

3-28-2005

Graduate Research Fair Program, 2005

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, 2005" (2005). *Graduate Research Fair Programs*. Paper 16.
http://commons.emich.edu/grf_prog/16

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.

Table of Contents

Welcome letter	Inside front cover
Index of presenters	2
Poster presentations	
Session I, 1:30 p.m.	3
Session II, 3 p.m.	8
Session III, 4:30 p.m.	10
Oral presentations	
Session I, 1 p.m.	
Alumni Room	14
Faculty Room	15
Intermedia Gallery	16
Main Lounge	17
Reception Room	18
Salon Room	19
Tower Room	20
Session II, 3 p.m.	
Alumni Room	21
Faculty Room	22
Intermedia Gallery	23
Main Lounge	24
Reception Room	25
Salon Room	25
Tower Room	26
Session III, 4:30 p.m.	
Alumni Room	27
Faculty Room	28
Intermedia Gallery	30
Main Lounge	31
Reception Room	32
Tower Room	33
Thank you	34
McKenny Union map	Inside back cover

G r a d u a t e R e s e a r c h F a i r 2 0 0 5

Poster Presentations
Guild Hall
Session I, 1:30 p.m.

Heather Anson

Department of Psychology
Professor James T. Todd

**Use of Odor as a Conditioned Stimulus for
Schedule-induced Polydipsia in Rats**

Studies that have attempted to classically condition schedule-induced drinking to stimuli such as tones have met with limited success. This might be because tones are less effective conditioned stimuli for appetitive responses than food-related cues. This study will examine whether an odor cue can become a conditioned stimulus for schedule-induced drinking. Four Sprague Dawley rats will be made polydipsic using a fixed time schedule of food presentation. Once schedule-induced polydipsia is established, the odor will be presented just prior to the food pellet delivery. The odor will then be occasionally presented without food to determine if it alone will induce drinking. If odor can be made a conditioned stimulus for drinking, then the case that schedule-induced drinking is a reflexive phenomenon is strengthened. This will further support an animal model for obsessive-compulsive disorder in humans.

Neil Chartier

Department of Biology
Professor Peter Bednekoff

**The Influence of Woodlot Size and Location in
Suburban and Rural Matrices on
Tufted Titmice (*Baeolophus Bicolor*) Abundance**

The status of tufted titmice (*Baeolophus bicolor*) has changed dramatically over the last 100 years in southeast Michigan. Prior to 1900, titmice were considered accidental visitors. After a major range expansion and growth in the early 1940s, titmice are now permanent residents. In order to find the set of landscape conditions necessary for expansion, we looked at current titmice winter abundance in a gradient of woodlot sizes and locations. Titmice surveys were conducted in 30 woodlots in Washtenaw County, Mich. We expected that abundance would be higher in (1) larger woodlots, (2) less isolated woodlots and (3) suburban woodlots with more access to bird feeders. Preliminary results indicate that titmice are found in areas where woodlots are mixed with development. The expansion of titmice may have coincided with the regrowth of forests in and around developed lands in Michigan.

Candace Dorsey

Department of Interdisciplinary Technology
Professor Denise Pilato

Women in Law Enforcement

Women's entry into law enforcement in the early 19th century began with a group of women who volunteered to reform female prisoners' morals and provide training to them. These women were called prison matrons, and they played a major role in the early system of justice. Prison reforms were eventually made as a result of these prison matrons. After the Civil War, a group of women "expanded this philosophy of 'women's sphere.'" These activist women became known as police matrons. They took care of women and children in police custody by providing custodial care, interviewing of accused women and making sentencing recommendations. These interactions began the "policewoman era, the second phase of women in policing." After World War II, the goals of women in policing changed dramatically. These new groups of women performed functions within the police departments more like policemen, the third phase of women in policing.

James Duggan

Department of Biology
Professor Steven Francoeur

**Comparison of Grazing Intensity and Diets of
Native and Invasive Amphipod in Lake Erie**

Echinogammarus ischnus is an amphipod currently invading the Great Lakes and displacing the native amphipod *Gammarus fasciatus*. Both species inhabit substrata with zebra mussels and/or filamentous green alga. *Cladophora* and other algae are important food sources for amphipods. Examination of gut content of both amphipod species determined their preferred food; a laboratory experiment determined each species effect on algal growth. Gut analysis was completed by brightfield microscopy. Algal growth was measured using ash-free dry mass and chlorophyll-a. Preliminary results indicate that *E. ischnus* and *G. fasciatus* exert approximately equal grazing pressure on Great Lakes food webs.

Joseph Golson

Department of Psychology
Professor James T. Todd

The Effects of Reinforcement Magnitude on Schedule-induced Polydipsia in Single-pellet Delivery Trials

A relationship between reinforcement magnitude and schedule-induced polydipsia has not been established. Researchers report finding a direct relationship, an inverse relationship and no relationship between meal sizes and drinking measures. Additionally, in most studies, varying the meal also results in confounds between variables such as total food delivered per session, session length and meal length. The purpose of this study is to show the relationship between meal size and drinking in a one-feeding-per-day schedule. Polydipsia will be established in four rats with daily sessions and fixed-time reinforcement. Drinking will then be measured in sessions consisting of a single meal delivery. It is expected that through the elimination of some of the previously existing confounds, a relationship between reinforcement magnitude and schedule-induced polydipsia may be observed.

Kiran Gottipati

Sreeja Sreekumar

Department of Chemistry
Professor Deborah Heyl-Clegg

Design and Synthesis of a Cysteine-Deleted-Analog of the Antimicrobial Peptide Tachyplesin I

Tachyplesin-I is a cyclic broad-spectrum β -sheet antimicrobial peptide, isolated from the hemocytes of *Tachyplesus tridentatus*. It exerts antibacterial activity by permeabilizing the bacterial membrane. It has seventeen residues. The four cysteine residues in Tachyplesin-I play a structural role in imparting amphipathicity to the peptide, which has been shown to be essential for its activity. In order to understand the role of cysteine residues in Tachyplesin-I, a cysteine-deleted analog (CDT-I) was synthesized and its interaction with membranes was studied. The CDT-I analog that was synthesized was shorter and simpler than the original peptide. The studies showed that CDT-I exhibits antimicrobial activity and also permeabilizes the outer bacterial membrane of *E.coli* at micromolar concentrations. Our results suggests that cysteine residues do not have any functional role and simultaneous hydrophobicity and charge characteristics of the peptide may be the essential determinants of antimicrobial activity.

Susan Leslie

School of Health Sciences
Professor Judi Brooks

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

Kidney disease and subsequent kidney failure rates continue to increase in staggering numbers in the United States and throughout the world. Nutrition has long been acknowledged as a crucial component in reducing morbidity and mortality outcomes in this population. An online survey was developed and sent to members of the Council of Renal Nutrition and DaVita, Incorporated. Ninety renal dietitians working in Michigan were asked to identify the most commonly used resources. They were also asked to specify their frequency of use and effectiveness in promoting specific nutrition markers used for end stage renal disease. Clinical outcomes were requested for each clinic and were compared to guidelines set forth by the Kidney Disease Outcomes Quality Initiatives and included intact parathyroid hormone, albumin and phosphorus. This study was designed to provide an accurate portrayal of nutrition interventions used in current practice and their ability to promote improved nutrition outcomes.

Jacqueline Mezza

Department of Psychology
Professor Carol Freedman-Doan

Racial Differences in Body Dissatisfaction Among Adolescent Females

Approximately 49-70 percent of adolescent girls are dissatisfied with two or more aspects of their bodies. Body dissatisfaction has been linked with depression and eating disorders and is a serious problem. Racial differences exist between African American girls and Caucasian girls in their levels of body dissatisfaction, with African American girls being more satisfied with their bodies than Caucasian girls. The goal of this study is to examine the link between body dissatisfaction and internalization of the thin ideal espoused in the media. The primary hypothesis is that African American girls will be more satisfied with their bodies than Caucasian girls and that this finding will be explained by their lower internalization of the thin ideal.

Jode Susan Millman

Department of English Language and Literature
Professor Craig Dionne

Seats: Chicago: A Year in a Life ... and Then Some

The objective of this project was to provide a practical and critical analysis of the writing of *Seats: Chicago*, a 272-page theatre guide that I wrote during 2003 and that was released in May 2004 by Applause Theatre and Cinema Books. This project is composed of two portions: an annotated bibliography of writings relevant to the development and creation of the text and a paper detailing the process of writing such a theatre guide. While *Seats: Chicago* is unique in its content, the practical process of creating a nonfiction reference guide is universal and can be applied to any genre, such as travel writing, cookbooks, reference, self-help, health/nutrition/medicine, science or popular culture/leisure book. The primary and secondary sources included writing guides and texts as well as travel-related Web sites, magazines and books relevant to Chicago and its extensive theatre scene.

Benjamin Philip

Department of Biology
Professor Cara Shillington

Inter- and Intraspecific Variation in Metabolic Rates of Tarantulas (Araneae: Theraphosidae)

Differences in patterns of energy allocations within and among individuals may have important effects on behavior, life history and population dynamics. While variations in body mass and life history both play important roles determining energy use, many studies suggest that predatory behavior of different species may strongly impact metabolism. The goal of this study is to compare the metabolic rates among different tarantula species. As a group, tarantula spiders are believed to exhibit low metabolic rates due to their sit-and-wait predatory behaviors. However, there is much variation among intrinsic traits, such as aggression, which may influence energetic allocations of the organism. We measured metabolic rates in several tarantula species and compared maintenance metabolism and average daily energy expenditures among the various species.

Brian Scruggs

Department of Communication and Theatre Arts
Professor P. George Bird

The Design of *Biloxi Blues*

While designing *Biloxi Blues* for EMU's 2004-05 Mainstage theatre season, my goals were to help strengthen the director's vision by designing scenery and lighting that would enhance what he and his actors were already portraying, to allow smooth transitions from scene to scene and to offer believable presentational scenes based on the physical limitations of the playing space. What started in May of 2004 as an idea sketched on paper by October had grown to a fully realized vision and three-dimensional reality encompassing all I hoped to accomplish.

Shauncie Skidmore

Department of Psychology
Professor Karen Saules

Exploring the Utility of Expanded Response Formats for Self-Report Measures

There is a large body of research addressing the issue of how many options should be included on a Likert response format for any self-report measure (for a review see Preston and Coleman, 2000). Most researchers contend that five-point or seven-point response formats yield maximum reliability coefficients. However, Bandura (1997), Dawes (1987) and Kazdin (2003) advocate the use of large-range response formats on self-report questionnaires, so that subtle increments and decrements in performance can be detected. In order to investigate the utility of expanded response formats, two studies were conducted — one in a university setting (utilizing a self-esteem and two self-efficacy measures), the other in a community clinic setting (utilizing a treatment outcome measure). Results from the first study suggest that expanded formats can influence the significance level of results. This report will review the results of both studies; implications of the findings will be discussed.

Andrea Tanner

Department of Psychology
Professor Alida Westman

Relationship between Gender, Religiousness, Political Orientation and Vocational Interests

In society, women on average are more religious than men, but in the last three studies at EMU there have been no gender differences. The current study investigates why this might be so. Is it that women university students are less religious than women who do not intend to get a bachelor's or higher degree? If so, does this mean that university women are more liberal than non-university women? Are there similar differences among men? We also explore whether major area of study made a difference.

Renee Tavares

Department of Geography and Geology
Professor Lauren Sickles-Taves

Raising the Grade for Preservation

The project is an underground crypt that was used in the past as a church. Most crypts have frescoes that celebrate the "religious" faith of the people and an altar that priests used. These crypts are very important to the locals for preservation. One of the ways to preserve them is by cleaning out the crypt and building barriers to protect the crypt, including "replicated" gates of the area. This project also serves as an educational site to teach the natives of the area why they are important not only to themselves, but also to their culture. *Raising the Grade for Preservation* is an important piece of preservation. Benchmarking from other countries' methods is important because "known preservation techniques" knowledge can be acquired. This project not only teaches preservation methods, but it allows for understanding the culture of southern Italy and the prosperous culture and history that surrounds the area.

Pooja Thakur

Department of Biology
Professor Marianne Laporte

Effects of Increased Expression of NADP Malic Enzyme on Guard Cells in Arabidopsis

Plants lose the majority of their water as transpiration due to stomatal opening and closing, which is governed by guard cells surrounding the stomata. Influx of ions such as K^+ , Cl^- , from neighboring cells into guard cells and malate synthesis within guard cells increases turgor pressure, opening the stomata. Stomata close when ions K^+ and Cl^- start moving out and the cytosolic isoform of NADP malic enzyme converts malate to pyruvate. Our hypothesis is that stomatal closure can be controlled by increased NADP malic enzyme activity in guard cells. We have developed a transgenic arabidopsis plant that is transformed with a guard cell specific promoter, driving expression of the maize NADP malic enzyme gene. We are performing molecular, immunological and enzymatic assays on the transformants to test for the presence of the transgene. Stomatal phenotypes will be studied and compared to wild type arabidopsis plants to determine if stomatal opening is altered in the transgenic plants.

Valerie Thomas

Department of Biology
Professor Steven N. Francoeur

The Effects of UV Radiation on Attached Wetland Algae and Bacteria

Periphyton is the community of microbes that grow attached to surfaces in aquatic systems. It is important in the functioning of these ecosystems. Despite the well-known increases in ultraviolet radiation (UV-R) reaching the earth's surface due to the destruction of the ozone layer, little is known about effects of UV-R on wetland periphyton. To study the effects of UV-R on wetland periphyton, substrata were placed under acrylic mesocosms in the Paint Creek Wetland, Ypsilanti. One treatment excluded light in the UV range ($<340\text{nm}$) and the other allowed the passage of all light. Substrata were sampled on four dates during August and September 2004. Chlorophyll a, ash-free dry mass, bacteria density, extracellular polysaccharide content and algal community composition were measured. Over the length of the experiment, the proportion of live to dead bacteria was significantly greater in the UV-R-shielded treatments, suggesting that ambient levels of UV-R damage periphytic bacteria.

Ivan Mihajlovic

Department of Foreigns Languages and Bilingual Studies
Professor Kimberly Anderson

Taking ESL beyond the ESL Program on College Campuses

"The Test of English as a Foreign Language (TOEFL) is the most widely used measure to determine the extent to which international students have developed the English language skills necessary for successful college-level study in the United States and Canada." (Light). However, research on the issue of academic communicative competence indicates that language proficiency includes several important and complex components, and not all of these components are measured by the TOEFL. Therefore, when universities use a single TOEFL cut-off score to determine regular university admission, there are several needs that go unaddressed for students who do meet the minimum TOEFL score. In the study conducted at Eastern Michigan University, survey responses from both University faculty and international students indicated that language development resources across campus are much needed for many international students who score above the minimum score required on the TOEFL.

Colleen Dougan

School of Nursing
Professor Tsu Yin Wu

The Effects of Physical Activity on Cancer-Related Fatigue in Patients Admitted to Hospital for Chemotherapy

Cancer-related fatigue (CRF) is the single most common side effect reported by cancer patients at any stage of their disease process. The effect of physical activity on CRF has been studied and demonstrated a benefit to a small group of oncology patient populations. This study examined the effect of physical activity on CRF in patients who received cyclic chemotherapy alone or in combination with radiation therapy. Patients were alternately assigned to one of two groups, control or experimental. The experimental group was assigned specific physical activity levels for their time in hospital and time at home. At the beginning of three consecutive cycles of chemotherapy, each patient was surveyed for fatigue level and tested for physical performance with a 12-minute walk test. While the data presented some interesting trends, there were no significant differences between the two groups regarding the effects of physical activity on fatigue or physical performance.

Prasanthi Geda

Department of Biology
Professor VandenBosch
With Lars Leichert and Ursula Jakob, Department of Molecular, Cellular, and Developmental Biology, University of Michigan

Identification of Thiol Modified Proteins in Nitric Oxide Stressed Escherichia Coli

The action of nitric oxide (NO) has both physiological and pathophysiological consequences. The targets of NO and its relative peroxynitrite are predominantly cysteine thiols in proteins, which become modified in response to NO treatment. To gain insight into the physiology of the bacterial stress response to NO and to identify the E. coli proteins, which are vulnerable to NO-induced thiol modifications in vivo, we used a novel 2D-based technique. The proteins that are most affected by the presence of NO include translational control enzymes, amino acid biosynthetic enzymes and many of the glycolytic enzymes. The combined effects of these thiol modifications on proteins probably explain the cytotoxicity of NO, which leads to an immediate growth arrest and eventually to cell death in E. coli. Very surprisingly, periplasmic proteins like DsbA, OmpA, OppA, UgpB and ArtJ, which are functionally dependent on disulfide bonds and thus show a high level of oxidative thiol modifications under normal growth conditions, appear to become irreversibly overoxidized by reactive nitric oxide species.

James Schaefer

Department of English Language and Literature
Professor Nancy Allen

Ethos: The Missing Dimension in the 2004 Flu-vaccine Crisis

Price gouging? Trips to Canada for flu shots? Threats of jail time and fines? What does all this excitement have to do with the serene world of English 505 in rhetoric? This final class project clearly shows, in research based on 103 primary documents, that U.S. President George W. Bush misrepresented the facts when he answered questions about the flu-vaccine crisis during the third debate of the 2004 presidential campaign season. His responses thus violate Aristotle's notion that ethos should reflect the forms of virtue. Indeed, ethos, the ethical dimension, was missing in action. My presentation will include samples of the primary documents I used, a transcript of the third presidential debate and a copy of my full paper.

**Poster Presentations
Guild Hall
Session II, 3 p.m.**

Brian Adams

Patrick Hoag

School of Health Services
Professor Valerie Howells

The Use and Meaning of Routine in Older Men

This study examines how older men use routine in daily life to influence their well-being and the meanings of those routines. It was conducted to replicate Ludwig's study of the use and meaning of routine in older women. This study seeks to expand on this knowledge and to examine the meanings of those routines for older men. The purpose of this study was to add to the knowledge base of the occupational therapy profession, especially considering the lack of research studies concerning men. Grounded theory research was chosen because of its focus on discovery of new information and theory development. The participants are all men, 70 years and older, who are Caucasian, independent-living and able to perform daily activities independently. Data were collected through in-depth interviews of each participant and analyzed with in-vivo coding.

Mary Ashley

Shannon Jackson

Megan Meisenhelter

Rebecca Paul

Julie Wechter

School of Health Sciences
Professor Elizabeth Francis

Mothering in the Academy: An Oxymoron?

Occupational therapy practitioners and researchers are interested in understanding the complexity of occupational roles and occupational balance when there are competing role demands. This study explores two major occupational roles, motherhood and academic professor, and the tension inherent in these roles. The research to date clearly indicates a gender balance at the junior faculty level; however, in the higher ranks of associate and full professor, a significantly disproportionate number of male tenured professors occur. What happens to the female tenure-track faculty along the way? It is theorized that for many female faculty members, mothering may explain this disparity. This research study used a grounded theory approach to explore these questions through focus groups and in-depth interviews with 15

female tenure/tenure track faculty members at a public southeast Michigan university. Emergent themes from the data will be described, and implications for occupational therapy practice will be addressed.

Mary Beth Bisinger

Heather Engel

Courtney Mack

Phivanh Sayalith

School of Health Sciences
Professor Carolyn Glogoski

Key Life Domains and Adaptive Strategies Used by Well Elderly Residing in Senior Housing versus Well Elders Living in Independent Settings in the Community

The ability to "age in place" and lead independent, satisfying lives is a challenge for many older adults faced with limitations in function. Previous research suggests that helping older adults successfully overcome barriers to meaningful life experiences has significant cost benefits. Preventative measures have resulted in fewer health risks and dollar expenditures and have improved quality of life (Clark, Azen, Zemke, Jackson, Carlson, Mandel et al., 1997). This preliminary study identifies and compares the life domains and adaptive strategies of two groups of well elders living in Southwest Michigan and at risk for future loss of independence. Using focus-group methodology, relevant domains and adaptive strategies for two groups of aging adults will be identified. The two groups consist of those living in senior apartment housing and those living independently in the community. It is hoped that these findings will support a life redesign program that will serve will elders at risk of reduced independence.

Melissa Doettl

Crystal Neher

School of Health Sciences
Professor Valerie Howells

Making Art: An Opportunity for Transformation of the Self

The purpose of this secondary data analysis research study is to examine and describe personal transformation that occurred with participants in a community arts studio. It is part of a larger participatory action research study that used ethnographic methods to examine the effect of a community arts studio on the lives of participants with and without mental illness. Personal transformation emerged as a theme in the original

study. Making art was seen as providing the scaffolding that allowed participants to transform their perception of themselves, to reconstruct their lives and to build a new identity. Some of the questions explored in this study include: How does the individual identify the self? What impact did engagement in art-making have on the individual? How did the culture of the studio and the broader community affect the individual's view of self? Emergent themes and implications for occupational therapy practice will be discussed.

Zainab Hassan
Christine Winfree

School of Health Science
Professor Gretchen Dahl Reeves

A Study of Mothers of Children with Autism

Play is often impaired in children with autism. Strategies to facilitate the development of play skills and playfulness in children with autism are becoming more prominent. This study was designed to evaluate the quality of interactions when mothers used play versus instructions to engage their children. The participants in this study were mothers and their children, four to eight years of age, with a diagnosis of autism. The 22 mother/child dyads were videotaped in their homes for 20 minutes while they played with one of five toys. Two graduate research students viewed the tapes to determine mother/child interaction characteristics and ability of mothers to engage their children in social exchange.

Barbara Martin
Jennifer Peltier

School of Health Sciences
Professor Valerie Howells

Exploring the Differences in Perception of Persons without Mental Illness After Participation in an Integrated Art Studio

This research study seeks to examine perceptions of people without mental illness before and after participation in an integrated community arts studio. A secondary data analysis was completed using transcripts from entrance and exit interviews of participants from the original study. This original study looked at the effects of an integrated arts studio on lives of participants with and without mental illness. One of the themes that emerged from the original study was "who is, who isn't." This theme identified issues related to stigma and mental illness. The focus of our analysis was to explore any differences that arose in the perceptions of those

participants without mental illness after participation in the integrated art studio.

Mary Christine Neph
Jennifer Thiede

School of Health Sciences
Professor Gretchen Dahl Reeves

Sensory Processing Issue in Adolescents who Self-harm

The purpose of this study is to examine how adolescent girls who have engaged in self-harm perceive everyday sensations. Little is reported in the literature about this aspect of the individual's body awareness. Many studies indicate that there are correlations of self-mutilation in the forms of cutting, skin-picking and hair-pulling, with smoking, eating disorders and a history of physical or sexual abuse. The behavior is more prevalent in females than in males. These concerns suggest that body treatment is distorted. Engaging in self-harm, which has the potential to cause pain, suggests that the threshold to sensation may be elevated. Extreme behaviors used by girls who self-harm may provide some form of connectedness to their bodies. We utilized the Adolescent/Adult Profile and the Body Investment Scale to determine if there are differences in sensory reactivity and body awareness in girls who self-harm compared to those who don't in a hospitalized adolescent population.

Aarti Parekh
Guinevere Sarnecki
Emily Wightman

School of Health Sciences
Professor Gretchen Dahl Reeves

Physiological Responses to Sensory Stimuli Following an Occupational Therapy Intervention

A widely used stimulation technique in occupational therapy has not been supported by research. In this technique a soft brush is stroked across the arms and legs of the client followed by passive contraction of the neck, wrist, elbow and shoulder joints. The purported benefit is to reduce overreactivity to environmental stimuli in persons sensitive to touch, sounds, lights and odors. This study compares physiologic responses in college students to novel sensory stimuli before and after the application of the technique to those of an untreated control group. The stimuli include a light, a noise, light touch and an odor. Heart rate, peripheral temperature and electrodermal activity recorded on a computer are the physiological responses reported. The Adolescent and Adult Sensory Profile will provide a

measurement of perceived personal reactivity to stimuli. This is a pilot study addressing concerns about the use of an intervention in clinical practice not yet validated.

Adia Powell

Jillian Sivinski

Gregory Szydlowski

School of Health Sciences

Professor Susan Murphy

Bathing Safely: The Use of Environmental Features by Older Adults

Bathing is associated with falls and fall injuries among older adults (Aminzadeh et al., 2000; Devito et al., 1988). Bathroom devices are thought to promote safety during bathing, but it is unknown how older adults use their environmental features. The purpose of this study was to examine how residents of a congregate housing facility (N= 59) use bathroom environmental features to transfer into a shower or tub. Videotapes of transfers were coded by three trained coders for presence and use of features. Interrater reliability was calculated and descriptive analyses were performed. Vertical grab bars were most commonly used. Horizontal grab bars were utilized more in the tub than the shower. Over half of shower users utilized the shower doors. Features most utilized were those closest to the subject at that point in the transfer, although these features were both safe and unsafe. Future environmental modifications should eliminate unsafe features.

Poster Presentations

Guild Hall

Session III, 4:30 p.m.

Becky Brant

Nicole Wassel

School of Social Work

Professor Tana Bridge

How Effective is Transitional Housing at Home of New Vision for Women Maintaining Abstinence Six Months and Twelve Months Postparticipation in Treatment?

This study served to evaluate the effectiveness of a long-term gender specific treatment for chemically dependent women. Women-specific treatment is in the forefront as women are more than likely the primary caregiver for their children (Marsh and Simpson, 1986 as cited in Nelson-Zlupko, Kauffman and Dore, 1995). With reports of up to 80 percent of substantiated child abuse and neglect reports

involving a substance-abusing parent, the crisis is evident (CWLA, 1989 as cited in Mumm, Olsen and Allen, 1998). Using random sampling, researchers conducted phone surveys to evaluate Home of New Vision's Transitional Housing Program. Variables of study included length of treatment as it relates to substance use, incarceration, Child Protective Service involvement, employment and health insurance coverage.

Jessica Chamberlain

Department of Psychology

Professor Carol Freedman-Doan

Examining the Relationships between Adolescent Sexual Risk-taking and Perceptions of Parental Style

The purpose of this study was to examine the relationship between adolescent sexual risk-taking and perception of autonomy granting, parental warmth and family support. Data were collected from adolescents ages 14-18 in a national, longitudinal study beginning in 1995. A self-report instrument assessed adolescent perceptions, behaviors and attitudes. Youth who had engaged in sexual intercourse were included in the analyses. High-versus low-risk sexual behavior was defined by age at first sexual intercourse, number of sexual partners and use of contraceptives. Regression analyses will be performed to examine the relationship between perceptions of parental style and sexual risk-taking behaviors. In addition, parental warmth will be tested for both mediational and moderational effects on autonomy granting and family support in predicting outcomes of sexual risk-taking behavior.

Sarah Fezzey

Department of Chemistry

Professor Ruth Ann Armitage

Characterization of Black Deposit Associated with Rock Paintings in Little Lost River Cave, Idaho, Using Pyrolysis GC/MS

The organic fraction of a black deposit that covers pictographs in the Little Lost River Cave in Idaho has been radiocarbon-dated to 1390-1040 BC, using plasma chemical oxidation and accelerator mass spectrometry (AMS). The age of the black deposit, which is much earlier than expected based on the archaeology of the site, should provide a minimum age for the pictographs underneath. However, the material that was dated was not characterized and may consist of a mixture of carbon-containing materials, some of which may not be related to the time that the deposit was formed. This

characterization, using pyrolysis/GC/MS and FTIR, focuses on identifying the organic material in the black deposit. A better understanding of the nature and origin of the black material will aid in determining whether the radiocarbon age previously obtained is reliable and will inform future attempts to date this material.

Sudeepa Karunaratne

Department of Chemistry
Professor Heather Holmes

Preconcentrating Inlet Systems for the Study of Lipid Peroxidation

Lipid peroxidation has been linked to a large number of severe health problems. Typically, the link is simply documentation of enhanced levels of known peroxidation products in patients exhibiting disease; the underlying metabolic pathways and whether lipid peroxidation is the cause or effect are unknown. The difficulty lies in the inherent complexity of the systems and the lack of sensitive, selective and rapid means by which a broad spectrum of biological metabolites can be quantified. Automated, real-time analysis of lipid peroxidation products can be achieved using a preconcentrating inlet system with GC-TOFMS. Instrumental considerations and application to model systems will be discussed.

Naveen Kunaparaju

Department of Chemistry
Professor Michael Brabec

Effects of Dinitrobenzenes on Mitochondria and its Role in Apoptosis

Nitrobenzene exposure to humans and experimental animals is most often associated with methemoglobinemia. Histopathological changes have been observed in the hemato-lymphoreticular system, CNS and liver. Here we report that mitochondrial damage is due to metabolic products of DNB. This can lead to the release of several mitochondrial proteins. These proteins promote apoptosis either by activating caspases and nucleases or even by neutralizing cytosolic inhibitors of this process.

Chi Fai Kwan

Academic Affairs/Interdisciplinary Program
Professor Benjamin Keller (Department of Computer Science)
Professor Marianne Laporte (Department of Biology)
Identifying Putative Homologs of Yeast ATG Genes in Arabidopsis

Autophagy is a regulated recycling process that enables organisms to survive during various stress conditions. We are developing computational methods to identify arabidopsis genes that are homologous to the 27 characterized AuTophagy (ATG) genes in yeast. One difficulty for targeting some of the other ATG homologs is that they contain conserved domains that are common in the arabidopsis genome. For example, ATG18 contains a conserved WD40 domain, which is present in more than 200 arabidopsis proteins. By using a multifaceted approach to targeting in yeast ATG18 putative homologs, at least three arabidopsis genes were identified to be potential ATG18 homologs. The methods used included multiple sequence alignment, domain analysis, PSI-Blast and PHI-Blast. We have applied these methods to identify additional ATG genes.

Vishwa Mantena

Department of Chemistry
Professor Michael Brabec

Do Dinitroaromatics Target Mitochondria?

Dinitroaromatics are known to be toxic in intact animals and as well as in tissue cultures. There is a hypothesis that dinitroaromatics target mitochondria and causes cytochrome c release, which triggers apoptosis in cells. The goal of this work is to determine whether dinitroaromatics induce apoptosis in rat lung epithelial cells and to characterize the involvement of mitochondria in the process.

Joan McDowell

Department of Psychology
Professor Carol Freedman-Doan

Public Perceptions of Depression

This research investigated causal and controllability attributions that others assign to individuals with depression by distributing a questionnaire to faculty and administrative staff at Eastern Michigan University. While there has been valuable research critical for furthering our understanding of how an individual's social network affects recovery from depression, we need to know more about public perceptions of depression. The information gathered in this study may be useful in developing treatments for depression that not only help the individual suffering with the disorder but also others around the individual who are affected. Results indicate that an individual's gender and personal knowledge of someone with depression are important in determining people's beliefs about depression.

Jennifer Montesi

Department of Biology
Professor Tamara Greco
and Dr. Chalie Jacobs, Henry Ford Community
College

Comparison of the Learning Styles of Online Students versus Traditional Students in an Introductory Biology Course

Adult learning styles can impact how classroom information is processed and used. Knowing the learning styles of a group of students can aid educators with an understanding of how to present information for ideal learning. As a part of this independent study, effectiveness of adult learning styles in an internet class versus the traditional classroom were compared to grade outcome of students enrolled in an introductory biology course. This independent study examined the hypothesis that biology students with a preferred auditory learning style would excel in the traditional classroom setting and the visual learner would excel in the online setting. The VARK questionnaire was the instrument used to determine participants' preferred learning styles. Although none of the participants had a single modal visual or auditory learning style preference, many students assessed by the VARK questionnaire were multimodal learners, so this study further investigated the performance of different types of multimodal learners. Results from this independent study suggested that participants with different learning style preferences did not perform significantly differently regardless of whether they were enrolled in the online course or the on-campus course.

Golam Moula

School of Engineering Technology; Professor Vijay Mannari

Study of Synthesis and Applications of High Phosphate Content Film Formers Based on Cycloaliphatic Epoxide and Vegetable Oil Derivatives for Coatings

Synthetic methods have been developed for deriving polymers with high phosphate content (up to 10 percent) based on cycloaliphatic epoxide and epoxidized vegetable oil derivatives. Various reaction parameters have been studied to optimize product yield. These polymers are characterized and used as primary film-forming components in various coating compositions. The primary film properties and corrosion resistance properties of such coatings have been studied and compared with conventional

coatings. Some key aspects of the synthesis of these polymers and their film properties will be presented.

Reshmi Perumplavil

Department of Chemistry
Professor Ruth Ann Armitage

Depth Profiling and X-ray Photoelectron Spectroscopy Analysis of a Black Deposit Associated with Rock Paintings in Little Lost River Cave, Idaho

The pictographs in Little Lost River Cave No.1 in Idaho are obscured by a black, shiny deposit. Electron microprobe analysis (EMPA) of the black material indicated the presence of carbon at levels that exceed those expected from the dolomite substrate; no nitrogen was observed by wavelength dispersive x-ray fluorescence (WD-XRF). X-ray photoelectron spectroscopy (XPS) provides elemental analyses on more superficial surfaces than is possible with EMPA or WD-XRF. This study utilizes XPS to characterize the outermost surface of the black residue and depth profiling using Ar ion sputtering to determine the elemental composition spatially within the deposit. The black deposit, as collected, varies in appearance from dull to shiny. Preliminary results indicate that the shiny material contains high levels of nitrogen, while dull black samples do not. Carbon and oxygen predominate in the spectra, strongly suggesting the presence of organic material, possibly of bacterial or soil humic acid origin.

Abhisek Sohni

Department of Biology
Professor Daniel Clemans

The Role of Cyclooxygenase Enzyme in Respiratory Infection by Haemophilus Influenzae

Chronic lung disease like cystic fibrosis and chronic obstructive pulmonary disorder (COPD) are frequently associated with recurring bouts of respiratory infection caused by various infective agents, one of them being nontypeable Haemophilus influenzae (NTHi). The infections are associated with inflammation due to the release of mediators like cytokines and prostaglandins. Human respiratory epithelial cells were infected with NTHi to observe the expression of proteins that are involved in inflammation either directly (cytokines) or indirectly, like cyclooxygenase enzyme (COX) that catalyses the production of prostaglandins. Expression of inflammatory mediator genes was assessed using reverse transcriptase polymerase chain reaction (RT-PCR). The production of inflammatory mediators released into the culture medium was assayed using enzyme-linked immunosorbent assay (ELISA).

Further experiments are being carried out using the COX-specific inhibitor like dexamethasone to find the correlation between the production of cytokines and prostaglandin in an inflammatory response to various NTHi stimuli.

Lisa Winhold

Department of Biology
Professor Allen Kurta

A Maternity Colony of Evening Bats (*Nycticeius humeralis*) in Southern Michigan

In August 2004, we discovered a colony of evening bats (*Nycticeius humeralis*) in southern Michigan. An adult female was captured in a mist net over Black Creek, Lenawee County, Mich. After attaching a radio-transmitter, we tracked the bat to a green ash (*Fraxinus pennsylvanica*) and counted 25 bats during evening emergence. Nets were set around the roost tree, and 10 evening bats were captured. We attached a transmitter to one of the juveniles and later tracked it to a sycamore (*Platanus occidentalis*) along the River Raisin. The adult female also was tracked to another green ash, near Black Creek. Sixty-eight individuals exited the roost trees on August 12. The bat caught on August 7 was only the fourth record of evening bats in Michigan and the first since 1969. This maternity colony is the first in the state, and the northernmost reproductive colony for the species in North America.

Qunhua Xu

School of Engineering Technology
Professor Jamil Baghdachi

Effect of Particle Size and its Distribution on Adhesion of Waterborne Coatings to Plastics

The adhesion of soft ($T_g \sim 18^\circ\text{C}$) and hard ($T_g \sim 30^\circ\text{C}$) latex particles at a constant surfactant level were investigated as a function of particle size and drying temperature. It was discovered that the smaller particles afford stronger adhesion to plastic substrate than the larger particles. This effect was confirmed by scanning electron microscopy. The effect is somewhat less pronounced if the films are dried at temperatures well above the T_g of the latex particles. In addition, the blends of small and large particles with a weight ratio of 1:1 adhere even better than smaller ones alone. The phenomenon can be explained in terms of the bulk and surface contributions to adhesion. The smaller particles produce a more cohesive film, which is consistent with the theories of film formation and mechanisms. The effect of particle size and their blends, and its contribution to adhesion, can be explained by particle

packing. Visual models indicate that a higher percentage of small particles than larger particles penetrates to the plastic surface region.

Mamatha Yerram

Department of Biology
Professor Marianne Laporte

Expression of Autophagy-Related Genes in Arabidopsis Culture Cells Under Nutrient and Sucrose Stress

Autophagy is defined as the process by which cells digest parts of their own cytoplasm. Autophagy allows for both recycling of macromolecular constituents under conditions of nutrient limitation and remodeling the intracellular structure for cell differentiation. This process is well characterized in yeast and mammals. In yeast, 27 autophagy proteins have been studied so far. Using standard bioinformatics techniques, I identified 12 autophagy-related genes in arabidopsis that are homologous to known yeast autophagy genes. A liquid culture system was developed to study the various environmental conditions that affect autophagy genes in arabidopsis. No marked difference was observed in the expression of ATG6 and ATG4a genes during nitrogen or low level salt stress. An increase in the expression of ATG6 but not ATG4a was observed during higher level salt stress. We are testing the expression of ATG2, ATG3, ATG7, ATG8, ATG9, ATG12 and ATG20 under these conditions.

Christian Casper

Department of English Language and Literature
Professor Ann M. Blakeslee

In Praise of Carbon: Genre and the 1996 Nobel Lectures in Chemistry

Using genre theory along with the hierarchy of scientific statement types of Latour and Woolgar (1979) and the scientific stases and scientific topoi of Prelli (1989), I analyze the three Nobel lectures in chemistry from 1996 to discern the characteristics of ceremonial discourse in science and its relation to scientific ethos. Throughout, the Nobel lectures are analyzed in reference to the original research reports published in the scientific literature. The unique social context of the Nobel lectures results in a distinct genre with textual characteristics that include statements with little moderation or hedging, arguments for the long-term significance of the work, recognition of colleagues and coworkers, and, significantly, discussion of the nature of science itself and of proper conceptual approaches and procedures.

Staci Perryman-Clark

Department of English Language and Literature
Professor William Tucker

Can Elbow Help Me Become a Better Teacher of Writing?

As a first-year instructor, the author recounts her experiences teaching while exploring the ideas of Peter Elbow, a scholar in composition rhetoric. Even though the author agrees with some of Elbow's ideas, she finds, through exploration, some disagreement with his theories. She decides to study Elbow because several areas of his work parallel those that she wants to improve. These areas include encouraging students to gain confidence writing academic essays, balancing reading with writing assignments and grading. To tackle these, the author begins her analysis with student writing versus academic discourse. She insists students are often intimidated writing academic papers. Next, the author ponders whether to do mostly writing in the class, mostly reading or to balance them equally. Finally, she discusses the system of grading and why grades in composition classes are problematic. From this scholarly study, the author learned to offer more responsive comments instead of always correcting and marking up everything students write.

Steve Moran

Department of English Language and Literature
Professor Verónica Grondona

A Grammatical Sketch of Western Sisaala

This talk presents the results of the research for my M.A. thesis, *A Grammatical Sketch of Western Sisaala*. Western Sisaala is a previously undocumented and unwritten endangered language of 6,000 speakers in Ghana's remote upper West Region. This research is based upon three months of linguistic fieldwork undertaken in Lambussie, Ghana, during the summer of 2003. This talk will describe this experience as well as outline the linguistic findings and analysis of my research. My main focus will be to describe Western Sisaala's phonology and the establishment of an alphabetic writing system. I will also address the sociolinguistic situation as well as the language's morphological system.

Oral Presentations

Session I

Alumni Room

1 p.m.

Beatrice Diaz

Department of Foreign Languages and Bilingual Studies
Professor William Cline

Sex Tourism in Cuba in the 1990s

The globalization of the demand for sex tourism, the economic crisis of the 1990s, and the open acceptance of this activity by the Cuban government created the conditions for making this Caribbean island a new paradise for this market in the 1990s. Sex tourism occurs when a resident of a country travels to another country and exchanges something of material value in payment for favors that the person of the host country offers him. Third World countries like Cuba represent cheap and exotic markets, "virgin" territories in which sex tourism operates freely and openly. The fall of the Berlin Wall in 1989, the disappearance of support from the Soviet Union, the U.S. trade embargo and the drop in prices in the world market for Cuba's traditional export products created conditions in which Cubans were obligated to sell themselves to anyone. The promotion of foreign sex tourism without restriction was officially stated in 1993 when Cuban government proclaimed that the Cuban prostitutes were the healthiest and most educated in the world. The government replaced the intermediaries, facilitating transactions between prostitutes and their clients. Cuba in the 1990s was near the top of the list of countries for sex tourism.

1:20 p.m.

Natsuko Komori

Department of English Language and Literature
Professor Sheila Most

Reception of *The Story of Little Black Sambo* in Japan

Since its publication in 1898, *The Story of Little Black Sambo* by Helen Bannerman has gained worldwide popularity. The book was adapted into Japanese and enthralled Japanese children since 1904. However, just like other classics that face the changing values in society, its racist contents have been challenged and discussed all over the world. In Japan, it disappeared from children suddenly in the late 1980s without being revised. Why should *The Story of Little Black Sambo*, which was written for the entertainment of children, be taken away from

them? Why wasn't a revised version of the story published, because of the book's superb popularity? The scope of this paper is to reveal the problems behind banning *The Story of Little Black Sambo*, which were political rather than educational.

1:40 p.m.

Amber Cobb Vazquez

Department of English Language and Literature
Professor James A. Knapp

Gender Politics and Rachel Speght's *The Dreame*

Rachel Speght, like other female Jacobean writers, receded from our historical memory despite her polemical and subversive writing. A close reading of *The Dreame* illustrates the dominant discourse of Speght's day though the poem itself is working against the ideology of her culture. That she was female, reading classical texts, able to successfully use rhetorical and literary figures, and bold enough to make this argument is remarkable, especially in light of the particular anxieties in her culture about the place of women. While we cannot focus solely on gender because of its constant interactions with other issues, looking at conversations about women, education and reading can help us read *The Dreame* for the powerful, radical piece of literature that it is.

2 p.m.

Lisa Grimble

Department of English Language and Literature
Professor Nancy Allen

Scientific Articles and Popular Press Accommodations: A Look at CWD through Both Forms of Discourse

My research and presentation focus on the process a scientific report goes through as it travels from expert to lay publications. The topic explored is chronic wasting disease (CWD) in deer and its representations in professional scientific articles and popular press accommodations and visits three key points: the importance of audience and language, the differing modes of rhetoric and the transformation of facts from one genre to the other. My research, along with the research of other rhetoricians in this field, concludes that what we see is much more than just a "dumbing down" of scientific jargon in order to reach the masses.

Faculty Room

1 p.m.

Carol Pearsall

Pamela Holloway

Department of Special Education
Professor John Palladino

Is There a Need for the LESA Early Childhood Developmental Classrooms to have one Coordinator?

There is an ethical and professional desire to research the effectiveness of the current supervision and coordination of the LESA Early Childhood Development programs as a result of the increasing demands on district coordinators and the hypothesis that the current structure is not only ineffective but also detrimental to the needs of the staff and therefore the children they serve. This desire was a result of a coordinators' meeting at which time the discussion occurred that articulated what a very complex and difficult responsibility it is to supervise these classrooms, given the inherent nature of the programs and the other demands, responsibilities and expectations of the coordinator position. The proposal is to determine a more efficient and ethical structure for the supervision of these programs. There may be a variety of solutions to the problem, such as hiring a coordinator to supervise these programs independent of the current center-based coordinator or the hiring of a specialist who would supervise the programs under the guidance of the LESA center-based coordinator. We may also look at restructuring the current employees to fill the supervisor position. At a minimum, we are requesting the discussion and study of the possibility of hiring a specialist who would work under the LESA center-based coordinator, working closely, however, with the five district coordinators. It would be imperative to delineate the job responsibilities of this specialist to ensure that inclusion would be incorporated into the classroom, building and district milieu.

1:20 p.m.

Celeste Gentile

Department of Special Education
Professor John Palladino

Special Education Needs Assessment

The purpose of this special education needs assessment is to examine an area of need within the existing special education reading instruction program and propose a plan of action. Ideally, the outcomes of this plan will be for all students who receive special education services to have a greater

opportunity to learn basic fundamental reading skills, along with cohesion of the use of similar instructional tools and strategies from grade level to grade level. This proposition is bred from the philosophy that reading success leads to tremendous long-term rewards in self-confidence and motivation to learn, and it gives students the tools they need for post-school success.

1:40 p.m.

Gerri-Lyn Nicholls

Myrna Toote

Department of Special Education

Professor John Palladino

Supervising Special Education Programs in the 21st Century

Supervising special education programs in the 21st century is one of the most difficult challenges that administrators face. With the rising cost of educating students with disabilities and the lack of funding and resources to keep pace with the demands and needs of students with disabilities, today's school administrators are forced to find creative ways to meet the needs of all students. This research taps into voices in the field and looks closely at what building level administrators and special education directors and supervisors are doing to meet the needs of students with disabilities within their districts and buildings. This assessment also looks at the differences in practice the level of competence and/or confidence that administrators have as it relates to the supervision of programs for students with disabilities. Finally, we offer possible recommendations for improvement or change to support administrators of programs for students with disabilities.

2 p.m.

Barbara Soffredine

Department of Leadership and Counseling

Professor Helen Ditzhazy

A Study of the Effectiveness of Parent Involvement in Supporting Osteoporosis Lessons in Second and Third Grade Classrooms in Selected Michigan Elementary Schools

The purpose of the research was to study the effectiveness of parent involvement in supporting osteoporosis lessons in second and third grade classrooms in selected Michigan elementary schools and to test the effectiveness of the osteoporosis lessons. The hypotheses were that parent involvement in the osteoporosis curriculum will have a positive effect on student learning of the information presented; that parent involvement in the

osteoporosis curriculum will have a positive effect on student choices of calcium-rich foods; that parent involvement in the osteoporosis curriculum will have a positive effect on the physical activity of students; and that second- and third-grade students will learn critical information about osteoporosis as a result of the osteoporosis lessons. Elementary schools in Michigan were chosen for the study, and second- and third-grade teachers either served as controls or implemented the lessons with or without parent involvement. The difference in test scores between treatment classrooms and control classrooms was statistically significant, indicating that the lessons produced a gain in knowledge about osteoporosis. However, there was minimal statistically significant change in the behaviors studied.

Intermedia Gallery

1 p.m.

Raluca Ilie

Department of Physics

Professor David Reid

The Myrheim Length Conjecture in Curved Spacetime

Understanding physics at energies close to the Planck scale requires a theory that embraces general relativity, or a modified form of it, and quantum mechanics. The standard approaches for unifying the two are called quantum gravity. Despite huge progress made since the 1980s, the goal of a quantum theory of gravity has still not been achieved. The causal set approach to quantum gravity considers modifying the continuum structure of spacetime. Within this framework, spacetime is discrete rather than continuous and consists of a partially ordered set of points called a causal set. We would expect that in a certain limit the causal set has similar properties as continuous spacetime. A consistency check could be done using the Myrheim length conjecture. This states that the longest path in a causal set corresponds to the geodesic in the continuum. I have investigated this for curved spacetimes of various dimensions.

1:20 p.m.

Lindsay King

Department of Psychology

Professor Karen K. Saules

Cognitive Style Mediates the Relationship between Smoking and Weight Concerns in College Women

Despite numerous prevention efforts, nearly 25 percent of college women currently smoke. Research

has shown a strong relationship between weight concerns and smoking in college women. However, this relationship alone does not fully explain the smoking rates among college women. In particular, anorexic and bulimic women, who have elevated weight concerns, have different rates of smoking. Specifically, anorexic women tend to smoke at a lower rate than bulimic women. It is important to consider other factors that might mediate the relationship between women's weight concerns and smoking rates. This study investigated the contribution of one factor, cognitive style, to differences in smoking rates among four different groups of weight-concerned college women (anorexic tendencies, bulimic tendencies, weight concerns and no weight concerns). The results of this study suggest that cognitive style may contribute to smoking rates among college women with weight concerns.

1:40 p.m.

Akash Saraf

School of Engineering Technology
Professor Vijay Mannari

Novel Functional Polyols for Corrosion Resistant Coatings

Phosphate ester groups containing polymeric materials are known to provide improved adhesion and corrosion resistance. Novel polyols containing phosphate ester groups have been synthesized from polybutadiene resins using different phosphating reagents. These polyols are characterized by techniques such as GPC, FT-IR and other chemical methods. Coating compositions are formulated using these novel polyols as principal components. The primary film properties and corrosion resistance properties of these coatings have been studied using accelerated cyclic corrosion tests and compared with conventional coating systems. Some key aspects of synthesis of these novel polyols and film properties of their coatings will be presented.

2 p.m.

Madhavi Lokireddy

Department of Chemistry
Professors Steven Pernecky, Stephen McGregor and Heather Holmes

Real-time Monitoring of Volatile Products of Lipid Peroxidation in Myoblast Cells by Gas Chromatography in Connection with an Incubator and Cryofocusing Inlet System

C2C12 mouse myoblast cells, grown in fetal bovine serum- and antibiotic/antimycotic-fortified DMEM media, were assayed on gelatin at 37 °C in glass vials

that were connected to a cryofocusing unit to trap volatile organic compounds (VOCs). The VOCs were eluted from the trap by capacitive discharge into a gas chromatograph with time-of-flight mass spectral capabilities (GC-TOFMS), and were found to include the lipid peroxidation product hexanal. The pro-oxidants, cumene hydroperoxide and hydrogen peroxide, elevated the levels of lipid peroxidation products when included in the culture media, whereas the anti-oxidant butylated hydroxy toluene (BHT) impaired their production. Derivatization of the aldehyde products of lipid peroxidation in the myoblast cells with pentafluorobenzyl hydroxylamine hydrochloride (PFB) provided evidence for formation of non-volatile products of lipid peroxidation such as malondialdehyde and 4hydroxynonenal. Funding was provided by NSF grant 9987063, an EMU CAS equipment grant and an EMU Research Assistantship.

Main Lounge

1 p.m.

Marissa Mourer

Department of Teacher Education
Professor Joe Bishop

What Does an Internationalized Campus of Higher Education Look Like?

Eastern Michigan University is one of many universities that endeavor to internationalize their campuses. One method employed to increase cultural, political and geographical awareness is International Week. Yet "internationalization is an ongoing and continuing effort" (Knight, 2003). Personal observation, participation in the planning process for International Week and a review of the literature were all utilized in order to determine how effective International Week 2004 was at achieving its stated goal of internationalization. From this research, including comparative data of universities worldwide, emerges a vision of what it takes to internationalize EMU.

1:20 p.m.

Stefanie Baier

Department of Teacher Education
Professors Robert Carpenter and Joe Bishop

Cultural Shock Experience of International Students in the US

Every year thousands of international students enroll in U.S. colleges and universities to pursue degrees. All international students go through an experience commonly known as culture shock, which manifests

differently depending on many variables. This study analyzes the ways self-confidence/self-efficacy, cultural background, gender and social support networks impact the adjustment process of students from foreign countries to the U.S. culture. Forty students from 23 different foreign countries attending a Michigan community college were surveyed and follow up interviews conducted to assess the relationship among self-confidence/self-efficacy, cultural background, gender and social support networks. Western students reported more positive cultural adjustment ($M=29.5$) than non-western students ($M= 25.8$). Regardless of cultural background, males adjusted better ($M=28.4$) than their female peers ($M=26.0$). These results have implications for all those working with international students, including counselors and teachers.

1:40 p.m.

Beth Corbin

Amanda Edgell

Department of Special Education

Professor Jacquelyn McGinnis

Social Skills Training for Individuals with Cognitive Impairment

Communication is one of the most vital components of life. Every day, individuals face a multitude of social interactions. This person-to-person contact involves giving, receiving and interpreting messages. The process of learning these skills begins at a young age and continues through adulthood. Most children and adults obtain social skills through modeling, role-playing and direct instruction. Recent studies have explored the effectiveness of various strategies used in the teaching of social skills to those individuals with cognitive impairments struggling in the social domain.

2 p.m.

Adrian Ong

Department of Management

Professor Eric Schulz

Factors Influencing Graduate Assistants' Pay at Eastern Michigan University

The research is conducted to determine what factors departments at Eastern Michigan University use to make pay decisions for graduate assistants. The departments at Eastern Michigan University have much freedom on decisions of pay for graduate assistants. A survey will be distributed to various departments and will gather information about the pay practices the departments have for graduate assistants. We will examine the extent to which

seniority, meritorious performance, economic circumstance, academic performance or some other factors that influence graduate assistants' pay. The data gathered will be analyzed using multivariate analysis.

Reception Room

1 p.m.

Tetyana Sydorenko

Department of Foreign Languages and Bilingual Studies

Professor Cathy Day

Multimedia Program Design for Second and Foreign Language Teaching

In recent years, multimedia software has been widely used for a variety of purposes, including language teaching. SMIL (synchronized media integration language) is a fairly new multimedia standard. It was designed for making presentations that synchronize different media, such as audio, video, text, graphics and animation. Multimedia programs created with SMIL can be useful for language teaching because they are able to incorporate various help features, such as subtitles, dictionaries, cultural explanations, playback controls and feedback, to aid students in their comprehension of authentic language material. However, before such a program is designed, the effects of each of these help features on learners' comprehension, retention and use must be investigated. In my paper, I draw on empirical studies of learner strategies in computer-assisted language learning to determine which of the above features are most beneficial for learners and exactly how they should appear in a multimedia program.

1:20 p.m.

Marie Baldwin

Department of Management

Professor Mary E. Vielhaber

Impact of Role Clarity in Breaking Down Communication Barriers: A Study of Frontline Customer Support Personnel

The need for role clarity in relationship to employee satisfaction and performance behaviors is well documented. This study of frontline customer support personnel focused on determining the communication barriers that were impacting their internal knowledge necessary to provide excellent customer support. Perceptions of communication methods, mediums and frequency were gathered through questionnaires and interviews. The results underscored the importance of role clarity in effective customer service.

1:40 p.m.

Bob Heins

Department of Political Science
Professor Claudia Petrescu

Building Effective Program Operations and Analysis in Social Service Organizations

The purpose of this paper is to discuss factors that are necessary for charitable nonprofit organizations to consider when designing, launching, implementing and evaluating programs. There are changing conditions in the world that lead to a greater need for nonprofit services. There are also conditions that make it harder for nonprofit organizations to operate, such as decreasing governmental support, an uncertain economy and a skeptical public. As a result of these difficulties, there are many struggling nonprofit organizations in the United States today. These factors include the mission, goals, objectives, strategies, action plans, fund raising and communication strategies. Paper also presents a general program cycle for social service organizations within the framework of a family caregiving program at the Washtenaw County chapter of the American Red Cross.

Salon

1 p.m.

Todd Stoltey

Department of Biology
Professor Cara Shillington

Movement and Behavior of Male Tarantulas (*Aphonopelma anax*) During the Breeding Season

Mature male tarantulas (*Aphonopelma anax*) leave the safety of their burrows to actively search for fossorial females in late spring. Actively searching for potential mates exposes males to the extreme environmental conditions and predators of the Texas chaparral. Our goals in this study were to 1) observe wild radio-tagged males over the course of the breeding season and 2) collect and analyze baseline movement and behavior data. Males were found to travel up to 235 meters/night and often use the shade of vegetation as an impromptu refuge from high daytime temperatures. Observed movement was interrupted by pauses of varying length, and directionality appeared random. Movement and other behaviors were observed during all hours they were active (5 p.m. to 11 a.m.). Diurnal activity exposed them to parasitoidism by the tarantula hawk wasp (*Pepsis* sp.), which was a major component of male mortality.

1:20 p.m.

Lindsay Anderson

Department of Biology
Professor Ulrich G. Reinhardt

Dispersal Rates of Bighead Carp in the Illinois River

Bighead carp populations were first documented in the Mississippi River basin during the 1980s. Since that time, their distribution has dramatically increased, and reproducing populations have been identified for the Mississippi River and its tributaries. The rate of expansion is unknown. This study observed adult bighead carp in the Illinois River to obtain dispersal rates and movement patterns. Forty-two adult bighead carp were implanted with radio transmitters and tracked June-August 2003 and May-August 2004. The total maximum distance traveled was 163-km upstream in 35 days. The top five percent of all movements averaged 68.8-km (n=9). The mean dispersal rate for movements detected by boat was 0.940-km/day. Bighead carp are capable of moving relatively large distances in a short amount of time. Management concerns about the spread of bighead carp into the Great Lakes are warranted, and actions to prevent their spread, such as electric dispersal barriers, are definitely needed.

1:40 p.m.

Gitanjali Kundu

Department of Biology
Professor Daniel Clemans

Induction of Interleukin (IL)-8 from Respiratory Epithelial Cells after Stimulation by *Haemophilus influenzae* Proteins

Nontypeable *H. influenzae* (NTHi) causes recurring respiratory infections in patients with chronic lung diseases. These infections are characterized by brisk inflammatory response that is due to the expression of IL-8. We hypothesize that secreted, NTHi protein (i.e., modulins) mediate cellular interactions with respiratory epithelial cells leading to the production of IL-8. We exposed 9HTEo- human tracheal epithelial cells to NTHi and compared the resulting profiles of IL-8 secretion using ELISA. Ultrafiltration followed by anion exchange chromatography revealed that secreted modulin was >100 kDa. SDS-PAGE showed several unique protein bands. Mass spectral analysis revealed various candidate modulin proteins that fall into four functional groups: nutrient transport, biosynthetic, stress and the hypothetical proteins. Further experiments are being performed to amplify and clone these candidate modulin genes. On analysis of the outer membrane protein P2, it was found that

the absence of this gene causes lower levels of IL-8 induction from the human respiratory cells, suggesting that this protein induces some factors that enhances the chemokine levels to elevate. In conclusion, these results suggest that secreted proteins contribute to the NTHi stimulation of the respiratory epithelial cell IL-8 production.

2 p.m.

Jocelyn Goodell

School of Technology Studies
Professor Subhas Ghosh

Developing Environmentally-friendly Women's Apparel from a Renewable Resource

This research compares woven fabric produced from polylactic acid or PLA fibers (Cargill Dow's Ingeo® Fiber) to common apparel woven fabric (e.g. polyester, cotton) regarding fabric properties and apparel construction. Cargill developed a new and environmentally-friendly corn dextrose fermentation process of PLA manufacturing. Cargill Dow's PLA is a thermoplastic polymer made from corn, which requires no solvents to produce. The manufacturing processes of PLA, polyester and cotton are compared, in addition to fabric structure, design and properties. Fabric property testing for data comparison includes wrinkle recovery angle, tensile grab and seam tests, abrasion resistance, fabric weight and drape. The development process of women's apparel from design through construction is documented for each fabric, and a comprehensive comparative analysis follows to determine the advantages and disadvantages of using PLA fabric for women's apparel.

Tower Room

1 p.m.

Marisa Ferrara

Department of English Language and Literature
Professor Verónica Grondona

Images of Love in Standard Italian

Emotions are abstract, culture-tinged constructs that are difficult to define. As a consequence, their linguistic analysis is particularly arduous. Because of its inherent definitional ambiguity, the language of emotion builds upon metaphors of the physical realm, and these metaphors in turn demonstrate a culture's way of defining a particular emotion. Unfortunately, the communication of emotion and its metaphors remains undocumented in many of the world's languages, which has led to linguistic and cultural biases in many scientific studies of emotion. This study aims to highlight this issue and contribute to

the clarification of its parameters by documenting the metaphorical characteristics of the idiom of love in spoken standard Italian. The documentation derives from an array of field-gathered linguistic expressions used by Italians to convey love and from the qualitative analysis of the metaphorical constructs providing the context for describing such emotions across age and gender.

1:20 p.m.

Kyla Gurganus

Department of English Language and Literature
Professor G. B. Cross

Sex and Violence in Recent Young Adult Novels

Sex and violence in recent works of young adult fiction are not as detailed as many adults would assume and are definitely not as explicit as that of today's movies, video games, television or adult fiction. In this study, 14 recent young adult novels were analyzed for sexuality and violence. All contained moving, compelling stories with young adult protagonists, but few contained graphic sexual and violent content.

1:40 p.m.

Neil Salmond

Department of English Language and Literature
Professor T. Daniel Seely

Finding a Theory of Resultatives Everyone can Agree On

Theories of the resultative construction abound in modern theoretical syntax (Carrier and Randall, 1992; Den Dikken and Hoekstra, 1993; Fontanales, 2000, 2001; Mueller, 2001; Rappaport and Levin, 2001; Harley, 2002; Jackendoff, 2002; Neeleman and van der Koot, 2002; Mezhevich, 2002; Goldberg and Jackendoff, 2004; McIntyre, 2004). However, each of the proposed models requires its own theory of argument structure and of the syntax-semantics interface, and picking the most theoretically viable one is therefore no easy task. Furthermore, the empirical data on which most models are built is highly skewed towards the Germanic languages, despite the fact that resultative-like constructions appear in many of the world's languages (Mendivil, 2000). In my presentation I will outline a few of the features of the resultative construction in English (case marking of unselected objects, telicity, restrictions on verbal and result phrase semantics, fixed constituent order) and compare these with features of resultatives in other languages and features of languages without a resultative construction, with a view to building a truly cross-

linguistically and theoretically viable model of resultatives.

2 p.m.

Erin Snoddy

Department Of English Language and Literature
Professor Ann Blakeslee

International Technical Communication: Writing Documentation for Translation

As businesses become more international, companies must globalize their technical documentation. Students of technical communication must therefore learn about writing for international audiences. This presentation addresses research I carried out to determine what is required to write effective technical documents for such audiences. I address the skills that are needed to write for international audiences, and I present tips from technical communication professionals on writing documentation for translation. I also address what students should learn in order both to write for international audiences and to prepare documents for translation. I present strategies for acquiring this knowledge.

**Oral Presentations
Session II
Alumni Room**

3 p.m.

Sun-Mi Kim

Department of Computer Science
Professor Benjamin Keller

Defining the Local Health of Recommender Systems

As a large number of e-commerce sites have employed recommender systems, maintaining the attractiveness of a recommender system to its users has become critical. We consider the **local** health of a recommender system as any property of the system that could affect the user's perception of the system. Therefore, **observability** by the user is a key property of recommender system health. Our goal is to define the user observable properties of recommender systems and to characterize the underlying properties of the algorithm and data that lead to pathologies observable by the user. User observable properties are all related to the list of recommendations provided to a user; these include accuracy of the predicted ranking, stability of the ranking and variability of new items in the ranking. We discuss these properties and the application of a graph-based model of recommendation to characterize properties

of the neighborhood(s) involved in computing the recommendations.

3:20 p.m.

Venugopal Kotagiri

Department of Computer Information Systems
Professor Huei Lee

Information Security Concerns in Supply Chain Management

Supply chain management, one of the buzz words in today's highly competitive business world, is collaboration among supply chain partners like manufacturers and/or service providers, suppliers and customers for producing highly competitive, low cost, quality goods and/or services on time with low inventory cost and guaranteed customer satisfaction. The information technology and telecommunication facilities available today facilitate the virtual collaboration among supply chain partners like manufacturers, suppliers, distribution centers and customers. The set up for virtual collaboration among supply chain partners includes the intranet, where all the plants and branches of organization share information, and extranet, where manufacturers and service providers partner with external suppliers and customers and share strategic supply chain activity information like procurement of raw material, production plans, scheduling plans and supplier information. Most of the organizations integrate enterprise resource software that connects all the functional units of organization irrespective of the location, which carries the information necessary for production and demand planning activities, with supply chain software systems. As strategic alliance among supply chain partners achieves competitive advantage, competitors of manufacturers and/or service providers and competitors of suppliers will be tempted to hack the information to learn the successful business of supply chain partners. This poses a great threat to the security of collaboration among supply chain partners and to the organizational information that is one of the most precious assets of the organization. This paper presents the present setup of virtual collaboration, threats to secure information sharing among supply chain partners and importance of secured information sharing among supply chain partners.

3:40 p.m.

Rahul Agnihotri

School of Engineering Technology
Professor Vijay Mannari

Self-cleaning and Microstructured Antifouling Coatings

Bio-fouling of hulls of ships significantly affects the fuel consumption and speed of the marine vessels and ships. Antifouling coating helps in controlling the bio-fouling and keeps the hull surface clean. The water repellency of lotus-leaf surface has the ability to self-clean. The focus of our effort is to mimic the lotus-leaf effect to create a self-cleaning coating. Our approach was to create a microstructure surface by formulating a polymeric binder with hydrophobic particles. Adhesion and self-cleanability of such coating will be studied as a function of surface energy, elastic modulus and film thickness. Some aspects of our approaches and test results will be presented.

4 p.m.

Lise Urbaczewski

Department of Computer Information Systems
Professor Stevan Mrdalj

A Methodology to Compare and Evaluate Enterprise Architecture Frameworks

An enterprise architecture (EA) maps out all of the information systems within the enterprise and how they relate and interact to fulfill the enterprise's mission. This documentation provides organizations with the ability to understand and analyze their business operations. EA also provides for weaknesses or inconsistencies to be identified and addressed. With information technology playing an ever-increasing role in today's organizations, there is a growing concern that the applications being developed cannot be integrated to meet the greater needs of the organization. EA efforts are addressing these challenges. There are a number of already established architectural frameworks in use today, such as Zachman's Framework and the Federal Enterprise Architecture. Some of these frameworks were developed for very specific areas, whereas others have broader functionality. This study will analyze several frameworks in order to create a methodology to compare and evaluate EA frameworks. This methodology can be used for guidance in the selection of an EA that meets the needed criteria.

Faculty Room

3 p.m.

Sandra Naimou

Women's Studies Program
Professor Whitney Harris

Disrupting Patriarchy: Conceptualizing Middle Eastern "Manhood"

This paper assembles central elements of Arab masculinities, a topic that is considerably lacking from men's studies research. With an in-depth examination into Middle Eastern familial structures, Western theories of masculinities, and emerging perspectives of Arab masculinities, the present analysis confirms that Arab masculinities are constructed within homosocially competitive environments, much like other patriarchal masculinities. The author identifies elements within Arab masculinities that emphasize competition and fear among men more than the need to control women. The concept of "honor" is given special attention because it is often used to justify and excuse men's violence. Also included in this analysis is a case study of Palestinian men's changing conceptions of "manhood" resulting from shifting power relations between Palestinians and their occupiers during the first intifada. Establishing this "oppositional masculinity" was a response to class and race/ethnicity oppression that redefined the meaning of violence against Palestinian men's bodies. The author contends that Palestinian men are sacrificing traditional notions of masculinity just as they reaffirm masculinity through redefinition.

3:20 p.m.

Katherine Brindle

Department of Communication and Theatre
Arts/Women's Studies
Professor Anita Rich

Speaking Out and Acting Out: Using Performance as Advocacy to Combat Eating Disorders

This presentation explores key ways in which performance can be used as a tool to combat and prevent eating disorders. First, I will discuss a performative-based teaching unit I designed to promote positive body image in elementary school children. Next, I will provide a sample excerpt from a speech crafted for college students that defines eating disorders, explores root causes and offers strategies to prevent and combat eating disorders and negative body image. Ultimately this creative/scholarly work juxtaposes multiple texts and performance forms, in particular solo, interactive and ensemble modes, in

order to destigmatize this important issue and empower people to love their bodies and themselves.

3:40 p.m.

Marilyn Prucka

Department of Art
Professor Patricia Williams

Indigo: Ancient Dye, A Personal Exploration

In this presentation I will briefly discuss what brought me to work with indigo: its distinctive beauty, ancient history, the simple chemistry of the seemingly easy and yet complex maintenance of the dyebath, and the enjoyment of the dye to fiber application. I will then discuss the simple chemistry involved and present a slide demonstration of the dye process. Last, I will show slides and real examples of my art quilts utilizing the dye and explain the reasoning for the use of indigo as an adjunct to my other surface design techniques.

4 p.m.

Samuel Richardson

Department of Communication and Theatre Arts
Professor Christine Tanner

Who's CAPE-able? Creating New Works for Young Audiences

My work as a playwright represents my personal experience, the observation of others' experiences, a review of children's literature and psychological texts, and anecdotal evidence gathered from colleagues, cast and elementary teachers and students. I merged these ideas into one piece reflecting truths that have resounded with our audiences. *Who's CAPE-able?* originated in my searching to understand children's fears. It has reverberated with audiences in the greater Ypsilanti and Ann Arbor area and will have reached more than 10,000 students by April 2005. I propose to share my process of playwriting from germination to performance through a presentation that will include short excerpts from the play.

Intermedia Gallery

3 p.m.

Hiral Shah

School of Engineering Technology
Professor Sema Kalaian

Comparison of Different Parametric Procedures to Examine Reliability in Sequential Delphi Surveys

Delphi technique is a procedure to obtain consensus on a particular topic through a set of carefully designed sequential survey questionnaires interspersed with feedback from the participants. The Delphi methodology makes collection of expert opinions from geographically dispersed experts and is proved to produce more accurate group estimates than do face-to-face discussions. The purpose of this study is to compare the three parametric statistical methods: coefficient of variation, Pearson correlation coefficient and F-test to obtain reliability in a Delphi study that involves more than 100 participants and find out a method that fits the best in this kind of study. Data for this study are obtained from the former thesis *A Delphi Study to Develop Engineering Management Curriculum at Eastern Michigan University*, and it has a sample size of approximately 200 participants.

3:20 p.m.

Bridgette West

Department of Biology
Professor Peggy Liggitt

Conjugation of Fecal Coliforms and the Transference of Antibiotic Resistance in Environmental Waterways of Southeastern Michigan

Waterborne disease outbreaks associated with rivers, ponds and lakes occur as a result of water pollution. A source of water pollution can be attributed to contamination with fecal coliform bacteria deposited from the feces of warm-blooded animals, including humans. Bacterial isolates from 10 study sites (six rural and four suburban) were cultured from water samples taken before and after significant rain events and tested for resistance to five commonly used antibiotics. More than 90 percent of all isolates (n=830) displayed resistance to at least one antibiotic, specifically ampicillin. To examine the ability of resistant isolates to spread their traits, the isolates were next tested for their ability to transfer resistance, via conjugation, to nonresistant laboratory bacteria. More than 50 percent of these bacterial isolates tested positive. Additional water quality data and an

analysis of human and animal impact from each study site will also be presented.

3:40 p.m.

Mark Rachal

Department of Biology
Professor Peter Bednekoff

Anti-predator Behaviors of Robins Singing near Cooper's Hawks

American robins (*Turdus migratorius*) singing near Cooper's hawk (*Accipiter cooperii*) nests face increased predation risks. Yet there may be benefits to being near the hawks that defend their territory aggressively from other predators. I hypothesized that the robins singing near Cooper's hawk nests will adjust their behavior to reduce the chance of being preyed upon. I observed the behaviors of robins near hawk nests and at control sites. The behaviors that I recorded included the position of the bird in the vegetation, how much cover was utilized and the length of song. Robins singing near hawk nests displayed different singing behaviors compared to those robins at control sites. Robins singing at Cooper's hawk nests did so covered by more vegetation. In addition, those robins sang from positions lower in the vegetation. This suggests that robins can alter their behavior while singing in order to decrease the chances of attack.

4 p.m.

Dianna Kinaschuk

Department of Interdisciplinary Technology
Professor Denise Pilato

Shrouded in Technology: Studies of the Shroud of Turin

My research was done on the technology surrounding the Shroud of Turin, arguably the most studied artifact of all time. Many believe this cloth to be the actual burial cloth of Jesus Christ. I examined historical as well as present day technology used to uncover the mysteries of the cloth.

Main Lounge

3 p.m.

Devon Akmon

Department of Geography and Geology
Professor Lauren Sickles-Taves

Dynamic Kernels! Perry Hayden and the "Biblical Wheat" Project

In 1940, Tecumseh resident Perry Hayden set out to put his passions for religion and farming into action by conducting a wheat tithing experiment within the local community. Inspired by a religious sermon, Hayden began the six-year project by planting one cubic inch of wheat (360 kernels) and vowed to give 10 percent of each year's harvest as a charitable donation to a church. Sponsored by Henry Ford, the project grabbed the national spotlight and provided an inspirational story during the troubling times of the World War II era. In addition to providing farmland for the project, Ford built the Dynamic Kernels (Macon Creek) Mill in Tecumseh, Mich., for the fifth year's planting. This presentation is the culmination of months of research leading to a National Register of Historic Places nomination for the Dynamic Kernels Mill. The National Register is the "nation's official list of cultural resources worthy of preservation."

3:20 p.m.

Amanda Apple

Department of Geography and Geology
Professor Lauren Sickles-Taves

Sleuthing the Sample Room

Historic preservation research takes on several forms, including local history, keen observation skills, map interpretation and government records inquiry. Preservationists piece together the history of forgotten buildings using these resources when conducting reconnaissance or intensive historic surveys and in preparing national register nominations and Section 106 reviews. The Sample Room in Baker City, Ore., is a historic gemstone nestled along the path of the Oregon Trail and a perfect case study of the research methods, techniques and tools used by preservationists to unravel the past, record our history and protect our heritage.

3:40 p.m.

Annie Marshak Dowling

Department of Geography and Geology
Professor Lauren Sickles-Taves

Cotswold Revival Architecture in Southeast Michigan: Definition, Distribution and Conservation

The southeast Michigan area is dotted with a vernacular architecture called Cotswold Revival. Considered an adaptation of the popular 20th-century Tudor Revival style, Cotswold Revival architectural features include light-colored limestone walls, steeply-pitched gable roofs with stone shingles, and

multi-paned windows based on medieval English forms. Multiple examples abound of this style imported to Michigan from England during the 1920s. Detroit Cotswold architecture emerged from Henry Ford's interest in an actual Cotswold cottage for Greenfield Village. Edsel Ford worked with architect Albert Kahn in building an understated mansion in this picturesque style. Cotswold Revival architecture became an established style for wealthy industrialists and beyond. Nevertheless, Cotswold Revival architecture faces a harsher climate in southeast Michigan than its historical ancestor does, and that poses a challenge to conserving this vernacular occurrence.

4 p.m.

Lisa Ruppel

Department of Geography and Geology
Professor Lauren Sickels-Taves

The Castellated Style of Armories

My presentation will cover the history and style of United State's armories and the unique style/type used exclusively in armory construction. The use of castellated architectural forms for armory construction was the physical response to the working class labor movement in the mid to late 19th century. The widespread use of the style coincided with the great wave of armory construction from 1870-1900. Military units housed in the armories used the distinctive attributes of the style to make the building physically defensible as well as impressive to the eye. By the 1920s the majority of castellated elements had disappeared from armory design, yielding to more fashionable styles of the time such as Art Deco, Art Moderne and Streamline styles. It is my goal to show how social movements defined armory construction and design and to profile the characteristic style for 19th century armories.

Reception Room

3 p.m.

Tammy Smith

Department of English Language and Literature
Professor Ian Wojcik-Andrews

Power and Gender Roles of Women: A Feminist Analysis of *The Wonderful Wizard of Oz*

My research presentation will focus on power and gender roles of women in L. Frank Baum's novel, *The Wonderful Wizard of Oz*. I will argue that while Baum's protagonist, Dorothy, exemplifies feminist power, her inability to recognize this power is what

ultimately leads her back to patriarchy. I will further argue that Dorothy's return home is a result of her subconscious reminder of the social roles of women in the 19th century. However, other powerful women in the novel who reject patriarchy, such as the wicked witch and the good witch, are representations of the reversal of gender roles of the 20th century. Thus, Baum's representation of Dorothy and the witches is an attempt to make women aware of their power.

3:20 p.m.

Angela Meador

Department of English Language and Literature
Professor Steve Krause

Speaking the Text: Speech Recognition Software as a Writing Tool

Speech recognition software (SR) turns spoken words into written texts. Since the 1990s, individuals with learning disabilities have used SR to overcome difficulties with conventional writing tasks. While many individuals with learning disabilities have had great success with SR, others have not. Superficially, it would appear that strong oral language skills would be a predictor for success with SR, but strong reading skills are, in fact, a much better predictor. Interviews with two individuals with learning disabilities, one who is a successful SR user and another who was unsuccessful, confirm the importance of literacy and provide insight into why reading skills are so important for effective SR use.

Salon

3 p.m.

Sara Brooke Curtis

Department of Communication and Theatre Arts
Professor Lee Stille

A Wide Awake Dreamer

This performance explores the life and literary magic of the late poet Denise Levertov. Weaving together Levertov's poetry from various stages of her life with details of her personal history, we gain access into the world of a dynamic activist, writer and woman. Levertov muses over her daily observations with astute awareness; her connection to the mystical is unique and contagious. Through performance, I pay tribute to a woman who transcends time by finding the divine in ordinary details and reminding us of the beauty and potential presented in each moment.

3:20 p.m.

Stephanie Patterson

Department of Communication and Theatre Arts
Professor Lee Stille

Dirty Dancing: An Exploration into Striptease and Bakhtin's Concept of the Carnavalesque

While exploring ways in which language has been utilized to subvert authority, literary theorist Mikhail Bakhtin grew increasingly fascinated with the carnivals of medieval Europe and their dynamic interplay of language and dialogue. Defined by its turbulent nature where hierarchies were overthrown, fantasies were indulged, desires were uncensored and etiquette and propriety were discarded, the medieval carnivals became Bakhtin's muse for his concept of the carnivalesque, used to examine texts that embodied the same anarchic nature of the festival. Drawing upon Bakhtin's idea of the carnivalesque, this paper seeks to establish striptease as a performative text and explore the subculture considered indulgent, perverse and subversive by mainstream America. Though the environment and culture of erotic dance clubs share much of the chaotic characteristics of Bakhtin's carnivalesque, a closer examination reveals that limitations including club security interference and the inability to overthrow hegemony prevent American strip clubs from actualizing Bakhtin's ideal.

3:40 p.m.

Christopher Small

Department of Communication and Theatre Arts
Professor Lee Stille

Homily as Carnival

This presentation examines the similar aspects of "homily" — preaching or sermons, especially that of first century Christianity — and of "carnival," celebrations of the Middle Ages, written about by the author Rabelais in the 16th century and reexamined by Mikhail Bakhtin in the 20th century. Despite vital differences, there are many striking parallels between homily and carnival as they work toward bringing people together, overturning false hierarchies, creating rituals, showing where wisdom lies, revealing hypocrisy, encouraging renewal, creating dialogue in common language and instilling a festive perception.

4 p.m.

Karen Moon Schaefer

Department of Communication and Theatre Arts
Professor Dennis Patrick

The Soldier in the Photograph: Discovering My Grandfather

My grandfather, who died while fighting in World War I, lies beneath a white marble cross, along with 14,000 other dead Americans, in a U.S. military cemetery in France. This evocative project for my CTAC 592 class provided me with a much more meaningful sense of his identity as a person because it weaves together a narrative of memories, documents and personal experiences of the connected lives that form the history of my family. This type of research, based on the work of scholars Jane Jorgenson and Arthur P. Bochner, discloses the role of communication in family life.

Tower Room

3 p.m.

Eleanor Swanke Fox

Department of Political Science
Professor James Dave Ivers

Community College Enrollment: Determining Influences of Future Enrollment

What does the future hold for community college enrollment? This is the question that many community college administrators ask as each term passes. With the increasing demand for and cost of higher education, community colleges find themselves struggling with providing the appropriate level of student services while still reconciling budgets. Consequently, the purpose of this research is to explore variables that influence enrollment at a Michigan community college; while concurrently determining if the Box-Jenkin's ARIMA model is useful in predicting enrollment. This research analyzes enrollment data for one Michigan community college from 1990 to 2003. Variables reviewed included credit hours, in-district tuition (adjusted for Consumer Price Index), county unemployment rates and county population. The ARIMA model incorporates the autoregressive and moving average components or predicting values, as well as manages the seasonal factor of the data during the forecasting process. The projection indicates that annual credit-hour enrollment from 2002-03 to 2003-04 will increase four percent; and annual credit-hour enrollment from 2003-04 to 2004-05 will increase

another four percent. Ultimately, the Box-Jenkins ARIMA model predicted credit-hour enrollment considerably well.

3:20 p.m.

Shawn Shivnen

Department of Political Science
Professor Jeffrey Bernstein

Attendance in High School: A Study of Factors Affecting Attendance

The purpose of this presentation is to determine the factors that affect students' attendance in a high school setting. The variables chosen were taken from other published surveys as well as from experienced teachers from within the school. The study involves 600 ninth, 10th and 11th grade high school students from Romulus, Mich. Students were given an online survey of roughly 60 questions on all types of subjects. The most significant questions, identified from the research and a school improvement team, were then statistically analyzed by the researcher. Of the 25 variables that were originally identified, four factor variables turned out to be statistically significant. The most significant factor was involvement in after school programs. Other significant factors were whether a student had a computer and Internet access, whether a student received a free/reduced lunch and, finally, the parents' view on school attendance.

3:40 p.m.

Amy Collings

Department of Psychology
Professor Karen Saules

A Cross-Sectional Analysis of Body Image Dissatisfaction in Previously Overweight Women at Various Lengths of Successful Weight Maintenance

Many overweight individuals embark on weight-loss programs but fail to maintain the weight loss for extended periods. Research on successful weight maintenance has focused primarily on diet and exercise while neglecting to explore other potentially significant factors. Preliminary studies examining psychological factors in weight maintenance suggest that poor body image may be associated with failure to maintain weight loss. Additionally, it is speculated that length of successful weight maintenance may be related to body image. Using self-reported information on body image obtained from previously overweight women at community weight-loss centers, this study examined body image dissatisfaction at various lengths of successful weight

maintenance. Results indicate that individuals with longer successful weight maintained periods demonstrated less body image dissatisfaction than those with shorter weight maintained periods and non-maintainers. This cross-sectional analysis indicates that a longitudinal study is warranted. Further implications of the study will also be discussed.

4 p.m.

Janet Roberts

Department of Psychology
Professor Carol Freedman-Doan

The Expectancy-Value Theory of Motivation and the Enumeration of Possible Selves; Evidence for Outcomes during Emerging Adulthood

The main objective of this study is to identify how one's hoped-for and feared possible selves are related to values and expectations and how these constructs influence the achievement of distal life goals. It is hypothesized that one's hoped-for and feared possible selves at age 18 are related to goal expectations and values two years later. It is also hypothesized that goal expectations and values are related to goal achievement 10 years post-high school. Finally, it is hypothesized that expectancies and values mediate the relations between one's ideas about possible selves and their achievement. This investigation is important because it will examine (for perhaps the first time) the relations between possible selves and the expectancy-value model of achievement motivation and how these constructs apply to emerging adults. Furthermore, the study will examine the degree to which these constructs can predict the attainment of desired educational, familial and occupational goals.

Oral Presentations

Session III

Alumni Room

4:30 p.m.

Jenny Clark

School of Technology Studies
Professor Sema Kalaian

Distance Education Accommodation for Students with Disabilities

This study will examine the interest level and projected accommodation needs for students with disabilities regarding distance education courses at Eastern Michigan University. This convenience sample will consist of 50 students with a variety of

disabilities from a wide range of academic disciplines at the university. Students will range in age from 18 to 65 years old and be enrolled in undergraduate level courses. Students will be surveyed regarding their accommodations in a distance education course compared to accommodations they typically received in traditional courses. The hypothesis is that results will indicate that for some specific disabilities, accommodation will differ in a distance education. Results from this study will serve two purposes. One, the interest level of students with disabilities in online courses will be measured. Two, the information on proposed accommodations will give the University further knowledge on appropriate assistance for distance education courses.

4:50 p.m.

Brian Filipiak

Department of Teacher Education
Professor Ellen Hoffman

Web-based Communication of the Middle School Teacher: Are Available Tools Being Used Effectively?

While the Internet can be a good resource that provides a new paradigm for information sharing and communication, and the availability of free tools for publishing information to a Web site are plentiful, how effective are classroom teachers at using this medium as a communication tool for students and parents, about the expectations, assignments, and the needs of their classrooms? This project surveyed Michigan school district Web sites to determine the availability of teacher-produced classroom Web pages at the middle school/ junior high school grade levels and evaluated found sites on the type of information presented, ease of navigation and organization of materials, to determine whether having tools available is enough incentive to communicate effectively with students and parents.

5:10 p.m.

Genevieve Bertso

Department of Teacher Education
Professor Deborah Harmon

Differentiating Biology Homework to Enhance Academic Achievement

The goal of this research is to determine if differentiating homework for 10th-grade biology students will have an effect on homework completion rate, accuracy and academic achievement. The rationale assumes there is a positive relationship between homework completion and academic achievement. Four classes involving approximately

100 students participated in the study. Two classes were the control group and were assigned the traditional homework assignment, and two classes were the experimental group. The traditional homework consisted of chapter outlines and study guides. The experimental group was given a homework menu that consisted of nine assignments based on Bloom's taxonomy and Gardner's "multiple intelligences." The differentiated homework products consisted of book reports, posters, games, puzzles, skits and models. The homework assignments will draw on a variety of skills and abilities, including verbal skills and performance skills, and academic skills, such as analysis and recall.

5:30 p.m.

Cristopher Lewandowski

Department of History and Philosophy
Professor Richard Nation

The "Successful Failure": Sir Ernest Shackleton and the Cult of Celebrity

Sir Ernest Shackleton's adventures at the South Pole made him an international hero during World War I. Yet in four attempts, Ernest Shackleton never reached the South Pole. Though his celebrity status was helped by fortunate circumstances — the death of Robert Falcon Scott made Shackleton Britain's South Pole expert — Shackleton worked hard to keep himself in the public eye. Using celebrity endorsements and gimmicks that included the first automobile at the South Pole and the drafting of Boy Scout volunteers to drum up public interest, Shackleton sold his misadventures with such charisma that he became the de facto Antarctic expert on two continents at the beginning of the last century. He is remembered today as a talented leader whose audacious plans and flamboyant returns were woven together as skillfully as the career of a modern politician or a Hollywood star.

Faculty Room

4:30 p.m.

Davia Cox

Department of Political Science
Professor Joseph Ohren

Arts in Education: A Program Analysis

As a result of standardized testing organizations who began to report in the late 1980s, substantial differences exist in test scores of arts students as compared to non-arts students, as well as positive affects on their overall GPA. This development led

the federal government to enact legislation adding arts as a core curriculum subject. To date, some states have adopted statewide policies adding arts to school curriculum; however, Michigan is one of the four states that, at the present time, does not have a standardized requirement for arts at any level. To determine data supporting a change in arts education policy in Michigan, a survey administered to college freshmen reflecting on their experiences in arts courses at the high school level in Michigan will be conducted to ascertain benefits of arts instruction and factors that lead students to enroll in arts at the high school level, as well as students' perceptions of arts coursework as an aid to overall academic performance.

4:50 p.m.

Michael Burns

Department of Political Science
Professor Joseph Ohren

An Evaluation of Police Service in Macomb Township, Mich.

This paper studies the mode of police-service delivery in Macomb Township, Mich. Currently, the township contracts with the Macomb County Sheriff Office for police protection. The research question deals with whether it would be more beneficial for a growing township such as Macomb Township to continue to rely on the Macomb County Sheriff for police protection or to establish its own independent police department. The study is based on a sample of six Michigan communities: Macomb Township and five geographically and demographically comparable communities and their police services. Of these, three relied on their county sheriff for police services and three provided their own police service. Two additional counties in two communities in Washington State, which are comparable to Macomb Township and which at one time relied on their local county sheriffs for police service, were also included in the study. Comparison was done in terms of costs, implementation, satisfaction with service and intangibles involved in having one's own police department. No significant difference concerning service delivery between communities that contract and those that independently provide service was found, although the Michigan communities that contracted were able to receive police services at tremendously lower cost in comparison to communities that provided their own service.

5:10 p.m.

Ann Rataj

Department of Art
Professor Richard Fairfield

The Deeply Etched White Line

I will discuss creating an image on a zinc plate with nitric acids, acid resistant stop-outs and various drawing techniques. Unique to this process of image-making is the deeply etched white line, which makes an embossed mark on the paper when printed. When used in combination with a number of other ways of making marks on a plate, interest, even intrigue, is given to the imagery. The incised lines and tonal passages on an intaglio plate are filled with ink during the inking process; the deeply etched white lines are left void of ink when a thin coat is rolled on the plate with a brayer. During the wiping process the ink will remain in the incised lines and tonal passages. When paper is soaked to remove sizing and placed on top of the plate, the softened fibers can then be pressed into the inked image with a printing press. The marks transferred to the paper have dimensional qualities that reflect light. The incised lines will print black or the color of the chosen ink that was applied to the plate, while the deeply etched white lines will be embossed. Relative to the picture plane, the dimensional quality of the image surface has several operating factors: the low relief of the incised lines, the flattened and textural passages of the tonal areas, and the high relief of the embossed white line. Optically, these embossed lines will reflect more light and appear whiter than the paper, thus creating a lyrical quality to the image.

5:30 p.m.

Sarah Kuretzky

Department of Art
Professor Melanie Buffington

Girls, Social Hierarchies and Academic Achievement: A Case Study

This case study investigates the construction of social hierarchies and academic success of adolescent girls in an adult education program. Data were gathered through observations, surveys, interviews and focus groups about how girls attribute their academic successes and failures. Based upon the analysis of data, there is a relationship between positive self-esteem and a student's academic success. Additionally, social status and labels appear to be a factor in girls' academic performance.

Intermedia Gallery

4:30 p.m.

Benjamin Edmondson

Department of Educational Leadership and Counseling
Professor Charles Achilles

The Effects of Parental Involvement and Small Class Sizes on the Academic Achievement Gap

The researcher investigated and compared the effects of specific parental interventions and the implementation of small class size on the academic achievement gap between African American and Caucasian children. The Early Childhood Longitudinal Study – Kindergarten (K) Cohort (ECLS-K) and Tennessee’s Student Teacher Achievement Ratio (STAR) were the primary databases used throughout this study. Data revealed that parental involvement and small classes in themselves positively impacted student achievement; however, the researcher also used regression analyses, descriptive statistics and Pearson Correlation to examine (1) the effects that home environment, activities and cognitive stimulation had on the a) reading, b) math and c) general knowledge performance of African American and Caucasian (K) students; and (2) the effect class size had on the a) reading and b) math performance of African American and Caucasian (K) students.

4:50 p.m.

Elaine Wisniewski

Department of English Language and Literature
Professor Nancy Allen

Forensic Oratory and Rhetorical Appeals in the Recall of the 1994/1995 Nissan Altima Passenger Air Bag

The purpose of this paper is to conduct a rhetorical analysis of the press releases and statements issued by the Office of Defect Investigation at the National Highway Traffic Safety Administration (ODI-NHTSA), Nissan Motor Company, and public citizens as a result of Nissan’s decision to replace the passenger air bag in the 1994/early-1995 Nissan Altima. The rhetorical appeals (ethos, pathos, logos) and their application to the positions of each of these organizations’ documents will be analyzed. A discussion regarding how rhetoric may have affected Nissan’s decision to voluntarily recall the air bag will also be discussed.

5:10 p.m.

Carol Pranschke

Department of Communication and Theatre Arts
Professor Anita Rich

The Parenting Experience: Exploring and Improving Parent-Child Interactions through Performance

Interactive performance offers innovative and practical techniques for parents to better understand their parent-child interactions and, subsequently, to improve those interactions. Research shows that parents are increasingly using anger and inappropriate aggressive strategies for discipline. In a series of parenting workshops designed by the author, participants explore their parenting experiences, test alternative styles of interaction and develop additional methods for communicating in constructive ways within the family unit. The workshops utilize multiple interactive theatre methodologies including image, playback and forum theatre. Collectively, these techniques promote an experiential and creative environment for fostering communications, building community and improving the outcomes of familial relationships.

5:30 p.m.

William Saunders

Department of Communication and Theatre Arts
Professor Patricia Zimmer

The Play Within the Play: Transformative Elements of Child’s Play Within *The Yellow Boat*

The play *The Yellow Boat* chronicles the life of Benjamin, who was born with congenital hemophilia and died in 1987 at the age of eight of AIDS-related complications. In the winter semester of 2004, I directed this production for the EMU Mainstage season. Children’s dramatic play is rooted in imaginative transformation and is exemplified by the visual metaphors used in this production. Using specific scenes in *The Yellow Boat*, I will examine this transformative play as metaphor for life and for catharsis in the young. I will also briefly discuss community outreach opportunities provided by this production, including collaborations with Halle Library, local HIV/AIDS education and resource centers, and Mott Children’s Hospital Child Life staff.

Main Lounge

4:30 p.m.

Kelly Simpson

Department of Geography and Geology
Professor Lauren Sickels-Taves

Mushroom Houses: The Stone Architecture of Earl Young

Earl Young's unique stone architecture has been attracting curious visitors to Charlevoix, Mich., for more than 50 years. Young is perhaps most well known for his "Mushroom House," a stone adaptation of a circular cottage that is often described as an architectural representation of a button mushroom. While stone architecture abounds throughout the state of Michigan, Young's application of stone masonry is quite different from most other regional builders, past and present. Young's architecture is characterized by the frequent use of massive granite boulders, many of which were collected from the surrounding countryside and the rocky shores of Lake Michigan. Presently, not one of these unique structures is protected by national, state or local legislation. The goal of the presentation is to create an awareness of the significance of Young's architectural creations and to inspire a movement towards their preservation over time.

4:50 p.m.

Matthew Borders

Department of Geography & Geology
Professor Ted Ligibel

The Iron Brigade at Antietam

The Iron Brigade, originally composed of the 2nd Wisconsin, 6th Wisconsin, 7th Wisconsin and the 19th Indiana, was the only all-western state brigade in the Union Army of the Potomac. The brigade would receive another western regiment, the 24th Michigan, just prior to the battle of Fredericksburg in December of 1862. Prior to the Union disaster at Fredericksburg was the September 17, 1862, Battle of Antietam. This battle, the single bloodiest day in American history, would see the Iron Brigade sustain a total of 42 percent casualties for just a few short hours of fighting in the now famous Bloody Cornfield and West Woods. The Brigade did their duty and paid for it in blood. The Iron Brigade suffered the dubious honor of achieving the highest combat casualty rate of any brigade in the American Civil War.

5:10 p.m.

Alison Chalom

Department of Geography and Geology
Professor Ted Ligibel

Lake Bluff, Ill., District Nomination to the National Register of Historic Places

The National Register of Historic Places is the list of important buildings and historic districts in our country. While the list is mainly honorary, nomination to the list enables the owners of historic buildings to leverage programs including federal tax credits, property tax freezes, and grant programs earmarked at historic buildings. The Village of Lake Bluff, Ill., is a small, bedroom community located in the prestigious North Shore suburbs of Chicago. Largely residential, the village also includes a small two-block main street downtown. Seven historic buildings anchor this downtown setting. The historic district will include the village hall, the train station, three two-story commercial buildings with upstairs apartments, the 1886 village market (the oldest building in town), a small cottage and the village park. Each of these components has a unique history and architectural significance that supplies the historic charm to the Village of Lake Bluff.

5:30 p.m.

Nicole Nesberg

Women's Studies Program
Professor Linda Schott

Domestic Violence Shelters in Michigan

Due to the efforts of second wave feminists, 500 domestic violence shelters were established in the United States between 1976 and 1981. This included the establishment of the Domestic Violence Project Inc. and subsequently SAFE (Shelter Available For Emergency) House of Washtenaw County, Mich. SAFE House was the first emergency shelter in Michigan to assist domestic violence victims. My presentation will detail the history surrounding the creation of SAFE House: the social climate and legal position on domestic violence; the activists who conceived of this project and worked toward its creation; the economic contributors that funded its establishment; and the political and public supporters.

Reception Room

4:30 p.m.

Peter Distelzweig

Department of Physics and Astronomy
Professor Diane Jacobs

Communicating the Nature of Scientific Practice in Introductory Astronomy Courses

As the interaction between the scientific community and broader cultural spheres becomes more prominent and intricate, it is essential that future K-12 science teachers have a thorough understanding of the nature of scientific practice and theory. This interdisciplinary research project involves a careful, creative examination of the character of scientific practice and theory along with the methods to communicate this to future educators in the context of introductory astronomy courses. Funded by the Michigan Space Grant Consortium, the study involves an examination of literature in the philosophy of science and science education, state educational benchmarks and introductory astronomy textbooks.

4:50 p.m.

Penelope Frenette

School of Technology Studies
Professor Subhas Ghosh

The Effects of Laminating Parameters on the Quality of Automotive Seating Fabrics

Textile fabrics are often laminated for various applications such as automotive interiors, furniture, clothing and so on. Lamination provides unique properties of fabric, including increased strength, durability, fullness, aesthetics and waterproofing. The quality of the laminated fabrics and their properties largely depend on laminating parameters and polymer selection. This research investigates the effects of laminating parameters such as resin type, lamination density and substrate type backing material. Results of this study will facilitate optimization of the laminated fabrics for various end uses.

5:10 p.m.

Jennifer Castillo

Department of English Language and Literature
Professor William Tucker

A Conversation About Reading and Responding to Student Writing

This project is an exploration into the complexities involved in reading and responding to student writing. It is presented in the format of a play and uses direct quotes from several respected academics in the field of rhetoric and composition to form a dialogue about many different issues involved with reading and responding to student writing. I am one of the participants in the dialogue, and while I don't agree with several of the things my character says at the beginning, I did explore several issues that I have had to confront and deal with as a new teacher. I used my character to synthesize some of the things that have happened in my classroom with the ongoing conversation between the scholars I chose to include. This paper explores several issues, such as the language we use with our students, the value we attribute to their writing as literature, how we balance qualitative teaching with quantitative evaluation, whether to grade innate talent or the ability to follow directions and improve writing skills over the course of a class ... and the list goes on!

5:30 p.m.

Tim Sisler

Department of English Language and Literature
Professor Linda Adler-Kassner

Embodied Writing: Basic Writers and the Dubious "I" in College Papers

Basic writers are sometimes instructed to write themselves out of their work. The assumption is that basic writers learn what to think by reading what published others think, not by reflecting on the muddy subjectivity of what is personal. Teaching writing, then, becomes reshaping student identity, and student writing becomes impersonal, vague and passive. Instead, writing should prompt the "self" to negotiate individual and social knowledge. By situating the "I" in their writing, students can look critically at what they know as compared to what they are learning at the university. Confident, reflective student writers are those who have the power to write through their experiences in and out of the classroom. The personal can be a metaphor for the larger context of human experience. Telling personal stories makes other stories possible, and the sharing of marginalized narratives makes possible the revision and development of critical thought.

Tower Room

4:30 p.m.

Erin Moore

Department of Psychology
Professor Carol Freedman-Doan

Sexual Knowledge and Religiosity in Predicting Sexual Behavior

Previous research suggests that religion plays a unique role as both a protective and risk factor in adolescent sexual behavior. While religious adolescents are less likely to have sexual intercourse at an early age, they may also be less likely to use consistent and effective means of contraception when they do become sexually active. This study focuses on the roles of both religiosity and sexual knowledge in determining three aspects of adolescent sexual behavior: a) use of contraception, b) age of first sexual activity and c) number of sexual partners. Analyses will control for sexual motivation, drug use, age, race and academic standing. Participants are 6,509 adolescents in grades seven through 12 who participated in the National Longitudinal Study of Adolescent Health (Add Health), a nationally representative study conducted in 1994 and 1996 that explores adolescent health-related behaviors.

4:50 p.m.

Debra Kubitskey

Department of Political Science
Professor Dogan Koyluoglu

The 35th District Court – Sobriety Court Evaluation

The primary purpose of this presentation is to describe the 35th District Court Sobriety Program and to determine the effectiveness of these therapeutic courts. The 35th District Court began the Sobriety Court in January 2004 and has not had an evaluation to date. Thorough evaluations of the program lead to an effective allocation of resources and therefore, the court can benefit from an effective program. Constructive evaluations will also lead to minor changes in the program to ensure that it is meeting the goals it has set. The data indicate that therapeutic courts are effective when the goals that have been established meet the needs of the community and when the key components of a specialty court have been met. Participants in proven programs show a reduced involvement in crime and reduced substance abuse. Since the 35th District Court program is new, presentation uses a process evaluation to explain how the sobriety court concept has evolved and has been implemented and how

sobriety court programs impact all the actors involved in the process (i.e. judges, staff, participants, attorneys, treatment providers and prosecutors).

5:10 p.m.

Michael Socie

Department of Political Science
Professor James Dave Ivers

Impact of Neo-traditional Design on New Home Pricing

The primary purpose of this research report is to describe the design characteristics of an actual traditional neighborhood development (TND) and to document its impact on housing values. The study site, located in Canton Township, Mich., uses comparative techniques to capture differences between the Cherry Hill Village TND and Central Park West, a comparable suburban development. Two hundred homes, 100 from each site, were randomly selected and analyzed on a spreadsheet. The neighborhoods are side by side, separated by Denton Road. The data indicate that houses located within Cherry Hill Village command a 20 percent price premium per square foot over those homes in Central Park West. Homebuyers in the TND purchased property that was 37 percent smaller, on lots that were 20 percent narrower, than those homebuyers in the standard subdivision. No relationship was found between the price premiums and preferences for new urban principles. The findings did indicate the price per square foot premium generated by this new urban development is the result of several factors. First, homebuyers are willing to pay extra for certain amenities; second, due to its mixed-use nature and large up-front infrastructure costs, the banking industry sees these projects as inherently risky; and finally, the cost for construction is higher because techniques of mass production are not being utilized on homes with custom features. New urban projects are not good role models for alternative housing because their designs are limited to a “niche” market. Developers, builders and consumers naturally will avoid such risk by sticking to well known and successful products. Potential demand for such developments continues to be uncertain, making new urban developments a risky investment.

Thank you!

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

Special appreciation goes to:

Administration:

Lisa Walters, Graduate School
Mary Schmaltz, Graduate School
Julie Rivette, Graduate School
Graduate School Staff

Graphics:

Tom Schoof

Other EMU Offices:

McKenny Union
University Publications
Parking
University Marketing
Stadium Trophy, department plaques
PJ Marketing Services, Inc., Ceil Paulsen
Flowers, Charlie Borg
Premium House

Graduate Research Fair
Planning Committee:

Deb de Laski-Smith, Graduate Studies and Research
associate dean
Patrick Melia, Graduate Studies and Research
associate dean
Robert Holkeboer, Graduate Studies and Research
associate vice president
Yvonne Callaway, Leadership and Counseling
Vance Kennedy, Chemistry
George Liepa, School of Health Services
Claudia Petrescu, Political Science
Toni Stokes Jones, Teacher Education
Deborah Ettington, Management
Denise Pilato, School of Technology Studies
Sema Kalaian, School of Technology Studies

*Funding generously provided by the Division of Academic Affairs through the
Provost's Office and Graduate Studies and Research.