



**GRADUATE RESEARCH CONFERENCE**  
EASTERN MICHIGAN UNIVERSITY 2014

**SAMPLE ABSTRACTS by COLLEGE**

**COLLEGE OF ARTS AND SCIENCES**

**Art**

**Suzanne M. Boissy**

Professor Ellen C. Schwartz

**Suzanne Valadon: Voler de Ses Propres Ailes**

Suzanne Valadon's career as an artist defied not only propriety but also the odds of her circumstances. Her idiosyncratic work subverted social and artistic conventions while recording the realities of her world. She claimed her right to represent herself and the female nude as a woman, capturing images without the dogma of the academy or the misogyny of the male gaze. Her work is commanding and forceful, yet most critical discourse gives us little more than Valadon the mother, Valadon the bad girl. More has been written about her son's paternity than her work, marginalizing her as a human being to reduce her importance as an artist. Her images possess a powerful sense of self possession, a defiance that seems to leap off the canvas and give history the finger.

**Biology**

**Brenan M. Wilson**

Professor Cara Shillington

**Limb-Loss, Regeneration, and Orange Bitey Things (*Pterinochilus Murinus*)**

Autotomy (voluntary limb-loss) is employed by spiders to escape predation and discard damaged appendages. With successive molts, lost limbs are regrown and become indistinguishable from those left intact. We tested the effects of autotomy and relative prey-size on the growth, development, feeding behavior, and metabolic activity of orange baboon tarantula spiderlings. We hypothesized that 1) limb regeneration requires more energy and results in greater metabolic demands, 2) nutritional limitations reduce metabolic rates (MRs) and impact the effects of autotomy, and 3) autotomy and prey-size affect growth, development, and feeding behavior. We induced autotomy and assigned spiderlings to a bi-weekly feeding treatment with prey that were either 10% or 30% of spiderling-mass. Metabolism was measured from CO<sub>2</sub> production, and feeding behaviors were quantified from prey capture times. Findings suggest an interactive effect of autotomy and prey-size on MRs.

## Chemistry

**Naga Sandhya Guntaka**

Professor Cory Emal

### **Design and Synthesis of Novel Inhibitors of Plasminogen Activator Inhibitor-1**

The inhibition of elevated levels of plasminogen activator inhibitor-1 (PAI-1) has been identified as a treatment for ailments such as diabetes, atherosclerosis, obesity, stroke, retinal diseases, pulmonary diseases and certain types of cancer. A series of novel inhibitors of plasminogen activator inhibitor-1 (PAI-1) have been synthesized and screened for biological activity. These compounds were designed with the intention to improve on previous generations of gallate, sulfonamide and sulfonimide polyphenolic inhibitors of PAI-1. The design rationale, synthesis, and structure-activity relationships of this series of compounds will be addressed.

## Communication, Media, and Theatre Arts

**Joseph M. Fedel**

Professor Jessica Alexander

### **I Am Not Distracted: Adult ADD in Daily Life**

This presentation will showcase highlights from an autoethnographic performance on Adult ADD, its impact on jobs and relationships as well as some of its lesser-known symptoms such as: tendency to over-commit, overreaction to being interrupted, and a chronic sense of a lack of accomplishment. Critical to this performance is the creating of a frame, style and structure that artistically and concretely gives insight into adult ADD without mocking or exploiting its subject. This presentation asks if performance can be a means of raising awareness of a disorder that affects the daily lives of an estimated 4% of adults.

## Computer Science

**Daniel Ouellette**

Professor William Sverdlik

### **Audio Assistant Smartphone Application**

The Audio Assistant (AA) is a smartphone application designed to help a blind person navigate while walking. Applications that provide visual and audio feedback while driving or walking have become commonplace. Some of these have been around since the late 1990s. These applications operate based on well-defined street grids and are constantly updated as that grid evolves. However, the applications are unreliable in areas away from streets such as airports, college campuses, and parks. The goal of AA is to enable a blind person to walk in these areas. This presentation will describe the application and how effective it was in carrying out its mission.

## Economics

**Marisha Sherrard**

Professor David Crary

### **Has Ethanol Production Increased World Food Prices?**

World food prices have been steadily rising over the last three decades and food security has become an increasing concern in developing countries. The inputs which contribute to rising food prices are evaluated in this research in an effort to reveal how changes in world GDP, exports, demand for corn used in ethanol production, total supply of cereal production, population growth, and consumer price index affect the prices. This research contributes to the standing literature by combining inputs that were only viewed theoretically in previous studies and by including the effects of ethanol production, a relatively new sector demand for corn.

## English Language and Literature

**Sultan A. Asiri**

Professor Daniel Seely

### **Gender Effect in Code Alternation Through Text Messages of Saudis**

Code alternation has become a noticeable linguistic factor in Arabic text messaging owing to the growth in learning languages. This study aims to investigate the gender effects on Arabic-English code switching by analyzing a number of text messages of some Saudi participants. It also aims at figuring out which gender uses code alternation most in text messaging and measuring the frequency of the topics used through code switching for each gender. The subjects are six Saudi males and females with diverse levels of education. The paper concludes that females are applying code alternation more than males. It also reveals that Arabic-English code alternation is applied through the extensive use of the system of writing Arabic with Latin alphabets, or what is widely known as Arabizi.

### **Geography and Geology**

**Melinda Ortiz**

Professor Ted Ligibel

#### **Hidden History: Revealing a Larger Picture of Washtenaw County Through Historic Preservation**

Ypsilanti and Ann Arbor have maintained the historic integrity of many districts while facing the constant threat of development and demolition. These places reflect the historic Washtenaw County that formed our community today. However, unmarked and unmaintained structures that tell important stories integral to the history of Washtenaw County remain in both cities. Preservation of structures that tell the story of African American heritage in Washtenaw County remains neglected. For example, Old Brown AME Church in Ypsilanti, Union Church in Ann Arbor, the Dexter Pinckney Bridge in Dexter, and the Kersley House in Ypsilanti are only a few structures among those with the potential to reveal the history of this area. Without their preservation, the story of Washtenaw County remains incomplete.

### **History and Philosophy**

**Andrea S. Christmas**

Professor Jesse Kauffman

#### **Masculinity in the Nineteenth Century Paris Opéra Ballet**

Beginning in the 19th century, ballerinas overtook male dancers on the stage of the Paris Opéra Ballet and in the minds of the ballet-going Parisian public. Prior to this, male danseurs, often from the aristocratic classes or at least seeking to emulate them, had been the stars of ballet. In the 19th century this shifted overwhelmingly toward women. Why did the male dancer fall out of favor? What does this reveal about larger issues of masculinity in France? This thesis seeks to answer both of these questions using primary sources reviewed at the Bibliothèque National de France-Opéra.

### **Mathematics**

**Megan B. Frame**

Professor Stephanie Casey

#### **The Development of Misconceptions about Sampling Distribution**

There has been a strong establishment of what misconceptions students have about sampling distributions, but there is a clear need for more research on the sources of students' misconceptions and reasoning in the context of sampling distributions. In order to correct or avoid these common misconceptions, we first need to understand their roots and discover why students have adopted this incorrect reasoning. Using task-based interviews of 20 college students, we hope to identify some of the sources of students' misconceptions about sampling distributions. With the results of this research, instructors can design their instruction to address those conceptions which will result in greater student understanding.

### **Music and Dance**

**Kevin T. Shay**

Professor Garik Pedersen

#### **“Weinen, Klagen, Sorgen, Zagen” by Franz Liszt**

In the span of just three years, pianist and composer Franz Liszt had suffered through the deaths of two of his children and had been denied permission by the Tsar of Russia to marry his love interest of fourteen years. Falling into a

depressed state, he became reclusive and turned to the church for comfort and answers. Translated to “weeping, lamenting, worrying, fearing,” this set of variations was composed by Liszt in 1862 to a theme by J. S. Bach. Never someone to shy away from letting his soul be heard through his music, Liszt reveals a long and tragic war of emotions in this piece before finally coming to a close with a bittersweet hymn of acceptance: Was Gott tut, das ist wohlgetan, or “What God does, that is done well.”

### **Political Science**

**Jennifer Hawes**

Professor Claudia Petrescu

#### **Organizational Change and Growth Influence an Organization’s Ability to Thrive or Die**

Organizational leadership, motivation, structure, and external influences highly determine an organization’s culture, resources, and ability to thrive in a competitive market. I will analyze a major health care system’s failing hospice program and provide recommendations as to how restructuring, realignment, and replacement of appropriate leadership staff will be key to the success of their survival. Some of the recommendations made were influenced by the works of Maslow, Weick, Follett, Daft, and others.

### **Psychology**

**Jessica L. Riggs, M. Calvert, S. Scott, S. Rosenberg**

Professor Alissa Huth-Bocks

#### **The Relationships Between Historical, Perinatal, and Current Threats to the Caregiving System and Parenting Outcomes**

This study will examine how mothers’ early experiences and prenatal experiences impact their feelings about parenting when their children are 2 years old. Data were collected on a sample of 120 mostly economically at-risk women and their infants during the transition to motherhood. It is hypothesized that adverse events will predict more problematic parenting outcomes. These associations were examined using multiple regression analyses, accounting for current levels of maternal depression. Findings regarding mental health and exposure to childhood maltreatment were as expected, with more depression and maltreatment being related to worse parenting outcomes. Unexpectedly, mothers who experienced loss reported more positive parenting when currently experiencing higher levels of depression.

### **Sociology, Anthropology, and Criminology**

**Ashley Wiegand**

Professor Marilyn Corsianos

#### **What Works? An Evaluation of Prisoner Reentry**

This population of released offenders has specific needs, obstacles, and stressors, which need to be addressed in order for successful reintegration. This paper serves to address the body of literature regarding prisoner reentry. While doing so the consideration for theory relating to the experience of offender reentry is explored. Furthermore, five frames emerged from the literature which is identified in the paper. Those five frames include, reentry as a gendered phenomenon, the proficiency of parole, methods of holistic programs, the controversy of reintegrative approaches and recidivism reduction approaches, and finally, future research and recommendation are explored

### **Women’s and Gender Studies**

**Leah N. Davidson**

Professor Kathryn Ziegler

#### **Beyond Body: An Exploration of the Queer Dynamics of Sex and Sexuality in Creation to the Bodiless Lover**

This paper will examine how queer theory has challenged specific norms and boundaries to help create the theory of the bodiless lover, one where sex, sexuality, gender and sexual organs are unnecessary for passion, desire, and intimacy to exist. This will be done by examining six assumptions of the theory: 1.) Inaccurate and impossible standards of the sex/gender binary system. 2.) The many different forms of intimacy, passion and desire. 3.) The possibility of love without sex. 4.) Compulsory heterosexuality exists to deny the existence of the bodiless lover. 5.) Consciousness raising groups can give life to it. 6.) The bodiless lover is by far one of the most unique and queerest ways to look at sexuality. This theory draws on research from feminist's work that deconstruct the sex/gender binary and queer theorist who have explored different forms of intimacy including the power of politics in lesbian and bi-sexual terms.

### **World Languages**

#### **Lauryn Gallo**

Professor Zuzana Tomas

#### **L2 Writers' Conceptualization of Plagiarism and Identification of Problematic Source-Use**

Both first language (L1) and second language (L2) writers often struggle with writing from sources. L2 writers in particular have difficulty learning conventions for source integration and citation that may be different from practices in their home culture. As a result, they may plagiarize in writing assignments and risk serious consequences. Research needs to focus on what L2 writers know about plagiarism and writing from sources. This presentation discusses an ongoing study of advanced L2 writers, to determine how L2 writers conceptualize plagiarism, to what extent they feel prepared to avoid it, and whether they are able to differentiate degrees of problematic source use.

## **COLLEGE OF BUSINESS**

### **Accounting and Finance**

#### **Andrew L. Walla**

Professor Angela Hwang

#### **Accounting for Hedging Derivatives: A Tutorial**

This research project aims to create a teaching aid to improve the comprehension of accounting for hedging derivatives. Due to the interdisciplinary nature of this subject, both strong accounting skills and strong finance skills are required. Adding to the challenge is the lack of academic study and existing teaching aids. The tutorial walks through a hypothetical international transaction between two companies to show how financial derivative instruments can mitigate the resulting foreign currency exchange risk. By comparing foreign currency forward contracts and options side by side, the student learns the underlying hedging accounting methods. This study specifically focuses on the treatment of recognized liabilities using cash flow and fair value hedges. A self-calculating Excel spreadsheet has also been developed to further guide a user of the tutorial.

### **Marketing**

#### **Chelsea Lockwood**

Professor Matthew Sauber

#### **X T R M Performance Management Network Managing the Business of Action Sports**

XTRM Performance Management Network ([www.xtrm.com](http://www.xtrm.com)) is the world's fastest growing online performance management network dedicated to extreme sports. XTRM provides online communities for individuals to connect and communicate with action sports athletes, enthusiasts, sponsors, and promoters. Demanding higher growth, the CEO is looking into different approaches to improve XTRM awareness among its multiple target audiences: sponsors, promoters and athletes. Sports sponsors are the most important target audience that XTRM would like to reach. The CEO maintains that once sponsors and promoters are connected with XTRM, athletes will follow. This paper examines growth opportunities in the online performance management industry and project market expansion strategies for XTRM by 1) improving awareness among target audience, 2) promoting adoption of technology in the industry, and 3) growing sales by attracting new sponsors, promoters, and athletes.

## **COLLEGE OF EDUCATION**

### **Leadership and Counseling**

**Michelle DiMondo, Kevin A. Calhoun**

Professor Eboni Zamani-Gallaher

#### **An Arm and a Leg: The Rising Cost of Higher Education**

For decades, a college degree was the bridge to the American Dream. Since the economic recession, there has been a growing debate regarding the rising cost of a college education. While the benefits of attaining a higher education are well documented, many critics are starting to question these “traditional” benefits. Many worry that higher education will once again be the privilege of the wealthy; therefore, it turns the once golden bridge into a rope bridge. During this presentation, we will review the literature on the costs of higher education, explore the effects on current and future student populations, and provide commentary on potential solutions.

### **Special Education**

**Jessica Bradley**

Professor Carole Gorenflo

#### **The Role Pediatricians Play in Referring Children to Early Intervention Services**

The goal of this study is to explore the role pediatricians play in referring children who are culturally and linguistically diverse (CLD) with speech or language impairment (SLI) for early intervention (EI) services. Pediatricians are trained in childhood milestones and are the first person a child and family sees who can track development from birth. However, there is little known about how pediatricians refer children to EI services and the reasons why they decide to refer. This is a growing problem as the CLD population is increasing, yet language differences and cultural competency are often overlooked in the medical community. This study will investigate pediatricians’ protocols for speech or language impairment, referral practices for EI, and provision of information on EI to parents of patients who are CLD.

### **Teacher Education**

**Celeste L. Hawkins**

Professors Valerie Polakow and Martha Baiyee

#### **Zero Tolerance Policies and Educational Exclusion**

This paper addresses the consequences of zero-tolerance policies in US public schools and the disproportionate impact on poor children and children of color. Zero-tolerance has infused educational policies and practices so that increasing numbers of youth are pushed out or permanently barred from educational access, legal protections are rarely enforced, and many are funneled into the juvenile justice system. This study explores the perspectives of suspended and expelled students in southeast Michigan and focuses on the impact of zero tolerance policies on their lives. Consistent themes that emerged from the interviews pointed to a general silencing of their voices; unfair discipline policies; and the importance of teachers caring about their students.

## **COLLEGE OF HEALTH AND HUMAN SERVICES**

### **School of Health Promotion and Human Performance**

**Jacob Troy Caldwell**

Professor Stephen McGregor

#### **Primary Components of Running Biomechanics Differ with Body Mass Index**

The purpose of this study was to identify the principal components of gait during treadmill running and compare them between groups of high or low body mass index (BMI). Seventeen healthy individuals, untrained for running, performed treadmill running with full-body optical motion capture. HI exhibited four significant components that explained 83.3% of total variance. LO exhibited three significant components that explained 83.1% of total variance. High BMI conferred a strong contribution of components related to hip and toe-off biomechanics. Among low BMI subjects, the hip component was of lesser importance.

### **School of Health Sciences**

**Amanda Reisedge, Paige Jaeger, April Kral, Taylor Reckert**

Professor Gretchen Dahl Reeves

#### **Effects of the Integrated Play Groups Model on Children with an Autism Spectrum Disorder**

This single subject experimental design study looks at the effects of Integrated Play Groups on children with an Autism Spectrum Disorder through a series of play sessions with typically developing children. Four children on the autism spectrum (novices) participated in this study along with six children of typical development (experts), two times a week, over a period of eight weeks. Play sessions were 45 minutes each and followed the Integrated Play Group Model as developed by Pamela Wolfberg. Video recordings were taken throughout each play session so that the behaviors of the “novice” and “expert” players could be examined and behavioral changes could be collected. Currently the data are being analyzed to determine its effects.

### **School of Social Work**

**Jessica R. Young, Miriam Beth Shabazz**

Professor Janet Okagbue-Reaves

#### **Love and Logic: Bluefields, Jamaica**

This research aims to present our findings from our cross-cultural trip from Bluefields, Jamaica, with the EMU School of Social Work. Bluefields is a small fishing village one hour outside of Montego Bay. On this trip we organized and ran a Love and Logic parenting and guardians skills group. The main goal of the group is to give persons working with adolescents concrete strategies to reduce behavior problems, increase motivation, and build assets which improve life-long accountability and resiliency.

## **COLLEGE OF TECHNOLOGY**

### **School of Engineering Technology**

**Kimberly A. Michels**

Professor Shinming Shyu

#### **Social Responsibility and Profitability: IKEA as Case Study**

A company can seek to make contributions to society, rather than solely taking from it. Policies and goals that will help to create a better society are defined as part of IKEA’s mission and are therefore integral to its success. The continued success, and growth, of IKEA demonstrates that in today’s global market, a business can successfully shift emphasis from the traditional, profit-driven mentality to one that is more socially and environmentally responsible and thrive while doing so. Through positive reinforcement, mentoring, monitoring, innovation, and longterm partnerships, IKEA’s business philosophy and profits have flourished. Investing in socially responsible practices on a global scale has enabled IKEA to impact not only its customer and employees but also its suppliers-local economies and societies.

### **School of Technology Studies**

**Kimberly Hopper, Ian Boone, Andrew Box**

Professor Alphonso Bellamy

#### **Student Satisfaction in Online Courses**

American higher education institutions are expanding their technology curriculum to meet the demands of students in the format of online courses. Today’s students are older and more diverse and possess varying levels of academic preparation. Online courses provide them a method to expand and attain their educational goals, while meeting their personal and professional needs. This study investigates student perceptions of the structural elements and associated effects of online course methodology. Our findings suggest an increased level of participation and support from the assigned online instructor has a direct positive impact on student satisfaction. Students who indicated higher levels of satisfaction with their overall online course experience were more critical of their online course interaction than their final grade.