all groups by gender and ethnicity. Logistic regression analyses were conducted to examine the predictors of binge eating for each group. Data revealed that binge-eating behavior is quite common across gender and racial groups. While Black and White males commonly engage in binge eating, they do not tend to report a sense of loss of control. However, Bi/Multiracial men do experience this feature, more so than all other groups. Findings also highlight gender and ethnic differences in the predictors of binge eating. Graduate student Kevin Alschuler was a co-investigator on this project.

Room 310, 11:00 a.m.

Daniel A. Jacobson

Professor Renee Lajiness-O'Neill

Role of Amygdala in Social Functioning of Individuals with VCFS

This study investigates the relationship between amygdala volumes and social deficits in individuals with velocardiofacial syndrome (VCFS). Volumetric measures of amygdala based on magnetic resonance imaging will be compared among 6 VCFS individuals and 6 controls. In addition, scores on the Child Behavior Checklist (CBCL) will be correlated with amygdala volumes in patients with VCFS. It was hypothesized that after covarying for total brain volume, VCFS patients will exhibit larger amygdala volumes in both right and left hemispheres relative to controls. Furthermore, it was hypothesized that larger amygdala volumes in patients with VCFS would be associated with increased social anxiety and decreased social competency as measured by the CBCL. Implications for the role of the amygdala as a substrate of social processing and social competency in individuals with VCFS will be discussed.

Room 310, 11:00 a.m.

Douglas Jones

Professor Karen Saules

Exploring the Impact of Pre-Treatment Personality Assessment on Therapeutic Outcome

The prevalence of personality disorders in the general population (10-13%; de Girolamo & Dotto, 2000) and in clinical populations (30-70%, Moran, 2003) has been well established. Moreover, the detrimental impact of personality-disordered symptomology on treatment outcome for other psychological disorders is well known (Chiesa et al., 2002). Since assessment to determine the presence, or level of, personality disorder symptomology is not routinely administered in most behavioral-health clinics, a study was conducted to determine the utility of pre-treatment personality assessment, as measured by the NEO-PI-R, on treatment outcome, as measured by the OQ45.2 total symptom distress change score. The subjects were randomized to conditions in which the therapists had or had not received their clients' pre-treatment NEO-PI-R results. Preliminary findings suggest that clinically distressed individuals, whose therapists had been given the results of their NEO-PI-R, reported a greater reduction in symptomology during the first six sessions of therapy.

Room 300, 3:15 p.m.

J. Robert Parker

Professor Alida Westman

Religious Orientations: Concerns about the Nature of Quest

Intrinsic, Extrinsic, and Quest orientations were studied in students at a Midwestern state university (N

= 185) and at a Southern Evangelical Christian university ($N = 87$), and in established members of a Midwestern Evangelical Church ($N = 30$). On average, state university students were least Intrinsic; Evangelical students were intermediate, and established church members were most Intrinsic. On average state university students were most Extrinsic, but Evangelical students and church members did not differ from each other. However, there was no significant difference in Quest orientation between groups. Further, the Extrinsic and Quest orientations were correlated in all three groups. The reason for this correlation is unclear and needs to be studied. It may be that the Quest concept is multi-dimensional and needs to be re-conceptualized, as also suggested by Beck & Jessup's (2004).

Room 350, 9:40 a.m.

Lesley A. Pawluk

Professor Renee Lajiness-O'Neill

Frontal and Parietal Activation during Working Memory Differentiates Dyslexia from Controls as Revealed by Magnetoencephalography (MEG)

Atypical right and bilateral hemispheric brain activation in temporoparietal regions is reported during nonword reading in individuals with dyslexia during functional neuroimaging. We hypothesized similar aberrant activity would be evident during verbal and spatial working memory (VWM and SWM) in individuals with dyslexia compared to controls as measured by Magnetoencephalography (MEG), a current density imaging technique. Results revealed that VWM activated more rapidly than SWM and required a volleying of neural activation at ≈ 200 -290 ms in bilateral frontal regions. Parietal regions were activated in a domain specific manner in controls but not during VWM in dyslexia. More focused activation in supramarginal and postcentral gyri (≈ 230 -245 ms) and left frontal regions (≈ 469 -583 ms) was evident in controls during SWM, while dyslexic subjects activated more diffusely. Results suggest that individuals with dyslexia may have fewer resources available for the maintenance and manipulation of phonological and visual information during reading.

Room 310, 9:30 a.m.

Gregory S. Pouliot

Professors Flora Hoodin and Michelle Byrd

What Factor Analysis Reveals about Body Image and Satisfaction with Treatment in Individuals with Adolescent Idiopathic Scoliosis

Adolescent Idiopathic Scoliosis (AIS) is a spinal deformity that may impact quality of life (QOL) in both the short and long term. The Scoliosis Research Society Questionnaire (SRS-22r) is a reliable and valid disease-specific measure of QOL for AIS. Its psychometric qualities when administered online to patients with AIS in adulthood are unknown and thus

were examined in this study. Study participants ($n = 311$) were categorized into treatment groups: those who have had surgery and those who were braced or had no treatment (nonsurgical). Results of factor analyses indicated that when all individuals with AIS were considered together, the factor structure was similar to the paper-and-pencil administration of the SRS-22r. However, when the nonsurgical subgroup was analyzed independently, the relationship changed between items associated with the SRS-22r subscales, "self-image" and "satisfaction with management of care." Thus online administration of the SRS-22r may yield subtle differences that warrant further investigation. Graduate students Theresa Lynch, Kevin Alschuler, and Jillian Carey were co-investigators on this project.
Room 310, 11:00 a.m.

Nicholas G. Velissaris
Professor Renee Lajiness-O'Neill

Activation during Joint Attention Is Context Dependent as Measured with Magnetoencephalography (MEG): Substrates of Social Cognition

Joint attention (JA) refers to nonverbal communicative behaviors through eye gaze/gesture. JA is an important precursor to language and related to positive social behaviors in children. Social dysfunction is a pervasive component of psychopathology and a strong predictor of outcome. MEG can examine differential JA responses to increase understanding of aberrant connectivity in social disorders. Pelphrey et al. (2005) demonstrated greater activity in the STS/STG when controls viewed incongruent stimuli rather than congruent stimuli. Six controls matched on age and IQ underwent MEG. Brain activity was analyzed as participants viewed congruent or incongruent faces, words, and targets (6 total trials). Compared to targets/faces, words elicited more left and supramarginal activation. Faces elicited more consistent mesial temporal/fusiform regions. While targets elicited lateralized cerebellar regions, words/faces was bilateral. Increased activation during incongruent trials may be a compensatory mechanism.

Room 310, 9:30 a.m.

Sarah Wice
Professor Alida Westman

The Influence of Adult Attachment Styles on Coping with Bereavement

This presentation investigates how we can help people deal with the loss of a loved one and seeks to determine who is more likely to need help in grieving. Members from bereavement support groups and religious groups answer questions about how they normally relate to people, their coping styles, and their grieving process. Hypotheses tested include whether (1) people with interpersonal relationship styles in

which they feel secure grieve less than those who are normally anxious, ambivalent, or dismissive; (2) the belief that religious figures are more supportive during the grieving process than fellow humans is associated with interpersonal relationship styles; and (3) specific interpersonal relationship styles are associated with particular coping styles (i.e., problem-focused, avoidant, or emotion-focused).

Room 350, 10:00 a.m.

Kathryn Woods
Professor Carol Freedman-Doan

Parental Transmission of Gender Stereotyped Beliefs and Their Impact on Adolescent Mental Health Outcomes

The researcher will describe theoretical models to explain how parent beliefs, mainly those regarding gender, are passed on to their offspring. Parental warmth will be considered both as a possible mediator and as a moderator in this transmission. In addition, ways in which these beliefs influence adolescent mental health will be explored. Specifically, the relationship between adolescents' gender stereotyped beliefs and internalizing and externalizing behaviors will be discussed.

Room 300, 2:05 p.m.

**Department of Sociology,
Anthropology, & Criminology**

Suzanne Hodge
Professor Jay A. Weinstein

The Altruistic Attitudes and Behaviors and Feelings of Duty or Obligation in Students at Eastern Michigan University

This poster will report findings of a survey of students of Eastern Michigan University about their altruistic attitudes and behaviors. The survey focused on the respondents' feelings of duty or obligation or the absence of such feelings when acting altruistically. The voluntary, self-administered test was taken at the end of the Fall 2007 term. It includes the Rosenberg Self-Esteem Scale and respondents' demographics. The hypothesis is that students who behave in an altruistic manner and do not feel a sense of duty or obligation have a higher score on the Rosenberg scale. Marital, parental, and employment status will also be considered.

Room 310, 11:00 a.m.

Matthew J. Klepac
Professor Marisa Ensor

**From Southern Sudan to the American Midwest:
The Journey of Nuer Refugees**

This paper discusses the lives and journeys of Nuer refugees who have resettled in the United States in order to escape the atrocities of the 20-year civil war in their homeland of southern Sudan. It provides a summary of anthropological and historical information regarding the Nuer and the nature of the conflict. The author also addresses cultural considerations that affect the processes of resettlement, analyzes demographic data and the social context of Nuer refugees living in the United States, and examines policies implemented to assist them in resettlement. This paper concludes by providing a preliminary evaluation of these policies and suggesting actions that might be taken in order to help Nuer refugees make the difficult transition to life in the United States.
Room 300, 2:25 p.m.

College of Business

Department of Accounting and Finance

Kurt Frank
Professor Robert M. Kiss

Company and Stock Analysis: Efficient Market Theory and Anomalies

The researcher did a regression analysis on a series 25 random stocks based on a fundamental analysis and price/book ratio divided by the industrial average. Other goals and areas of concentration for selecting the stocks in the selected companies are the following: finding anomalies, judging the management, evaluating the price, industry potentials (R&D, expanding market segments, under-served markets), trends in stock price and net contribution, quality of stock, capitalization, and finance. The procedures and methodology are to focus on an economic analysis, industrial analysis, and a company analysis. The researcher has calculated the intrinsic values in combination with the ratio rankings to test the efficient market theory and to find anomalies. Based on this information, the researcher will make a recommendation to Buy, Sell, or Hold the stock from the selected companies.
Room 350, 3:55 p.m.

Ruth Naebeck
Professor Zafar Khan

Mortgage Foreclosure and Renegotiation: Tax Implications

Under section 108 of the internal revenue code, a person who is forgiven for all or a portion of their mortgage debt must pay federal income taxes on the

forgiven debt unless they are filing for bankruptcy. This forgiven debt is known as discharge of indebtedness (DOI) income. Due to the current condition of the real estate market, foreclosures and renegotiations without bankruptcy are increasingly common with high interest adjustable rate mortgages. Congress sought to change section 108 to exclude mortgage indebtedness on a taxpayer's principal residence for up to \$2,000,000. On December 20, 2007, President Bush signed HR 3648 (Mortgage Forgiveness Debt Relief Bill of 2007) into law. This bill will remain in effect until January 1, 2010. The focus of this paper is the impact under the old and new legislation on different classes of taxpayers in different income brackets.

Room 304, 10:00 a.m.

Jingjing Zhou
Professor D. Robert Okopny

Identification of Perceived Common Success Attributes in the Internal Audit and Music Professions: A Survey of Professionals

The researcher developed a survey instrument based on the literature regarding the disciplines of internal audit and music concerning attributes identified for successful careers. This survey will be administered to professionals in southeast Michigan in both disciplines. Additionally, the surveys will be administered to two upper level EMU classes, one in internal auditing and one in music. The results of these four surveys will be analyzed using nonparametric statistics. The primary question is whether success attributes in music mirror those in internal auditing. In answering that question, the survey results from internal audit and music will be compared. Also, the students' results will be compared to their respective professionals to examine whether there is a common understanding of these success attributes.
Room 330, 3:15 p.m.

Department of Management

Kasia Czajka
Carrie Fontana
Emily Sutherland
Kim Thomas
Professor Sanjib Chowdhury

Job Satisfaction, Organizational Commitment, and Intention to Quit in a Contemporary Organization

For several decades, the research on job satisfaction, organizational commitment and intention to quit has resulted in a variety of results. This report provides a theoretical model based on research conducted in previous studies and additional hypotheses formed by the research group, which in turn provides a theoretical model. The implications of the study for today's workforce managers suggests that an

employee's level of commitment to the organization and job satisfaction can be positively impacted by the employee's perception of the fairness of rewards distributed within the organization (i.e., bonuses, compensation, etc.). Improving this perception can have a significant impact on organizational success. The results of the study also indicate that enhancing certain job characteristics such as friendship and the level of feedback received by employees can also positively impact job satisfaction and commitment to the organization.

Room 320, 9:20 a.m.

Rebecca Clark de Castillo

Professors Eric Schulz and Megan Endres

Averting the Retirement Savings Crisis in the U.S.: Determinants of Pension Allocation and Investment Strategies

It is estimated that only 36 percent of those eligible to participate in an employer's pension and savings plan actually participate in these plans. It is virtually certain that today's young workers will face tough retirements without substantial savings in private retirement plans. Understanding employee characteristics that may impede organizational efforts to encourage participation in private pension plans takes on greater poignancy with the impending retirement of the baby boomer generation. This study presents the results of an examination of the determinants of pension allocation and investment choices. A laboratory study of undergraduate and graduate business students was utilized to collect data for this investigation. Demographic information, financial experience, and attitudinal/dispositional characteristics of subjects were examined to assess their independent and interactive effect on investment strategies and deferred income allocation decisions. The implications for organizations assisting in the financial planning of their employees are discussed.

Room 300, 2:45 p.m.

Nicole Johnson

Amber Gwynn-Powell

Professor Sanjib Chowdhury

Individuals' Positive Perception of Diversity, Task Interdependence, and Goal Interdependence and its Effect on Developing and Implementing Innovative Behavior

This study was designed to test whether individual positive perception of diversity has a positive effect on developing and implementing innovative behavior. The study also tests the relationship between perceived goal interdependence and developing and implementing innovative behavior and the relationship between perceived task interdependence and developing and implementing innovative behavior. The focus of this research was on ABC International, Inc.*, one of the world's largest U.S.-based Japanese-owned automotive suppliers of advanced technology,

systems, and components. Their goal is to gain market share and exceed customer expectations. To that end, they have defined principles that guide their corporate actions, one of which is supporting individual spirit and innovation.

Room 320, 9:00 a.m.

College of Education

Department of Leadership and Counseling

Thyagarajan Ammachathram

Professor David Anderson

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

This study identified the extent of various institutional support services and assistance offered to quota-based students in Indian higher education. The study emphasizes the past socialization behaviors that affect the quota-based students' educational endeavors and examines the impact of institutional practices. We address cultural differences among these students due to inadequate socialization, cultural deprivation, and accumulated environmental deficits. Van Maanen and Schein identified organizational socialization as a part of role transitions both into and within an institution. This study examines the impoverished background of quota-based students in terms of origin, race, ethnicity, income levels, and previous educational equity and its correlation with their performance and success in college life. This study has provided a better understanding for public institutions that admit predominantly quota-based students and recommended successful strategies to develop programs that will insure improved graduation rates and help to gain better educational equity among these students.

Room 320, 3:15 p.m.

Carin Barber

Professor James Barott

Communities in Southeast Michigan: The Foundation of EMU Student Culture

The researcher investigated the student culture at Eastern Michigan University (EMU). Rather than operating under the premise that student culture is formed within the confines of the university once students matriculate, this study considered the surrounding communities, specifically examining culture transmission in communities and how hometown cultural characteristics are brought with students onto the campus. The research identified 53 communities in southeast Michigan that are feeder communities for EMU, specifically for on-campus housing. Communities in southeast Michigan were

analyzed by variables such as poverty level, residential density, and median household income. Through investigating the correlation between community characteristics and student characteristics, the researcher was able to illuminate how the cultures in southeast Michigan permeate the EMU campus.
Room 350, 10:30 a.m.

Theresa Bolster
Professor Sue Stickel

Relationship of Marital Quality and Stability in Couples Who Have Cohabitated Premaritally

The researcher conducted a literature review of the various studies related to marriage quality and stability in couples who cohabitated prior to marriage. She explored multiple variables associated with cohabitating couples that have been studied in the research. The majority of the research indicated that couples who lived together prior to marriage were more likely to have poorer marital quality and stability. Further research is needed to determine whether the experience of cohabitation or factors associated with cohabitating couples contribute to poorer marital outcomes.
Room 310, 2:15 p.m.

Marlena Bravender
Professor David Anderson

Social Learning and its Importance to an Increased Feeling of Affiliation among Students in an Online Classroom

The researcher investigated and compiled theories from social psychologists to discover an increased understanding of how social cues and perceptions should be an integral part of online learning. Specifically focusing on social learning and motivation, the researcher examined creations of various social cues in an online classroom. Further study showed, through a range of interactive tools, how those perceptions and judgments could affect the feeling of affiliation related to students within an online class setting. All of the subject matter was reviewed to lend itself to the creation of an evaluation tool that could help present an avenue for instructors to view any social learning that had taken place.
Room 310, 9:30 a.m.

Inna Gorlova
Professor Eboni Miel Zamani-Gallaher

A Multiple Streams Analysis of the Impact of Globalization: The Case of One Russian Community College

This study contrasts the politics of access and curricular reform in lieu of globalizing behaviors affecting community colleges in Russia and the United States. More specifically, the policy climate relative to

global forces in response to shifting economics, emerging technologies, changing demographics, and migration of people is addressed in terms of impact on the open admissions environment at one Russian community college in Voronezh (Central-Chernozem Region of Russia). This policy analysis addresses the evolution of three global behaviors: (1) homogenization, (2) internationalization, and (3) multiculturalism. Kingdon's Multiple Streams Policy Framework and Globalization Theory serve as the theoretical lens in illuminating globalization within two-year colleges of higher learning and in understanding the politicized environment for equalizing access and progressing internationalization and multiculturalism in community colleges.
Room 350, 11:10 a.m.

Jessica Hale
Professor Martha W. Tack

A Preliminary Rubric for Assessing and Stimulating Quality in Effective Online Threaded Discussions

Using relevant literature, faculty participation, and student feedback, the researcher has designed a preliminary rubric to structure, guide, and assess quality in effective online threaded discussions. This evaluative tool can be used by distance education faculty to maximize quality and to enhance student motivation in online discussion settings. Information for this qualitative study was obtained using multiple focus groups, open-ended questionnaires, and individual interviews with graduate students as well as distance education faculty experienced in conducting online threaded discussions. All interviews were audio-recorded, and transcripts were produced; notes from focus-group sessions and open-ended questionnaire responses were compiled as well as sorted. All content was then examined for categories and themes, which were considered in creating the preliminary rubric focused on quality factors to be assessed in online threaded discussions.
Room 310, 9:30 a.m.

Chiharu Hensley
Professor Dibya Choudhuri

Experiences of Parents Who Have Preschool or School-Age Children with Special Needs

I am investigating the services used by parents of children with special needs in Michigan and their effectiveness in reducing their stress levels and increasing their coping skills. An online survey is being used to collect data regarding the parents' stress levels and experience of receiving services provided for helping such parents. My presentation will include a review of literature, description of research methods, results from the current study and its limitations, and recommendations for further studies.
Room 350, 11:30 a.m.

Wan-En (Joyce) Leu

Professor Elizabeth Broughton

Exploring Potential Stressors, Counseling Service Uses, and Effects of Different Counseling Styles on International College Students

With the growing international population on college campuses, there is an increasing need for university counseling centers to address foreign students' mental health issues. Being far from their home countries, international students are often under many different stressors, including language proficiency, adjustment to the U.S. culture, and financial burdens. However, unlike American students, international students tend to underutilize counseling services. Counseling styles also affect international students' attitudes toward seeking counseling. This review will explore the potential stressors and counseling services usage among international students at Eastern Michigan University as well as the possible effects different counseling styles may have on such population.

Room 310, 9:30 a.m.

Charles Muwonge

Professor James Barott

Superintendent of Catholic Universities and Colleges

This research explored the administrative structure used by the Catholic Church as it seeks to act as superintendent of universities and colleges. I investigated the governance system of the church grounded in the elite and symbolic framework and included a historical treatise that examined how the Catholic Church has influenced trends in higher education. I considered the mechanisms in place to ensure that the Catholic Church maintains its role as superintendent of Catholic schools. I attempt to show how the Catholic higher education model is designed to protect its technical core, which is the training of ministers.

Room 350, 1:45 p.m.

William Ssozi

Professor James Barott

The Genesis and Evolution of Catholic Schools in Hoima Diocese, Southwestern Uganda

I am studying the establishment of Catholic schools, how they are managed, and how they have evolved in Southwestern Uganda. This study is meant to enhance my professional development as a prospective educational leader in these parochial schools. This research follows the historical interpretivist approach as well as use of ethnographic tools. Preliminary findings indicate that there has been a marked change not only in the core technology but also in the management of these schools arising from the changes in the task, managerial, and resource environment. This study will seek to draw the overall

implications of these changes for an educational leader of these schools in Uganda.

Room 350, 10:50 a.m.

Richard Weigel

Professor James Berry

Essential Knowledge for School District Leaders

School administrators are given multiple lists of suggestions and approaches to improve schools and student achievement from a variety of sources. The problem may not be "what" to do but "how" to do it. There is a need to more clearly identify and define skills for school leaders in order to meet the needs, changes, and demands on public schools today. Research and clarity about leadership skills is essential for improving what happens in our schools. With the demand for changes in our education system, we must reflect on how our school leaders use essential skills to bring about transformation. This poster presentation will address several different concepts: It will explore ideas for school improvement from different authors; it will list skills required for school leadership success; and the Interstate School Leaders Licensure Consortium (ISLLC) standards will be reviewed in light of the components necessary to improve schools and acquire the skills for leadership success. A survey instrument will be presented that elicits responses from practicing schools leaders about the skills they perceive as the most important in order to accomplish their tasks.

Room 310, 9:30 a.m.

Department of Special Education

Anna K. Courage

Professor Ann Orr

Teacher Attitudes toward the Inclusion of Students with Special Needs

This study explores the factors that contribute to teacher attitudes toward the inclusion of special education students. Research indicates that positive attitudes toward inclusion are correlated to successful implementation of inclusion programs, reflecting best practices in special education. Factors related to teacher attitudes toward inclusion are school resources, teacher quality and education, teacher preparedness, teacher perceptions regarding education, and parental involvement. This study examines teacher attitudes through two interviews with eight teachers in the Metro Detroit area. Four randomly selected schools in one district are included. Findings will inform stakeholders about local inclusionary practices and provide information as to inclusion supports and barriers.

Room 320, 3:35 p.m.

Lisa Mosser-Desnoyer
Professor Ann Orr

EMU Special Educators in Their First Year of Teaching: Relationship between Training and Service

The widespread practice of including students with exceptionalities in general education classrooms has led teacher preparation programs to examine the institution's role and responsibilities in preparing new educators for teaching in inclusive settings. This presentation will share the results of a qualitative multiple case study in which a select group of EMU Special Education graduates were interviewed about their experiences with inclusion during their first year of teaching. Findings help to describe inclusionary practices in area school districts and also inform the College of Education as to the appropriateness and efficacy of our teacher preparation programs.
Room 320, 9:40 a.m.

John Planck
Professor Philip Smith

Balancing Expectations of Special Education Students: Real and Fulfilling Goals

Special educators, parents, and students with disabilities may all have different academic and life expectations. I considered the factors that influence the continuum of possible expectations for a particular student in order to determine the extent to which they differ. Some expectations may be compromised, while others will be real and fulfilling. Resolving potential expectation gaps to better balance student goals is important. Balanced expectations in special education should be considered to combat the current trend of underachievement. I explored special education and disability studies literature to find ways to connect expectation-setting with ableism and inclusive education and to discern bias toward the expectations of persons with disabilities.
Room 350, 2:05 p.m.

Carolyn Potts
Professor Sarah Ginsberg

Dysphagic Patient Compliance with Thickened Liquid Recommendations

Patient noncompliance with dietary modifications can be a significant barrier to the management of dysphagia. The purpose of this qualitative study, sponsored by the 2006-2007 Students Preparing for Academic and Research Careers (SPARC) Award, was to better understand the decisions patients make regarding dysphagia recommendations. Adherence/compliance research from the field of behavioral medicine provided the theoretical framework for this study. The presentation will focus on preliminary study results and factors that

potentially influence patients' compliance with dietary recommendations.
Room 350, 2:25 p.m.

Jeannette Woltmann
Professor Steven Camron

Workload Analysis in Recruitment and Retention of Speech Pathologists

Data indicate a critical shortage of speech pathologists in schools in the United States. The projected need for speech pathologists is estimated at 57,000 job openings by 2010. Numerous factors have contributed to changes in roles and responsibilities of the speech pathologist in the school settings. Working conditions related to unmanageable caseloads and excessive paperwork have been cited as major issues in job satisfaction for speech pathologists. The failure to acknowledge the added workload requirements of speech-language pathologists has resulted in problems for districts in recruiting therapists for open positions and retaining competent speech pathologists in schools. Research is examined for the use of a workload analysis approach for establishing speech caseload standards in schools.
Room 320, 4:15 p.m.

Department of Teacher Education

Maria Gonzalez-Allen
Professor Joe Bishop

Post-Secondary Education and the International Student

One challenge international students in American K-12 Education face is limited access to post-secondary education. International students enjoy certain entitlements to American public education in their K-12 years. However, once they graduate, they face narrowed accessibility to college due to issues with residency and documentation. Most of these students see this as a complete lack of accessibility, though they may have been exemplary students throughout secondary school. Universities decide for themselves what admissions policies are. This research to date has illuminated discrepancies between the written admissions policies and the interpretations thereof in regards to residency and documentation status by universities. This research will analyze these admissions policies of a few local post-secondary institutions and question the rationale behind them. The goal of this research is to connect these students with universities that offer them favorable admissions policies.
Room 350, 2:45 p.m.

Sara Hammig
Professor Ann Orr

Post-Secondary Strategies for Teaching Students with Learning Disabilities

Students with learning disabilities account for the largest portion of students with disabilities among students enrolled in post-secondary education. However, research indicates a gap between evidence-based practices for post-secondary students with learning disabilities and classroom pedagogy. This synthesis examined current research on beneficial methods for in-class instruction involving post-secondary students with learning disabilities. Research was categorized by type of assistance including universal design methods, student specific techniques, assessment considerations, and assistive technology.
Room 320, 3:55 p.m.

Michael F. Hull
Professor Kyung-Hee Kim

Effects of Name-Cards Method on Students' Participation and Academic Achievement in a College Statistical Application in Educational Research Class

This study examines whether a name-cards method increases college students' participation and achievement compared to the traditional hand-raising method. Data were collected on a mixed gender, ethnically diverse, graduate level sample enrolled in two sections of EDPS 621 on separate campuses of EMU. One section was assigned to a control condition with traditional hand-raising method, while the other was assigned to a treatment condition using the name-cards method. Students in the traditional condition independently choose to respond. In the treatment condition, the instructor randomly selected a numbered card after each question and asked the corresponding student for a response. Participation, number of questions asked per class, and correctness of answers were tracked. Scores on pre-assessment, mid-term, and final project are compared to assess the effectiveness on learning.
Room 320, 10:00 a.m.

College of Health and Human Services

School of Health Promotion and Human Performance

Michael Busa
Professor Stephen McGregor

Control Entropy (CE) of Unfiltered: Triaxial Accelerometry Signal during Incremental Treadmill Exercise

The purpose of this study was to examine the CE response to pace during incremental treadmill exercise. Ten trained and ten untrained/moderately trained runners performed incremental exercise on a treadmill (True ZX-9?). Each subject stood, unmoving for 2 minutes, then began walking at 2 km/h and speed was increased 2km/h every 2 minutes until voluntary exhaustion. Data revealed that CE increased from standing to walking and continued to rise until the walk-to-run transition was made and thereafter, CE declined until exhaustion. Because CE is indicative of system constraint, this suggests that walking is less constraining to the system than standing. Conversely, running faster increases system constraints. Metabolic data were also collected for these tests and statistical analysis of this was done comparing each individual axis of movement to the metabolic cost of the exercise.
Room 300, 11:30 a.m.

Frank Joseph Fedel
Professor Sema Kalaian

Efficacy of First-Person Perspective Multi-media versus Conventional Class Exposure to a Practical Human Anatomy Lesson

The purpose of the study was to compare the effects of a "first-person perspective" online, multi-media lesson in human anatomy with a face-to-face lesson, on recall and practical application of information. Fifty first-year human anatomy students were randomized into two groups; one attended a conventional class session with lecture and a hands-on demonstration, and the other viewed the lesson as both a multi-media video of the lecture and a first-person perspective video of the demonstration online. Both groups attended the lesson on the same day and at the same time; both lasted for one hour. At the end of the hour, students from each group took a written exam and a practical exam. Results are presented and discussed.
Room 330, 1:45 p.m.

Jacob L. Lindquist
Professor Alicia Davis

Efficiency Trends of Upper Extremity Prosthetic Cables and Housing

The goal of this study is to better understand upper extremity prosthetic harness positioning and configuration of cable/housing used to generate the forces required to operate a standard 5XA terminal device. Standard ergonomic data of the average human will be used to design a testing apparatus to simulate clinical patient positioning. This apparatus will be used to systematically test three styles of cable in four housing configurations. Trends will then be analyzed to determine optimal cable efficiency for upper extremity patients.
Room 310, 11:00 a.m.

Julie McLean

Professor Tony Moreno

The Influence of Yoga on Flexibility Characteristics Among NCAA Division I Intercollegiate Baseball Athletes

Among baseball athletes, joint range of motion (ROM) is an important physical characteristic with respect to injury prevention and performance. Professional and intercollegiate programs employ various methods of flexibility training; however, no literature exists with regard to the effect of a yoga-based training program. The purpose of this investigation was to determine the effects of a sport-specific yoga program among NCAA Division I intercollegiate baseball players. Subjects were assessed for shoulder joint, hamstring, and groin ROM and subsequently followed a 12-week, 2x/week yoga intervention. Post-test results indicated significant improvements in SH and HS ($p < 0.05$). Future investigations should evaluate the influence of longitudinal yoga interventions on injury incidence and specific performance parameters important to the game of baseball.

Room 300, 10:50 a.m.

Paul Pancoe

Jessica Nietrzeba

Professor Brenda Riemer

Third Annual Women's Athletics Bowling Fundraiser

The Third Annual Women's Athletics Bowling Fundraiser follows in the footsteps of two previous successful events. Last year, graduate students Dan Murphy and Mekye Phelps set and reached their target goal of \$10,000 for the event. The event is put on by graduate students of the Sport Management program, and although we do receive credit for doing so, the main goal of the project is to create an event that brings together students, professors, athletes, and the community in an effort to raise awareness and funds for women's athletics here at Eastern Michigan University. Although the obvious goal is to raise funds, also important is the planning and promoting learned by those directly involved. Students take control and lead this event from the ground up, from reserving the bowling alley to contacting local businesses in search of sponsorships and donation gifts. What most students read about putting on an event in a book in any marketing or public relations class, those involved with this great event are provided with firsthand experience.

Room 300, 10:30 a.m.

Ian Ratz

Professor Stephen McGregor

Adaptations in Maximal Accumulated Oxygen Deficit (MAOD) after a "Living High-Training Low" Approach Using Simulated Altitude Exposure

Much research has been completed to understand the aerobic adaptations to altitude exposure (AE) and training. However, potential anaerobic adaptations have received far less focus. Further, few studies have examined AE for short time frames (e.g. seven days). Therefore, the purpose of this research was to determine if a seven-day simulated AE could elicit improvements in the anaerobic capacity of trained cyclists. The College HSRC approved this study, in which seven trained male cyclists voluntarily participated. Submaximal and Maximal Mean Power Output in four minutes ($MMPO_{4min}$) were performed on Velotron cycle ergometers, and Maximal Accumulated Oxygen Deficit (MAOD) was determined by open circuit spirometry (Jaeger Oxycon). These measures were reevaluated after a seven-night exposure to a simulated AE of 2,500m. Finalized results of current testing to determine the effect of seven-day simulated AE will be presented.

Room 300, 11:10 a.m.

School of Health Sciences

Michelle Authement

Brenda Bradley

Melissa Clayton

Betsy Idziak

Melissa Kaufman

Adrienne Rutherford

Kimberly VanderKlok

Professor Elizabeth Francis-Connolly

Mothing Young Adult Children: Occupation, Meaning, and Experience

Although mothering is one of the oldest existing occupations, it is important to note that it is also one of the most unappreciated. As a result of this lack of recognition, there has been very little research exploring the experience of mothering. Further, the extant research focuses on mothering young children or the transition to parenthood. Our research was conducted using grounded theory method to gain a better understanding of the views and experiences that exist for women who mother young adults. Interviews were conducted with both mothers and unrelated young adult children between the ages of 18 and 29.

Room 310, 2:15 p.m.

Kathleen Gutkowski
Rena Kolarik
Allison McIntyre
Angela Muscato
Professor Gretchen Dahl Reeves

Sensory Processing, Body Awareness, and Self-Concept in Adolescent Girls with Major Mood and Affective Disorders

The purpose of our study is to examine sensory processing, body awareness, and self-concept in adolescent girls with major mood/affective disorders. Three groups are being examined. The control group is composed of typically developing adolescent girls between the ages of 13 and 17. The two experimental groups are adolescent girls who are seeking outpatient psychiatric services for a major mood/affective disorder and who have a history of self-mutilation, and adolescent girls who are seeking outpatient psychiatric services for a major mood/affective disorder who do not have a history of self-mutilation. Four assessments are being used: the Sensory Profile, the Piers-Harris 2, the Body Investment Scale, and the Draw a Person: Screening Procedure for Emotional Disturbance. Physiological tests are also performed to evaluate heart rate, temperature, and respiratory rate when presented with various sensory stimuli.

Room 310, 2:15 p.m.

Terrie Holewinski
Professor George Liepa

Positive Impact of Brief Interventions by a Registered Dietitian During Exercise Sessions in a Phase 2 Cardiac Rehabilitation Setting

The present study was designed to evaluate the impact that the presence of a registered dietitian (RD) has on weight loss and nutrition knowledge of cardiac patients. An RD provided weekly nutrition counseling over a 4-month period. Gain in nutrition knowledge and body weight was determined. Subjects were also asked if they valued the presence of an RD in their sessions. Mean nutrition knowledge scores improved significantly and patients were shown to make improved food choices. Weight loss also improved with an RD present. Nutrition referrals for CR patients to receive individual counseling at an out patient setting increased during this time frame. Further program modification and out monitoring continue to be in progress.

Room 310, 9:30 a.m.

Danielle Karsies
Professor George Liepa

Polycystic Ovary Syndrome (PCOS) and Other Androgen Excess-Related Conditions: Can Changes in Dietary Intake Make a Difference?

Polycystic ovary syndrome (PCOS) is the most common endocrine disorder found in women of

reproductive age and is one component of the metabolic syndrome. Most clinicians feel the optimal treatment for PCOS should be diet and exercise. A review of literature suggests a diet high in fiber and complex carbohydrates, with moderate levels of protein and adequate fat to meet essential fatty acid needs. It should also focus on omega-3 fatty acids and monounsaturated fatty acids and contain limited amounts of trans and saturated fats. In addition, a multivitamin and mineral supplement providing no more than 100% of the Dietary Reference Intake (DRI) for all nutrients, with additional calcium, vitamin D, and magnesium may also be beneficial. Dietary food items that contain compounds with anti-inflammatory properties, such as red wine and omega-3 fatty acids, should also be emphasized. These dietary adjustments should significantly improve many of the symptoms that accompany PCOS.

Room 350, 3:15 p.m.

Susan Leslie
Professor George Liepa

Nutrition Education Resources Used by Renal Dietitians for the Education of the Outpatient Dialysis Population in Michigan

Kidney disease and end stage renal disease rose 10 percent from 2001-2004 throughout the United States. Nutritional management is a crucial component to preventing malnutrition in this population. This survey-based research study was designed to evaluate educational resources used by renal dietitians in outpatient dialysis. One hundred and twenty renal dietitians in Michigan were contacted to participate, and one hundred one surveys were completed (84% response rate). Renal dietitians rated educational resources based on frequency, efficacy, and existing limitations. Input was obtained regarding the degree of influence of specific groups on renal patients in promoting adherence to nutrition guidelines. Albumin outcomes for Michigan were compared to outcome goals set by Renal Network Eleven. Descriptive statistics included comparisons using cross tabulation data. Results noted the most frequently used resources were not effective. In addition, albumin outcomes for Michigan (70.7%) compared to Renal Network Eleven outcomes (80.1%) showed current interventions were not effective.

Room 310, 9:30 a.m.

Christina L. Leventhal
Professor Stephen Sonstein

Outcomes of Patients Transferred to the University of Michigan Health System on a Short-term Ventricular Assist Device for Cardiogenic Shock

Short-term ventricular assist devices (VADs) are mechanical pumps that are used to temporarily support a patient who is in cardiogenic shock. These VADs are effective in sustaining a patient's life until he or she

can be transferred to a tertiary cardiac center. The researcher examined patients' clinical status at the time of transfer and used univariate analysis to determine which factors are likely to predict a successful outcome. Multivariate analysis showed that younger age and better kidney function were prognostic variables in the patients' 30-day and long-term survival. These factors improve the chances of a patient becoming a heart transplant candidate and increase the probability of long-term survival.

Room 350, 3:35 p.m.

Kristopher Osher

Mariam Zaiat

Emily TenEyck

Professor Gretchen Dahl Reeves

Assessing Outcomes of a Sensory-based Program in a Community Pediatric Clinic

We are assisting our colleagues at a local community agency that serves children with special needs in assessing the outcomes of their intervention programs. We reviewed the literature concerning outcome measurement in pediatric settings for individuals with a variety of diagnoses. Relevant topics included parent satisfaction, family-centered service, and goal attainment scaling. The research revealed that parent and family involvement is an integral part of measuring outcomes. Obtaining outcome measures is imperative to the effective intervention with clients in today's dynamic health care climate. However, in many practice settings, a consistent method of collecting outcome data is not established. We are working with the community agency to establish a consistent and informative method to track outcomes.

Room 310, 2:15 p.m.

Rae Lynn Schmidt

Professor George Liepa

Impact of Nutrition Education on Dietary Habits of High School Females

The objective of this study was to explore the impact of nutrition education on the nutritional intake of high school females. Two groups of females from Saline High School in Saline, Michigan, participated in the study. Age, height, weight, and activity level were obtained from each female in the control group (N=5) and the experimental group (N=17) by completion of a survey, and each female completed a three-day food diary for two weekdays and one day during the weekend. No significant differences were found between the groups in age, weight, height, or BMI. Diet analysis of the three-day food diaries showed significant differences ($p < 0.05$) in intake of dietary fiber and several vitamins and minerals. It was found that students who took a nutrition education class consumed more dietary fiber and consumed vitamins and minerals in amounts closer to the DRI.

Room 310, 9:30 a.m.

Rukmini Sen

Professor Anahita M. Mistry

Nutrient Intakes in College Students in a Midwestern Regional University Compared to the Recommended Dietary Guidelines

The prevalence of obesity is problematic in the United States. The objective of this study was to determine the extent of obesity in Eastern Michigan University students and evaluate their diet quality. Body Mass Index (BMI) of students (19-30 years, n=100) as a benchmark of their weight category was measured from self-reported heights and weights. Intakes of macronutrients and key micronutrients were assessed from three-day food diaries maintained by participants and compared with the Dietary Reference Intake Standards. Results indicated that 4% of students were underweight, 52% were within a normal weight range, 28% were overweight, and 16% were obese. There was no linear relationship between BMI and total energy intake. The consumption of most nutrients, except sodium, was within the Recommended Dietary Guidelines. Since 44% of students at EMU are overweight or obese, a health promotion campaign aimed at weight control is warranted.

Room 310, 2:15 p.m.

School of Social Work

Argenis R. Conner

Professor Joan Abbey

The Statewide Evaluation of Michigan's Infant Mental Health Model

This is a presentation of the early results of the Statewide Evaluation of Michigan's Infant Mental Health Model funded by the US Department of Justice, Office of Juvenile Justice and Delinquency Prevention (OJJDP). This evaluation of Michigan's homegrown model of home visitation services for infant and toddlers with regulatory disorders or developmental delays and/or whose primary caregiver has mental disorders is being funded by OJJDP to determine if the model is a best-practice program for preventing child abuse/neglect and serious emotional disturbance in children. Early process and outcome results for the first 60 families in the study will be presented.

Room 304, 9:00 a.m.

Marie Schaefer

Professor Marilyn Wedenoja

Native American Empowerment Through Language Revitalization

Language is an essential part of personal identity and worldview. In this research, we define empowerment and the connections among Native American language, culture, and identity and review current Native American language revitalization programs and

their impact on individuals and tribes. This research will look at how language revitalization programs affect levels of empowerment, specifically, at how the degree of empowerment of Michigan Native American tribes who have native language revitalization programs, compared to those who do not, could be measured. This proposal recommends utilizing Ruth Alsop and Nina Heinsohn's (2005) questionnaire to find the degree to which direct indicators of empowerment are present in enrolled members of Michigan Native American tribes. Based on this research proposal, generalizations regarding the level of empowerment of federally recognized Michigan Native American tribal members, in relation to language revitalization programs, can be made.

Room 304, 9:40 a.m.

Elizabeth Trapp

Pierre Rice

Professors Elvia Krajewski-Jaime and Peggy Wiencek

Teen Biz: A Community Collaboration Towards Adolescent Empowerment

This presentation will describe the trials and tribulations of planning and implementing an empowerment-based program that served adolescents with special educational, emotional, and behavioral needs. The "Teen Biz: Teens in Business Through the Arts" Program was spearheaded by the Institute for the Study of Children, Families, and Communities at EMU, in collaboration with Michigan Works! and the Ypsilanti Schools. The program was designed to teach low-income, culturally diverse youth important work and life skills through the arts to better prepare them to enter the work force after completing high school. Results of the program evaluation will also be presented.

Room 304, 9:20 a.m.

College of Technology

School of Technology Studies

Christopher Kluse

Professor Sema Kalaian

A Designed Experiment to Determine the Effects of Melt Temperature, Hold Pressure, Hold Time, and Nylon Moisture Content on Surface Profile

Various types of polymers are utilized in the automotive industry. To exploit the unique properties of these polymers, one must have the ability to effectively manufacture product using conventional injection molding equipment. The objective of this project was to determine if melt temperature, hold pressure, hold time, and nylon moisture content have a significant effect on surface profile during injection molding of TPO fascia. A 150-ton injection molding machine was utilized to conduct the experiment. In

order to determine the effects of melt temperature, hold pressure, hold time, and nylon moisture content on surface profile, a thirty-two run, 2⁴ full factorial designed experiment was utilized. In this experiment, the researchers chose factors that affect surface profile for a molded TPO fascia. Extensive opportunity exists for subsequent researchers to explore significant affects of injection molding parameters on various applications utilizing TPO.

Room 330, 10:30 a.m.

Sangeeta Yadav

Professor Subhas Ghosh

Smart Textiles Performing Unusual Tasks

During recent years, a revolution in textile technology has given birth to what is called "Technical Textiles" or "Smart Textiles." These textile products have unusual aesthetic, mechanical, electrical, and magnetic properties that allow them to perform in a manner never before deemed possible. This presentation covers some very important inventions of the century in the textile field: Vivo metric's life shirt system, which is very useful to the pharmaceutical, clinical, and health care research; Airvantage adjustable insulation, called BLEEX; and Speedo's Fastskin FSII swimsuit, which enhances one's ability to adjust with changing weather, loads, and speed. This field has evolved in versatile application areas because of its ability to club with other fields of composites, electronics, medical, space, sports, and so on.

Room 330, 10:50 a.m.

School of Engineering Technology

Sarjak Amin

Professor John Texter

New Polyurethane Resins for Epoxy Replacement

Microemulsion and solvotrope polymerizations are being developed for synthesizing polyurethane prepolymers from the step monomers. These prepolymers are converted to resins using new secondary-amine cross-linking agents to produce polyurethane resins suitable for replacement of epoxies in primers used for jet aircraft. Kinetic, thermodynamic, and thermomechanical characterization methods are used to provide insight into the step polymerization processes and the cross-linking processes and to compare physical and performance properties with the epoxy systems to be replaced. These analyses include microcalorimetry of prepolymer formation kinetics, dynamical mechanical analysis of resins, and diffusing wave spectroscopy of film formation relaxation processes.

Room 350, 4:15 p.m.

Agnishikha Choudhuri
Professor Shinming Shyu

The Quest for Quiet: Noise Management in Interior Spaces

Among the various environmental concerns, the effects of noise pollution are considered less harmful than other forms of pollution. The researcher investigated why there is not very much information on this. Readings showed that a lack of government funding contributes to noise pollution not being treated as an important concern. There are several health effects that can be directly attributed to high levels of noise, including stress, anxiety, and hearing loss. This presentation also discusses possible ways to control noise levels in interior spaces.

Room 330, 2:05 p.m.

Christopher Crowe
Professor William Moylan

Construction Safety: Motivating for a Safer Jobsite

The researcher investigated motivation techniques and impetus behind motivating a workforce as traditionally applied and then compared motivation techniques as applied from sociological, psychological, and business perspectives. These findings were then applied to a preliminary survey of 25 individuals who evaluated those motivation techniques as applied to a construction jobsite.

Room 330, 11:10 a.m.

Ninad Dixit
Professor John Texter

Dielectric and Thermomechanical Analysis of T_g and T_m Transitions of PDMS-Based Marine Coatings

Commercial and developmental marine (fouling release) coatings based on polydimethylsiloxane (PDMS) have been studied by dynamical mechanical analysis (DMA) and by dielectric spectroscopy (DS). The T_g and T_m processes for PDMS in all of the samples were discernable in the permittivity and storage modulus spectra. They were also discernable in the DMA loss spectra, but in the dielectric loss spectra they could not be resolved among the additional loss mechanism that come into play. A loss mechanism at about 100 Hz was found by DS to be associated with the T_g . Over the 100-125°C range, a loss mechanism at about 3-4 Hz appears. Samples were examined as a function of thickness. Dielectric spectra showed increasing permittivity and loss values with increasing sample thickness, but DMA spectra generally showed an opposite trend.

Room 310, 11:00 a.m.

Dustin England
Professor John Texter

Reversibly Porating Materials and Coatings

A new class of hydrogel/solvogel copolymers has been derived by microemulsion polymerization of methacrylates and reactive ionic liquid surfactants in aqueous-methacrylate-surfactant microemulsions. Depending on the cross-linking density, the resulting gels (transparent or translucent) can be reversibly transformed into microporous or nanoporous materials with open cell structures via spinodal decomposition of the gel phases. Reversibility is aided by the cross-linking. The spinodal decomposition is induced by changing the solvent quality from good to poor for the copolymeric blocks containing the polymerized ionic liquid surfactant. They provide solvent-reversible opacity as an overcoat to otherwise transparent materials. With suitable cross-linking, such materials may also provide porous fabric coatings for repelling water while allowing vapor to freely permeate. Porosity varies with composition throughout the precursor, single-phase microemulsion domain. Conductivity studies provide transition markers for the onset of percolation through strings of reverse microemulsion droplets and for transformation to the irregular bicontinuous microemulsion mesostructure.

Room 330, 11:30 a.m.

Hong Gu
Professor John Texter

New High Charge Density Polymers for Printable Electronics, Sensors, Batteries, and Fuel Cell

Bulk and solution polymerization of reactive ionic liquid surfactants (RILs) yield easily engineered advanced polymers that can be tailored for diverse applications. Introductory results based upon an RILS composed of an amphiphilic imidazolium acrylate (IL) and a 2-acrylamido-2-methyl propylsulfonate (AMPS) are illustrated for humidity sensitive preparations suitable for ChemFETs, for proton conducting polymer electrolyte membranes (PEM) suitable for fuel cell fabrication, for lithium ion and silver ion conducting membranes suitable for fast ionic conducting batteries, and for high-k dielectrics based on in situ reduction of incorporated ionic silver.

Room 310, 11:00 a.m.

Ravi Joshi

Professor Vijay Mannari

Smart Polyurethanes with Selective Surface Properties for Marine Coatings Applications

Various eco-friendly approaches have been studied in the recent years for effectively controlling biofouling on to the marine structures. Amongst these, two commonly known approaches are (a) use of hydrophilic surfaces that control biofouling by resisting adhesion of organism on to the surface and (b) use of hydrophobic surfaces that function by facilitating their easy removal. The present study attempts to investigate amphiphilic surfaces for their effectiveness in controlling marine biofouling. Polyurethane surfaces containing tethered hydrophilic, hydrophobic, and amphiphilic moieties have been synthesized. The wetting behaviors of these surfaces, as a function of external environment, have been studied by Dynamic Contact Angle (DCA) measurements and their morphologies by Atomic Force Microscopy (AFM). The results from DCA, AFM, and bioassays with the green fouling alga *Ulva* showed that the amphiphilic surfaces have antifouling and fouling release potential and provide an insight into the scope for development of smart marine coatings.

Room 330, 2:25 p.m.

Vinod Kakde

Professor Vijay Mannari

Effect of Addition of Inorganic Corrosion Inhibitors in Sol-gel Coatings on Performance of Aerospace Aluminum Alloy

Effective pretreatment of aluminum alloys is critical to the success of protective coating systems for aerospace applications. Chrome-based pretreatments, while very effective in corrosion-resistance performance, have been targets for replacement due to their toxicity issues. There has been significant pressure to develop chrome-free systems to comply with the increasingly stringent regulations. Among many approaches to develop such systems, the organic-inorganic hybrid coatings based on Sol-gel technology has advanced rapidly. We have successfully developed a Sol-gel coating system based on Bis-ureasil type silane compounds. In the present study, inorganic inhibitors will be used to study their corrosion performance in Sol-gel matrix. Our study shows that by proper choice of sol-gel precursors, cross-linkers, and reaction conditions, very dense adherent and protective hybrid coatings on aerospace aluminum alloys can be obtained. Results of corrosion resistance studies—Potentiodynamic scans, Salt-spray resistance test—of various compositions and their comparison will be discussed.

Room 330, 10:00 a.m.

Karyn McKey

Professor Shinming Shyu

A Look at Airports, Present and Future

Air travel used to be an exciting experience, and it has certainly inspired the architecture and design of our century to a perhaps greater degree than anything else, including the automobile. Yet, because we as a nation have grown accustomed to the experience of flying, the airport and airplane now take on almost invariably negative connotations as being noisy, unsafe, overcrowded, and difficult to navigate. So the question is: What can designers do to facilitate a safer and more comfortable travel experience? An examination of air travel and airport stresses could explain what has happened over the past decade and how to address it.

Room 310, 9:30 a.m.

Division of Academic Affairs

Bioinformatics

Steve Lenk

Professor Xiaoxu Han

ELK: A Statistical Tool to Classify Microarray Data

Q5 is a composite classification algorithm that was applied to complete Mass Spectrometry (MS) data from human blood samples using Surface-Enhanced Laser Desorption/Ionization Time of Flight (SELDI-TOF) in an effort to properly classify samples from cancer datasets. Q5 was able to successfully classify MS cancer data. Q5 has the inherent limitation of having difficulties in classifying multimodal data where any given class has separate clusters, due to the use of global information only. The work described here was focused on classifying microarray datasets. The underlying method was to substitute the algorithms used by Q5 with algorithms that preserve local clustering information through each step of the process. Four new composite algorithms were developed. The new algorithms and Q5 were tested against cancer datasets using multiple sets of experimental parameterizations. Two of the new algorithms were able to classify two and three class leukemia data more accurately than Q5.

Room 330, 3:35 p.m.

Oral presenters by location and time

Session I:
9:00-10:15 a.m.

Room 300

9:00
Rachel Bricklin
Biology

9:20
Jacob Job
Biology

9:40
Olivia Munzer
Biology

10:00
Linda Joegiono
Lee Ann Soltis
Mathematics

Room 301

9:00
Allison Stein
History

9:20
Eric Christensen
Scott Kowalewski
English Language and
Literature

9:40
Meriah Sage
Communication and Theatre
Arts

10:00
Anke Thorey
Communication and Theatre
Arts

Room 304

9:00
Argenis Conner
Social Work

9:20
Pierre Rice
Elizabeth Trapp
Social Work

9:40
Marie Schaefer
Social Work

10:00
Ruth Naebeck
Accounting and Finance

Room 320

9:00
Amber Gwynn-Powell
Nicole Johnson
Business

9:20
Kasia Czajka
Carrie Fontana
Emily Sutherland
Kim Thomas
Management

9:40
Lisa Mosser-Desnoyer
Special Education

10:00
Michael Hull
Teacher Education

Room 330

9:00
Roshini Fernando
Chemistry

9:20
Meenal Mhaskar
Chemistry

9:40
Fatmagul Tuluoglu
Chemistry

10:00
Vinod Kakde
Engineering Technology

Room 350

9:00
Leanna Fortunato
Psychology

9:20
Erin Henshaw
Psychology

9:40
J. Robert Parker
Psychology

10:00
Sarah Wice
Psychology

Room 352

9:00
Catherine Adams
Hannah Morales
English Language and
Literature

9:20
Daniel Parker
English Language and
Literature

9:40
Julia Eussen
English Language and
Literature

10:00
Lisa Chizek
English Language and
Literature

Session II:
10:30-11:45 a.m.

Room 300

10:30

Jessica Nietrzeba

Paul Pancoe

HPHP

10:50

Julie McLean

HPHP

11:10

Ian Ratz

HPHP

11:30

Michael Busa

HPHP

Room 301

10:30

Nicole Bryant

English Language and
Literature

10:50

Hermione Gorney

English Language and
Literature

11:10

Emily Russell

English Language and
Literature

11:30

Jeffrey Butcher

English Language and
Literature

Room 304

10:30

Bruce Hammond

Political Science

10:50

Presentation Canceled

11:10

James McFarlane

Political Science

11:30

Heather Laird

Political Science

Room 320

10:30

Ya-Ju Chuang

Foreign Language and
Bilingual Studies

10:50

Elizabeth Ravelo-

McKinney

Foreign Language and
Bilingual Studies

11:10

Jacki Rinck

Foreign Language and
Bilingual Studies

11:30

Dace Koenigsknecht

Geography and Geology

Room 330

10:30

Christopher Kluse

Technology Studies

10:50

Sangeeta Yadav

Technology Studies

11:10

Christopher Crowe

Engineering Technology

11:30

Dustin England

Engineering Technology

Room 350

10:30

Carin Barber

Leadership and Counseling

10:50

William Ssozi

Leadership and Counseling

11:10

Inna Gorlova

Leadership and Counseling

11:30

Chiharu Hensley

Leadership and Counseling

Room 352

10:30

Kristin Adams

English Language and
Literature

10:50

Marcus Adams

History

11:10

Nasreen Islam

Psychology

11:30

Conan Baldwin

Economics

Session III:
1:45-3:00 p.m.

Room 300

1:45

Lauren Earls
Psychology

2:05

Kathryn Woods
Psychology

2:25

Matthew Klepac
SAC

2:45

Rebecca Clark de Castillo
Management

Room 301

1:45

Yi-Hsin Lu
Communication and Theatre
Arts

2:05

Steven Stuglin
Communication and Theatre
Arts

2:25

Joshua Jobst
Music

2:45

**Christine Waugh-
Fleischmann**
Art

Room 304

1:45

Andrew Winckles
English Language and
Literature

2:05

Jamie Jones
English Language and
Literature

2:25

Alison Malburg
English Language and
Literature

2:45

Kate Williams
English Language and
Literature

Room 320

1:45

Rebecca Torsell
Geography and Geology

2:05

Tracy Aris
Geography and Geology

2:25

Christopher Blough
Political Science

2:45

Kimberly McGrath
Political Science

Room 330

1:45

Frank Fedel
Technology Studies

2:05

Agnishikha Choudhuri
Engineering Technology

2:25

Ravi Joshi
Engineering Technology

2:45

Joshua Stumpf
Biology

Room 350

1:45

Charles Muwonge
Leadership and Counseling

2:05

John Planck
Special Education

2:25

Carolyn Potts
Special Education

2:45

Maria Gonzalez-Allen
Teacher Education

Room 352

1:45

Kari Brown
History

2:05

Rob Hardman
History

2:25

Wendy Molloy
History

2:45

Kayti Purkiss
English Language and
Literature

Session IV:
3:15-4:30 p.m.

Room 300

3:15
Douglas Jones
Psychology

3:35
Karen Cross
Political Science

3:55
Kylee Guenther
Political Science

4:15
Julia Sutton
Political Science

Room 301

3:15
Latasha Hailey
History

3:35
Geoffrey Krempa
History

3:55
Caleb Klingler
History

4:15
David Walton
History

Room 304

3:15
Sara Goletz
English Language and
Literature

3:35
Rachel DuBois
English Language and
Literature

3:55
Ryan Kerr
English Language and
Literature

4:15
Theresa Smith
English Language and
Literature

Room 320

3:15
**Thyagarajan
Ammachathram**
Leadership and Counseling

3:35
Anna Courage
Special Education

3:55
Sara Hammig
Teacher Education

4:15
Jeannette Woltmann
Special Education

Room 330

3:15
Jingjing Zhou
Accounting and Finance

3:35
Steve Lenk
Bioinformatics

3:55
Ke Zhu
Mathematics

4:15
Chakravarthi Nagolu
Physics

Room 350

3:15
Danielle Karsies
Health Sciences

3:35
Christina Leventhal
Health Sciences

3:55
Kurt Frank
Accounting and Finance

4:15
Sarjak Amin
Physics

Room 352

3:15
Jennifer Goodhue
English Language and
Literature

3:35
Monika Ehrlich
English Language and
Literature

3:55
Hava Levitt-Phillips
English Language and
Literature

4:15
Sarah Soebbing
English Language and
Literature

Poster presenters in 310 by time

Session I:

9:30-10:45 a.m.

Mercedes Quinteros
Biology

Alexis Stein
Biology

Karyn McKey
Engineering Technology

Polly Ricciardo
Foreign Language and Bilingual
Studies

Tegan Baiocchi
Geography and Geology

Leslie Van Veen
Geography and Geology

Terrie Holewinski
Health Sciences

Susan Leslie
Health Sciences

Rae Lynn Schmidt
Health Sciences

Marlena Bravender
Leadership and Counseling

Jessica Hale
Leadership and Counseling

Wan-En (Joyce) Leu
Leadership and Counseling

Richard Weigel
Leadership and Counseling

Kylene Bavers
Psychology

Laszlo Erdodi
Psychology

Lesley Pawluk
Psychology

Nicholas Velissaris
Psychology

Session II:

11:00 a.m. -12:15 p.m.

Leah Cook
Biology

Peter Wilson
Biology

Vasumathi Molugu
Chemistry

Swathi Ramaraju
Chemistry

Ninad Dixit
Engineering Technology

Hong Gu
Engineering Technology

Laura Ramm-Christensen
Foreign Language and Bilingual
Studies

Abby Boggs
Geography and Geology

Jacob Lindquist
HPHP

Jillian Carey
Psychology

Daniel Jacobson
Psychology

Gregory Pouliot
Psychology

Suzanne Hodge
Sociology, Anthropology, and
Criminology

Nancy Angelella
Amy Collings
Valentina Ivezaj
David Saunders-Scott
Ashley Weidemann
Psychology

Vivian Burwell
John Bennett

Indrani Datta
Elizabeth Habrecht
Maurice Slaughter
Biology

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

Andrew Gray
Chemistry

Balakrishna Kurva
Chemistry

Emily Otto
English Language and Literature

Rukmini Sen
Health Sciences

Theresa Bolster
Leadership and Counseling

Kevin Alschuler
Theresa Lynch
Psychology

Michelle Authement
Brenda Bradley
Melissa Clayton
Betsy Idziak
Melissa Kaufman
Adrienne Rutherford
Kimberly VanderKlok
Health Sciences

Kathleen Gutkowski
Rena Kolarik
Allison McIntyre
Angela Muscato
Health Sciences

Kristopher Osher
Emily TenEyck
Mariam Zaiat
Health Sciences

Andrea Abbas
Jose Paul
Sreelatha Ponnaluri
Biology

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

JillAnne Bauer, Graduate School
Lisa Mills Walters, Graduate School
Jeanne Torok, Graduate School
Jamie Jones, Graduate School
Marcy McShane, Graduate School
Carly Moe, Graduate School
Rebecca Torsell, Graduate School
Office of Research Development Staff
Richard Magyar, ORD

Other EMU Offices

The Student Center
Parking Control
University Marketing

Businesses

Tower Inn
Freedom Design
Standard Printing

Graduate Research Fair Planning

Deb de Laski-Smith, Graduate School
Interim Dean
Brenda Riemer, HPHP
Student Affairs Subcommittee of
Graduate Council

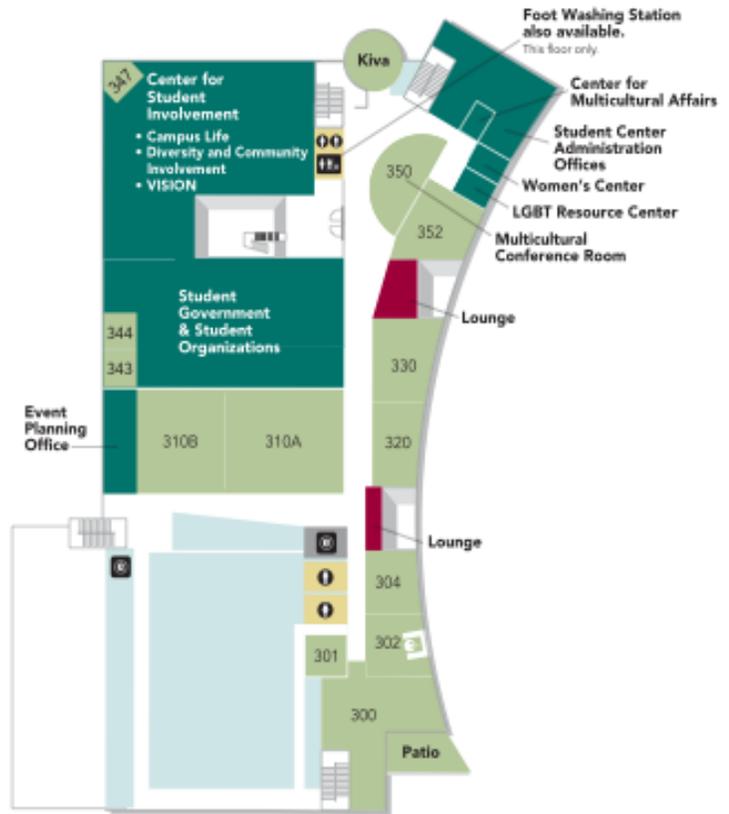
Faculty Judges

Joe Bishop, Teacher Education
*Timothy Brewer, Chemistry
Pauline Buchanan, College of Technology
Steven Camron, Special Education
*Deb de Laski-Smith, Graduate School
Subhas Ghosh, School of Technology Studies
Susan Gregory, School of Technology Studies
Xiaoxu Han, Mathematics
Benjamin Keller, Computer Science
Linda Kinczkowski, School of Technology
Studies
Ellen Koch, Psychology
Lidia Lee, Special Education
Alicia Li, Special Education
George Liepa, School of Health Sciences
Aaron Liepman, Biology

Michael McVey, Teacher Education
Bill Moylan, Engineering Technology
Joe Ohren, Political Science
Kathlyn Parker, Special Education
Dennis Patrick, Comm. and Theatre Arts
Claudia Petrescu, Political Science
Elsa Valeroso Poh, Computer Science
Mary Rearick, Teacher Education
Robert Rhodes, School Health Promotion &
Human Performance
Andrew Ross, Mathematics
Barbara Scheffer, School of Nursing
Melanie Schueller, Comm. and Theatre Arts
Christine Tanner, Comm. and Theatre Arts
Carla Tayeh, Mathematics
Jackie Tracy, Leadership and Counseling
Diana Wong, Management

*Judging Facilitators

**Floor
3**
EMU Student Center



Legend

- Event/Conference Rooms
- Service Areas
- 1 Food & Dining Areas
- Lounges
- 🔥 Fireplace
- ♿ Restrooms
- ♿♿ Family/Gender Neutral Restrooms
- ⬆️ Elevators
- Building Support
- 🎨 Art Gallery
- ? Information Center
- 💰 ATM

Notes:



EASTERN
MICHIGAN UNIVERSITY
Graduate Education First

