

UNDERGRADUATE SYMPOSIUM 34

EASTERN MICHIGAN UNIVERSITY 2014

DEAN'S WELCOME

Welcome to the 34th Undergraduate Symposium!

This day of presentations of scholarly and creative activities by our undergraduate students is the culmination of a year-long collaboration between the students and their faculty mentors. The many presentations, posters, performances and exhibits illustrate an impressive level of accomplishment as a result of these relationships.

We will see the participation of 503 students and 222 faculty members in this year's Symposium. Additionally, donors and friends of EMU now support 24 Symposium Undergraduate Research Fellows. As you explore the extraordinary breadth and depth of student scholarly and creative activity, you will discover the special synergy of teaching and learning that powers this year's Symposium program.

EMU's Undergraduate Symposium is one of the longest standing events of its kind in the country. In 1980, former provost and professor of chemistry, Dr. Ronald Collins, conceived the idea of presenting undergraduate student research to the University community, which was supported by then president Dr. John Porter. The first event began with a handful of students and faculty mentors from the College of Arts and Sciences. Each president and provost since has supported the Undergraduate Symposium and acted to enhance its stature.

Many faculty and staff have worked hard to make this Undergraduate Symposium a success. I gratefully acknowledge the efforts of the volunteer Symposium Planning Committee and its chair, Dr. Harriet Lindsay, Event Coordinator Wendy Kivi and the staff of the College of Arts and Sciences Office of the Dean.

The faculty sponsors of the student presenters are the expert core of the Symposium. They deserve special recognition for their voluntary efforts. I also want to recognize the families of the students, the many sponsors and guests who provided essential support for this event and who are committed to the success of our students in their academic pursuits.

Most especially, my congratulations to you, our students, who are presenting today!

A handwritten signature in black ink, reading "Thomas K. Venner". The signature is written in a cursive style with a large, sweeping initial "T".

Thomas K. Venner, Dean
College of Arts and Sciences

SCHEDULE OF EVENTS

FRIDAY, MARCH 28, 2014 /// EMU STUDENT CENTER

ORAL PRESENTATIONS

First Floor /// room104

Second Floor /// auditorium, student art gallery, room 204

Third Floor /// rooms 301, 304, 320, 330, 344, 350, 352, Kiva

Session A	8:30-9:45 a.m.
Session B	10-11:15 a.m.
Session C	1:15-2:30 p.m.
Session D	2:45-4 p.m.

POSTER PRESENTATIONS

Third Floor /// room 310 A/B

Group 1	9-11:10 a.m.
Group 2	1:30-3:40 p.m.

DESIGN EXPO: CROSSING LINES

Third Floor /// rooms 300, 302

Gallery Exhibit	9 a.m.-4 p.m.
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SYMPOSIUM LUNCHEON

Second Floor /// Ballroom

Lunch	11:30 a.m.-1 p.m.
Keynote speaker:	Julie A. Eadeh
Student emcee:	Nino Monea

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VICTORIA VEIT /// DEPARTMENT OF ART

ORAL SESSIONS

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ORAL SESSIONS



SAMANTHA ISSELBACHER /// DEPARTMENT OF BIOLOGY

SESSION A

Room 104

Moderator: Dave Pawlowski

- 8:30 a.m. /// **Accelerometer in High Altitude Ballooning**
Adam Bloom and Mark Price
Dave Pawlowski, faculty mentor
Physics and Astronomy
- 8:45 a.m. /// **Amateur Weather Ballooning**
Guy Hamburger and Jason Robert Feys
Dave Pawlowski, faculty mentor
Physics and Astronomy
- 9:00 a.m. /// **Measuring the Stratosphere: Magnetic Fields**
Matthew Koehler and Lauren Thelen
Dave Pawlowski, faculty mentor
Physics and Astronomy
- 9:15 a.m. /// **Collecting Data of Atmospheric Temperature Up to 100,000 Feet Using a Weather Balloon**
Iain Marshall Rhodes and David Juenemann
Dave Pawlowski, faculty mentor
Physics and Astronomy

Room 204

Moderator: Kathy Peterson

- 8:30 a.m. /// **Congress: A Brighter Tomorrow or More of the Same**
Christopher David Kippola
Edward Sidlow, faculty mentor
Political Science
- 8:45 a.m. /// **An Analysis of the Extent of Presidential Power in Regard to Drone Strikes**
Kaitlyn Dugas
Barry Pyle, faculty mentor
Political Science
- 9:00 a.m. /// **Foreign Aid: Behind the Scenes**
Jessica Bussell
Volker Krause, faculty mentor
Political Science

Room 204

cont.

- 9:15 a.m. /// **International Political Economy: How Does Freedom Correlate with Economic Success?**
Trevis Quincy Harrold
Dave Ivers, faculty mentor
Political Science
- 9:30 a.m. /// **Edward Snowden: Hero or Traitor? Privacy Rights and National Security**
Nicholas Beaton
Kathy Peterson, faculty mentor
Political Science

Room 301

Moderator: Chong Oh

- 8:30 a.m. /// **A Social (Alumni) Network: CTAC 495L Experiences with Social Media and Cloud-Based Data**
Andrew Paul Abad and Sara Wilkins
Kathy Stacey, faculty mentor
Communication, Media & Theatre Arts
- 8:45 a.m. /// **In-Class Smartphone Use and Its Effect on Student Learning**
Ilkhomjon Amanov
Mohammadjafar Esmaeili, faculty mentor
Engineering Technology
- 9:00 a.m. /// **Stocktwits Analysis**
Dakoda Johnson, Marc Hamady,
Javad Kouchakzadeh and Joshua Eastman
Chong Oh, faculty mentor
Computer Information Systems
- 9:15 a.m. /// **Social Media and TV Ads: The Case of Super Bowl Tweets**
Soliman Saleh Almahmoud
Chong Oh and Sheila Sasser, faculty mentors
Computer Information Systems
- 9:30 a.m. /// **Intellectual Property in the Modern Era: A Conundrum**
Devin Bruen
Mark Maironis, faculty mentor
Political Science

Room 304

Moderator: Raymond Rosenfeld

- 8:30 a.m. /// **Policy Analysis of Current Storm-Water Practices in the United States**
Jacquelyn Marie Richards
Raymond Rosenfeld, faculty mentor
Political Science
- 8:45 a.m. /// **Invasive Species in the United States: A Policy Analysis**
Amanda Campbell
Professor Raymond Rosenfeld, faculty mentor
Political Science
- 9:00 a.m. /// **The Global Economic Effects of Going Green: Industry Creation, Transformation, and Destruction**
Karen Elizabeth Nelson
Mehmet Yaya, faculty mentor
Economics
- 9:15 a.m. /// **“Who Gives a Dam?”**
Eric Edward Christian
Kathleen Chamberlain, faculty mentor
History and Philosophy
- 9:30 a.m. /// **Combating Runway Incursions: Improving Airport Movement Area Safety**
Andrew Poure
Philip Tartalone, faculty mentor
Technology Studies

Room 320

Moderator: Zuzana Tomas

- 8:30 a.m. /// **Disproportionally Diverse Schools: Danger Ahead!**
Logan Ovella Beatty
Jacqueline LaRose, faculty mentor
Teacher Education
- 8:45 a.m. /// **Speech-Language Services for Bilingual Students: Relevant Issues and Concerns**
Mary Kathleen Scott
Jennifer Desiderio, faculty mentor
Special Education

Room 320

cont.

- 9:00 a.m. /// **The Shift is Alive and Well**
Tiffany A. Westcott
Beverly Goodman, faculty mentor
English Language and Literature
- 9:15 a.m. /// **Benefits of Using TED Talks in Teaching English as a Second Language**
Julia Czyborra, Kristin Tenney and LeAnne LaFratta
Zuzana Tomas, faculty mentor
World Languages
- 9:30 a.m. /// **Parlez-vous Français? Should Students in International Fields be Required to Take French?**
Anjali T. Martin
Genevieve Peden, faculty mentor
World Languages

Room 330

Moderator: Bernie Miller

- 9:00 a.m. /// **The Relationship Between Female Self-Objectification and Involvement in Extra-Curricular Activities**
Tanjare McKay
Karen Saules, faculty mentor
Psychology
- 9:15 a.m. /// **Relationship Between Female Paternal Attachment and Future Romantic Relationships**
Carla Nodi
Natalie Dove, faculty mentor
Psychology
- 9:30 a.m. /// **The Influences of Early Life Experiences on Perceptions of Leading Women**
Jazmin J. Rodgers
Natalie Dove, faculty mentor
Psychology

Room 344

Moderator: David Crary

- 8:30 a.m. /// **Analyzing the Effectiveness of the Federal Reserve**
Thomas Stockwell
James Saunoris and Abdulah Dewan, faculty mentors
Economics
- 8:45 a.m. /// **Taylor's Rule**
Kara Lynne Binning
Professor David Crary, faculty mentor
Economics
- 9:00 a.m. /// **Federal Open Market Committee (FOMC) Simulation**
PANEL
Kara Lynne Binning, Andrew Felder, Gannon LeBlanc,
Nino Monea and Thomas Stockwell
David Crary, faculty mentor
Economics

Room 350

Moderator: William Sverdlik

- 8:30 a.m. /// **An Investigation of the HITS Web Search Algorithm**
Cade W. Sperlich and Tyler Charles Hoffman
William Sverdlik, faculty mentor
Computer Science
- 8:45 a.m. /// **The Central Processing Unit (CPU)
Virtually Demystified**
Carlos Mora
Li Zhang, faculty mentor
Computer Science
- 9:00 a.m. /// **File Encryption and Communication Security Using
Publicly-Available 'Pretty Good Privacy' Software**
Robert Levi Barry
Michael Zeiger, faculty mentor
Computer Science

Room 350

cont.

- 9:15 a.m. /// **Pandora's Box: The Rise of Malware and How to Study It Without Creating Chaos**
Robert Keith Woolson, Daniel Whitlock and Kelly Douglas
Samir Tout, faculty mentor
Technology Studies
- 9:30 a.m. /// **Augmented Reality: Bringing Education to Life Using Smart Devices**
Mark Binkowski, Edmund Bleeda-Vineyard
and Mark Kenworthy
Pamela Speelman, faculty mentor
Technology Studies

Room 352

Moderator: Maria Milletti

- 8:30 a.m. /// **Q Methodological Study of Subjectivity and Objectivity**
Maria Karimova
Dennis Delprato, faculty mentor
Psychology
- 8:45 a.m. /// **Aspects of the Crystal Chemistry and Structure of Povondraite**
Brittany Cymes
Christine Clark, faculty mentor
Geography and Geology
- 9:00 a.m. /// **Importance of Chirality of the Lewis Acid Catalyst in an aza-Cope-Mannich Reaction**
Amanda Dewyer
Maria Milletti, faculty mentor
Chemistry
- 9:15 a.m. /// **Effect of Carbinol Substituents on Product Stereoselectivity in a Tandem aza-Cope-Mannich Reaction**
Antonios Marios Nikolaos Chionis
Maria Milletti, faculty mentor
Chemistry
- 9:30 a.m. /// **Producing Medically Relevant Compounds Using a Novel and Efficient Three-Step Synthesis**
Sherif Hassanien
Harriet Lindsay, faculty mentor
Chemistry

Auditorium

Moderator: John Dorsey

- 8:30 a.m. /// **Concerto No. 1 in G Minor, by Max Bruch (1838-1920), Second Movement: Adagio**
David Shann
Dan Foster, faculty mentor
Music and Dance
- 8:45 a.m. /// **Andante and Rondo from Concerto in E-flat Major by Johann Nepomuck Hummel**
Michael Block
Carter Eggers, faculty mentor
Music and Dance
- 9:00 a.m. /// **Robert Muczynski: Time Pieces**
Andrew Scott Novak
Sandra Jackson, faculty mentor
Music and Dance
- 9:15 a.m. /// **J. S. Bach: Suite No. 1 in G Major for Unaccompanied Cello: Prelude, Sarabande, Gigue**
Max Hiler
Scott Woolweaver, faculty mentor
Music and Dance
- 9:30 a.m. /// **Down a River of Time: Concerto for Oboe by Eric Ewazen**
Kelly McBride
Kristin Reynolds, faculty mentor
Music and Dance

Kiva

Moderator: Sarah Smarch

- 8:30 a.m. /// **Redefining Symbolism: Samuel Taylor Coleridge and “The Rhyme of the Ancient Mariner”**
Michelle Lietz
Laura George, faculty mentor
English Language and Literature
- 8:45 a.m. /// **Synesthesia Amidst a Sacrificed Safety**
Isaac Pickell
Sarah Smarch, faculty mentor
English Language and Literature
- 9:00 a.m. /// **Zhuangzi and the Adaptable Body**
Josh Lyon
Brian Bruya, faculty mentor
History and Philosophy

Kiva
cont.

9:15 a.m. /// **The Transcendence of Archetypal Behavior in Quentin Tarantino's *Pulp Fiction***
Keith Brian Hester
Rusty McIntyre, faculty mentor
Psychology

9:30 a.m. /// **An Abstract Approach to Nature Awareness**
Sarah Lin Trump
Cynthia Gabriel, faculty mentor
Sociology, Anthropology and Criminology

Student Art Gallery

Moderator: Jesse Kauffman

8:30 a.m. /// **Lost Translations: Hegemonic Tensions in the Writing of Julia Alvarez and Edwidge Danticat**
Jasmyn Barringer
Heather Neff, faculty mentor
English Language and Literature

8:45 a.m. /// **And Rhythm Will Know No Color: A Study of Racial Integration in Rhythm and Blues**
Taylor Styes
John Wegner, faculty mentor
History and Philosophy

9:00 a.m. /// **Joe Louis: The Black Atlas and A Nation's Hope**
Ashlyn Julia Zarate and Dillon Kangas
Russell Jones, faculty mentor
History and Philosophy

9:15 a.m. /// **Racial Policies, Genocide, and Anthropology in Nazi Germany**
Benjamin Guidot
Jesse Kauffman, faculty mentor
History and Philosophy

9:30 a.m. /// **A Comparative Study of Black Collective Resistance in Brazil and Jamaica**
Shohei Isobe
Mary-Elizabeth Murphy, faculty mentor
History and Philosophy

SESSION B

Room 104

Moderator: Bradley Ensor

- 10:00 a.m. /// **Caste, Class and Cousins:
Kinship Change in Modern India**
Michelle Elise Cox
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology
- 10:15 a.m. /// **Breaking Down and Assimilating:
Processes of Culture and Kinship
Change on the Japanese Islands**
Justin Michael Lancon
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology
- 10:30 a.m. /// **Herders and Capitalism: Changing Kinship Among
Two Pastoral Societies in Emerging Free Markets**
Jake Manderfield
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology
- 10:45 a.m. /// **Cherokee and Choctaw Kinship:
Traditional and Contemporary Practices**
Luke Wanty
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology

Room 204

Moderator: Raymond Rosenfeld

- 10:00 a.m. /// **Stop and Frisk: A Progressive Evolution**
William Douglas McDonald
Mark Maironis, faculty mentor
Political Science
- 10:15 a.m. /// **Border Security and Immigration Policy**
Theodore Nicholas Alvarez
Raymond Rosenfeld, faculty mentor
Political Science
- 10:30 a.m. /// **Securing America's Northern Border:
An Analysis of Current and Proposed Policy**
Katherine Anderson
Raymond Rosenfeld, faculty mentor
Political Science

Room 204

cont.

- 10:45 a.m. /// **The Policy Problem of High Skilled Immigration**
Andrew S. Kocis
Raymond Rosenfeld, faculty mentor
Political Science
- 11:00 a.m. /// **Security Challenges Along the Mexican-American Border: An Analysis of Immigration Policy**
Justin Massey
Raymond Rosenfeld, faculty mentor
Political Science

Room 301

Moderator: Mary Margaret Sweeten

- 10:00 a.m. /// **The Renaissance in a 12th Grade French Class**
Caitlin Jennifer Wojtas
Mary Margaret Sweeten, faculty mentor
Teacher Education
- 10:15 a.m. /// **Algebraic Expressions**
Sean M. Warford
Mary Margaret Sweeten, faculty mentor
Teacher Education
- 10:30 a.m. /// **Native Americans in Literature**
Michelle Lietz
Bettie McGowan, faculty mentor
Sociology, Anthropology and Criminology
- 10:45 a.m. /// **The Hidden Mystery:
Arts Integration in Urban Schools**
Sr. Mary Perpetua Ha
Meriah Sage, faculty mentor
Communication, Media & Theatre Arts
- 11:00 a.m. /// **Hyperinflation: The Birth of a Worthless Currency**
Marla Beretta Bastie
James Saunoris, faculty mentor
Economics

Room 304

Moderator: Margrit Zinggeler

- 10:00 a.m. /// **Changes in World War II Domestic Propaganda Posters (1941-1944)**
Sarah Elizabeth Giles
Linda Pritchard, faculty mentor
History and Philosophy
- 10:15 a.m. /// **The Emcha or the Ronson? The Controversy over the M4 Sherman Tank**
Bryan Andrew Maul
Jesse Kauffman, faculty mentor
History and Philosophy
- 10:30 a.m. /// **The Enterprise: Technology and Turning Points in the Pacific During World War II**
Todd L. Christopher
Joseph Engwenyu, faculty mentor
History and Philosophy
- 10:45 a.m. /// **Volkswagen: Two Cultures, One Car**
Theodore Henry Hauke
Margrit Zinggeler, faculty mentor
World Languages
- 11:00 a.m. /// **Rebuilding “the Place in the Sun”: How German Women and Guest Workers Made It Possible**
Thomas Patterson
Margrit Zinggeler, faculty mentor
World Languages

Room 320

Moderator: Kevin Karpiak

- 10:00 a.m. /// **Inclusive Higher Education: Transition Programs at Post-Secondary Institutions**
Kristina Oberly
Derrick Fries, faculty mentor
Special Education
- 10:15 a.m. /// **Sharing the Trials and Tribulations of Focusing on Graduation in Ypsilanti**
Christopher Carter
Ken Saldanha, faculty mentor
Social Work

Room 320

cont.

- 10:30 a.m. /// **Mentoring: The Impact It has on Non-Traditional Students Toward the Completion of a College Degree**
Ebony L. Walls
Yvette Colon, faculty mentor
Social Work
- 10:45 a.m. /// **The Opaque Self: Exploring the Complex Racial Identity of White College Students**
Caleb D. Kruzell
Kevin Karpiak, faculty mentor
Sociology, Anthropology and Criminology
- 11:00 a.m. /// **Defying Odds: The Lived Experiences of Homeless College Students**
Courtney Smith
Roger Kernsmith and Gary Bell, faculty mentors
Sociology, Anthropology and Criminology

Room 330

Moderator: Shel Levine

- 10:00 a.m. /// **Aortic Dissection: Diagnosis, Treatment, and Cardiovascular Health**
Meghan Marie Lucero
Shel Levine, faculty mentor
Health Promotion and Human Performance
- 10:15 a.m. /// **Short Peptides as Small Molecule Inhibitors of Mechanisms Implicated in Alzheimer's Disease**
Martin Solano
Deborah Heyl-Clegg and Hedeel Evans, faculty mentors
Chemistry
- 10:30 a.m. /// **The Effects of High-Intensity Resistance Training on Pre-Diabetes and CV Risk Factors: A Case Study**
Alan Fredendall
Shel Levine, faculty mentor
Health Promotion and Human Performance
- 10:45 a.m. /// **Promoting Sustainability Literacy Across Elementary Grades Through Performance Assessments**
Reshmie Liz Kottoor and Kristen Kus
Martha Baiyee, faculty mentor
Teacher Education

Room 330

cont.

- 11:00 a.m. /// **Soy in the Spotlight:
Tofu Scramble Culinary Demonstration**
Callie Louise Gavorek
Alice Jo Rainville, faculty mentor
Health Sciences

Room 344

Moderator: Judith Kullberg

- 10:00 a.m. /// **Promoting Democracy Through Election
Observation: The Experience of
EMU Students in El Salvador**
Jessica M. Northrup, Kaitlyn Elizabeth Hill,
Ihsan Ghadieh, Rebecca N. Thomas and Sayem Khan
Judith Kullberg and Randal Baier, faculty mentors
Political Science

Room 350

Moderator: Elizabeth Devos

- 10:00 a.m. /// **Import-Export Discrepancies in the United States**
Gezim Rreshpja
Khairul Islam, faculty mentor
Accounting and Finance
- 10:15 a.m. /// **The Role of American Culture in the Convergence
Process of International and United States
Financial Accounting Principles**
Umarbek Ulug'bekovich Rabbimov
Elizabeth Devos, faculty mentor
Accounting and Finance
- 10:30 a.m. /// **The Best Travel Case**
Brian Scott Fischer
Barbara Ross, faculty mentor
Accounting and Finance
- 10:45 a.m. /// **The Experience of the United States
Economic Foreign Policy in Kosovo**
Trevis Quincy Harrold
David Victor, faculty mentor
Marketing

Room 350

cont.

- 11:00 a.m. /// **How Internship Experience Can Help You Grow**
Anna Lazarenko
David Victor, faculty mentor
Marketing

Room 352

Moderator: Joseph Ohren

- 10:00 a.m. /// **Business Incubation in the United States and Michigan**
Bradley Scott Peters
Arnold Fleischmann, faculty mentor
Political Science
- 10:15 a.m. /// **State Business Tax Expenditures: Transparency and Reform**
James Tatum
Joseph Ohren, faculty mentor
Political Science
- 10:30 a.m. /// **American Colonies: The Importance of European Honey Bees in United States History, 1622-1851**
Jacob Martin Benn
John Knight, faculty mentor
History and Philosophy
- 10:45 a.m. /// **Family Business to Modern Corporation: Ford Motor Company Leadership Under Henry, Edsel and Henry II**
Rebecca E. Canell
Linda Pritchard, faculty mentor
History and Philosophy
- 11:00 a.m. /// **Change in Michigan's Government Branch Articles Between Four Constitutions**
Emma Fitzhugh
Linda Pritchard, faculty mentor
History and Philosophy

Auditorium

Moderator: John Dorsey

- 10:00 a.m. /// **Doolallynastics: A Brief Torture for Solo Trombone**
Matthew Nienow
Donald Babcock, faculty mentor
Music and Dance

Auditorium

cont.

- 10:15 a.m. /// **The Sound of (Music) Water: *Jeux d'eau* by Maurice Ravel**
Trang Vo
Gary Pedersen, faculty mentor
Music and Dance
- 10:30 a.m. /// **Reading Between the Lines: W. A. Mozart's Clarinet Concerto in A Major, K. 622**
Sarah Elizabeth Hardaker
Sandra Jackson, faculty mentor
Music and Dance
- 10:45 a.m. /// **Grand Pas de Deux from *Don Quixote***
Amber Lawson and Patrick McCrae
Joanna McNamara and Wendi DuBois, faculty mentors
Music and Dance
- 11:00 a.m. /// **Dance-Scapes**
Kelly Waltz, Mikhayla Dolson and Patrick McCrae
Joanna McNamara, faculty mentor
Music and Dance

Kiva

Moderator: Amy Johnson

- 10:00 a.m. /// **Shrinking Women: Interpretation Examining the Space Women are Allowed to Occupy**
Karine Bagoumian and Ashley B. Kerby
Amy Johnson, faculty mentor
Communication, Media & Theatre Arts
- 10:15 a.m. /// **Out with the Old and In with the New Woman and Man in Victorian and Contemporary Family Literature**
Geneva Korytkowski
Ramona Caponegro, faculty mentor
English Language and Literature
- 10:30 a.m. /// **Narrative Reaction as a Feminist Tool: Analyzing Ursula K. Le Guin's Poetry**
Ian M. Sargent
Alexandra Norton, faculty mentor
English Language and Literature

Kiva
cont.

- 10:45 a.m. /// **Feminism and Gender in
*Are You There, God? It's Me, Margaret***
Shelby Hallenbeck
Jessica Kander, faculty mentor
English Language and Literature
- 11:00 a.m. /// **Incest and Empire in Daniel Defoe's *Moll Flanders***
Kaitlin Lorraine Browne
Abby Coykendall, faculty mentor
English Language and Literature

Student Art Gallery

Moderator: Elisabeth Daumer

- 10:00 a.m. /// **Sylvia Plath's Revisionary Mythology**
Cosette Elizabeth Girardot
Elisabeth Daumer, faculty mentor
Women's and Gender Studies
- 10:15 a.m. /// **Becoming the *Other*: The Self Annihilation of
Sylvia Plath and Ted Hughes**
Barbara Hubbard
Elisabeth Daumer, faculty mentor
Women's and Gender Studies
- 10:30 a.m. /// **The Mystery of Sylvia Plath's "Detective"**
Ashley Powers
Elisabeth Daumer, faculty mentor
Women's and Gender Studies
- 10:45 a.m. /// **Cranio-Facial Manifestations of Language in the
Bio-Cultural Evolution of the Genus Homo**
Hannah Catherine Hilbert
Megan Moore, faculty mentor
Sociology, Anthropology and Criminology
- 11:00 a.m. /// **Patterns of Dental Enamel Hypoplasia in a Medieval
French Population: Evidence of Malnutrition**
Taylor BL Kirchoff
Megan Moore, faculty mentor
Sociology, Anthropology and Criminology

SESSION C

Room 104

Moderator: Bradley Ensor

- 1:15 p.m. /// **Prehistoric Rock Material Selection for Heating Purposes**
James Beaumont
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology
- 1:30 p.m. /// **Spatial Analysis of a Historic Farmstead in Southeast Michigan**
Hannah Catherine Hilbert
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology
- 1:45 p.m. /// **Analysis of Prehistoric Activities at Site 20WN37: Findings from the EMU Archaeology Field School**
Marc Rogers
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology
- 2:00 p.m. /// **Testing Historical Site Interpretations**
Alicia Williams
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology

Room 204

Moderator: John Knight

- 1:15 p.m. /// ***Popol Vuh* for Dummies: Explaining the “Mayan Bible” to the Uninitiated**
Megan Rose Timpf
Thomas Ulch, faculty mentor
English Language and Literature
- 1:30 p.m. /// **The Coptic Church of Egypt: Its History and Future**
Mary Kathleen Perrotta
Mark Whitters, faculty mentor
History and Philosophy
- 1:45 p.m. /// **Plan Dalet: The Forced Palestinian Exodus**
Daniel Saul Berman
John Knight, faculty mentor
History and Philosophy

Room 204

cont.

- 2:00 p.m. /// **Ideologies of Power in Ancient Israel**
Gregory Schwab
Philip Schmitz, faculty mentor
History and Philosophy
- 2:15 p.m. /// **Persia Interrupted: Why Eisenhower Supported the End of Democracy in Iran**
David William Swan
John Knight, faculty mentor
History and Philosophy

Room 301

Moderator: Martha Baiyee

- 1:15 p.m. /// **The Role Non-Cognitive Abilities Play in Predicting Students' Academic Success in College**
Timothy Harrison
Crissie Frye, faculty mentor
Management
- 1:30 p.m. /// **Winning Words: The Impact of Curriculum-Based Board Games on Sight Word Recognition**
Kaytie Corlew
Jennifer Desiderio, faculty mentor
Special Education
- 1:45 p.m. /// **A Blueprint For Successful Assessment**
Michelle Sprenkel
Martha Baiyee, faculty mentor
Teacher Education
- 2:00 p.m. /// **TLO in the Age of Cell Phones**
Scott Brown
Konnie Kustron, faculty mentor
Technology Studies
- 2:15 p.m. /// **Developing an Integrated Science Lesson to Promote Scientific Proficiency**
Christopher Valasin
Amy Flanagan Johnson, faculty mentor
Chemistry

Room 304

Moderator: John Cooper

- 1:15 p.m. /// **The Gaze Back: Reclaiming Femininity and Narrative in *Vertigo* and *Rear Window***
Christopher Moriarty
Abby Coykendall, faculty mentor
English Language and Literature
- 1:30 p.m. /// **Narrative, Time and Enclosure in *Dog Day Afternoon* and *Do the Right Thing***
Adam Mitts
Abby Coykendall, faculty mentor
English Language and Literature
- 1:45 p.m. /// **Exploring the Link Between Perceptions of Women and Media Viewing: *Showgirls* vs *Tomb Raider***
Melissa Blackstone
Natalie Dove, faculty mentor
Psychology
- 2:00 p.m. /// **The Role of Media in the Formation of Social Distance**
Adam Moody
Kristine Ajrouch, faculty mentor
Sociology, Anthropology and Criminology
- 2:15 p.m. /// **Genre Evolution: Has the Spectator Culture Really Grown Up?**
Katherine Robey
John Cooper, faculty mentor
Communication, Media & Theatre Arts

Room 320

Moderator: Cara Shillington

- 1:15 p.m. /// **Behaving Boldly: Impacts of Feeding Regime on Growth and Locomotion of *Lasiodora parahybana***
Samantha Alice Isselbacher
Cara Shillington, faculty mentor
Biology
- 1:30 p.m. /// **SEM and LM Analysis of Structural Hydrophobicity in *Nymphicus hollandicus* Feathers**
Asia R.S. Hall
Glenn Walker, faculty mentor
Biology

Room 320

cont.

- 1:45 p.m. /// **Quantifying the Early Evolution of Macroalgae**
Matthew LeRoy
Steve LoDuca, faculty mentor
Geography and Geology
- 2:00 p.m. /// **Cosplay a Start-Up: A Business Proposal**
Lilly DeRamos
Holly Mosher and Julie Becker, faculty mentors
Technology Studies
- 2:15 p.m. /// **R&D Performance Business Plan**
Daniel Wiacek
Elizabeth Sikkenga, faculty mentor
Management

Room 330

Moderator: Wade Shen

- 1:15 p.m. /// **Quantifying Sport Avidity and Symbolic Consumption of Collegiate Athletics: An Exploratory Study**
Robert Thaddeus Krajewski and Lukas Scott Fosdick
Thomas Cieslak, faculty mentor
Health Promotion and Human Performance
- 1:30 p.m. /// **Performance Modeling of the Fourteen Weeks Preceding the Fastest Marathon Ever Run by an American**
Michael Patrick Parker
Stephen McGregor, faculty mentor
Health Promotion and Human Performance
- 1:45 p.m. /// **Knee Kinematics While Landing During Anticipated and Unanticipated Jump Conditions**
Jacquelyn Swartz
Anthony Moreno, faculty mentor
Health Promotion and Human Performance
- 2:00 p.m. /// **Confocal Raman Imaging Microscopy I**
Matthew Koehler and Lauren Thelen
Wade Shen and Vijay Mannari, faculty mentors
Physics and Astronomy
- 2:15 p.m. /// **Confocal Raman Imaging Microscopy II**
Lauren Thelen and Matthew Koehler
Wade Shen and Vijay Mannari, faculty mentors
Physics and Astronomy

Room 344

Moderator: Ramona Caponegro

- 1:15 p.m. /// **Young Adult Literature Catching Fire: Voices from the Classroom**
Emily Colletti
Ramona Caponegro and W. Douglas Baker, faculty mentors
English Language and Literature
- 1:30 p.m. /// **Helpful Harry or Hurtful Harry? The Beneficial Side of the *Harry Potter* Series**
Kaylee Dawn Brown
Lacey Hoffman and Ramona Caponegro, faculty mentors
English Language and Literature
- 1:45 p.m. /// **Alice's Adventures in Hogwarts: An Exploration of Female Development in the Dreamworld**
Jessica Anne Johnsen
Lacey Hoffman and Ramona Caponegro, faculty mentors
English Language and Literature
- 2:00 p.m. /// **False Portrayals of Empowerment of Female Characters in J.K. Rowling's *Harry Potter***
Amelia Harlan Stecker
Lacey Hoffman and Ramona Caponegro, faculty mentors
English Language and Literature
- 2:15 p.m. /// **Shiny Colored Tokens: Female Racial Minorities in J.K. Rowling's *Harry Potter* Series**
Tiffany Nicole Browne
Gina Boldman, faculty mentor
English Language and Literature

Room 350

Moderator: Margaret Crouch

- 1:15 p.m. /// **Two Theories of Perception: John Locke and George Berkeley**
David Goodyear
Margaret Crouch, faculty mentor
History and Philosophy
- 1:30 p.m. /// **Descartes' Legacy: An Emotional History Through the Lens of Modern Philosophy**
Catherine Shay
Margaret Crouch, faculty mentor
History and Philosophy

Room 350

cont.

- 1:45 p.m. /// **Leibniz and the Unstuck Self**
Michael S. Schersten
Margaret Crouch, faculty mentor
History and Philosophy
- 2:00 p.m. /// **Irrationality and Poetic Philosophy:
The Nature of Truth in the Zhuangzi**
Adam Malinowski
Brian Bruya, faculty mentor
History and Philosophy
- 2:15 p.m. /// **Kierkegaard's Rotation Method as Applied to
Nietzschean Philosophy**
Natalie Elizabeth Anschuetz
Jeremy Proulx, faculty mentor
History and Philosophy

Room 352

Moderator: Barbara Patrick

- 1:15 p.m. /// **The Utilization of Performance Reforms in
Education: Can They Improve Education Quality?**
Samuel Sterlin Cummings and Andrew Felder
Barbara Patrick, faculty mentor
Political Science
- 1:30 p.m. /// **Detroit: A Budgetary Analysis**
Nino Monea and James Tatum
Barbara Patrick, faculty mentor
Political Science
- 1:45 p.m. /// **Deindustrialization, Substandard Education,
and Urban Poverty in Detroit**
Nathaneil Winston
Melvin Peters, faculty mentor
Africology and African American Studies
- 2:00 p.m. /// **Bridges Out of Poverty: An Ethnography of the
Changing Role of "Choice" Food Pantries**
Linda M. Harrison
Cynthia Gabriel, faculty mentor
Sociology, Anthropology and Criminology

Room 352

cont.

- 2:15 p.m. /// **Why African Inclusion in the United Nations Security Council Could Eradicate Poverty around the World**
Kelly McDonald
Melissa Mantei, faculty mentor
Communication, Media & Theatre Arts

Auditorium

Moderator: John Dorsey

- 1:30 p.m. /// **Modern Pedal Harp**
Celisa Gutierrez
Ruth Myers, faculty mentor
Music and Dance
- 1:45 p.m. /// **The Rhetoric and Psychoanalysis of *World of Warcraft***
Ben Bower
Nick Romerhausen, faculty mentor
Communication, Media & Theatre Arts
- 2:00 p.m. /// **The Barista Blogs: Coffee Talks with Daily Strangers**
Heather Rose Lawrence
Jill Darling, faculty mentor
English Language and Literature
- 2:15 p.m. /// **The Art of the Curve: Experiments in Bending Wood**
Melissa Judd
John DeHoog, faculty mentor
Art

Kiva

Moderator: Toni Stokes-Jones

- 1:15 p.m. /// **The Reasoning and Pedagogical Techniques for AAVE in K-12 English Language Arts Education**
Megan Anthony
T. Daniel Seely, faculty mentor
English Language and Literature
- 1:30 p.m. /// **Pennies On Their Eyes: Gullah Culture and 'Otherness' in Nikky Finney's *The World Is Round***
Daniel W. Long
Alexandra Norton, faculty mentor
English Language and Literature

Kiva
cont.

- 1:45 p.m. /// **“St. Roach”: A Failed Attempt at Rewriting the Racist Script**
Molli Shomer
Elisabeth Daumer, faculty mentor
Women's and Gender Studies
- 2:00 p.m. /// **The Overrepresentation of African Americans in Special Education**
Marcia Molett
Sylvia Jones, faculty mentor
Teacher Education
- 2:15 p.m. /// **African American Male Inclusion, Involvement, Perception, and Achievement at Predominantly White Institutions**
Brandon Britt
Toni Stokes-Jones, faculty mentor
Teacher Education

Student Art Gallery

Moderator: Nitya Singh

- 1:15 p.m. /// **Unemployment by Educational Attainment in the United States**
Isiah Beauchamp
Khairul Islam, faculty mentor
Accounting and Finance
- 1:30 p.m. /// **An Assessment of Trends of Labor Force Participation Rate in the United States**
Rongyan Xu
Khairul Islam, faculty mentor
Accounting and Finance

Student Art Gallery

cont.

- 1:45 p.m. /// **Computational Study of Investment Strategies**
Andrew Greiner
Suchindran Maniccam, faculty mentor
Computer Science
- 2:00 p.m. /// **The Eurozone Economic Crisis and the Divergent Paths of Unity**
Kaitlyn Elizabeth Hill
Nitya Singh, faculty mentor
Political Science
- 2:15 p.m. /// **United States—China Trade Relationship and the WTO: Conflicts and Cooperation**
Congzhe Xu
Nitya Singh, faculty mentor
Political Science

SESSION D

Room 104

Moderator: Diane Jacobs

- 2:45 p.m. /// **Physical Applications of Conformal Mapping**
Brandon Ryan Laycock
Diane Jacobs, faculty mentor
Physics and Astronomy
- 3:00 p.m. /// **It's a Whole New Enterprise:
Imaging and CCD Surveys via the
Sherzer Observatory Secondary Telescope**
Robert John Windas
Norbert Vance and Nick Arnold, faculty mentors
Physics and Astronomy
- 3:15 p.m. /// **Quantifying the Predictability of the Solar Wind**
Jeffrey Lee Flegal
Dave Pawlowski, faculty mentor
Physics and Astronomy
- 3:30 p.m. /// **Sampling Distribution with Simulation in R**
John Diorio
Khairul Islam, faculty mentor
Mathematics
- 3:45 p.m. /// **Assessing Multicollinearity: Theory and Applications**
David Cheedie
Tanweer Shapla, faculty mentor
Mathematics

Room 204

Moderator: Bettie McGowan

- 2:45 p.m. /// **Joy Harjo and Contemporary Native
American Identity**
Michelle Lietz
Alexandra Norton, faculty mentor
English Language and Literature
- 3:00 p.m. /// **Espiritismo: An Afro-Indian Belief System**
Michelle Elise Cox
James Egge, faculty mentor
History and Philosophy

Room 204

cont.

- 3:15 p.m. /// **First Indian Removal: Removing the Choctaw of Mississippi to Oklahoma**
Christopher Sutton
Bettie McGowan, faculty mentor
Sociology, Anthropology and Criminology
- 3:30 p.m. /// **Revitalization of the Language of the Pokagan Potawatomi, Taking Back Our Language and Our Culture**
Amber Ann-Rose Morseau
Bettie McGowan, faculty mentor
Sociology, Anthropology and Criminology
- 3:45 p.m. /// **The Kiowa Before and After the Europeans' Arrival**
Dakota Aitson
Bettie McGowan, faculty mentor
Sociology, Anthropology and Criminology

Room 301

Moderator: Brian Bruya

- 2:45 p.m. /// **Strategies for a Chinese Company to Enter the Latin American Auto Market**
Brock Foster
David Victor, faculty mentor
Marketing
- 3:00 p.m. /// **Reverse Merger: A Shortcut for Private Company Going Public**
Rongyan Xu
Yu Zhang, faculty mentor
Accounting and Finance
- 3:15 p.m. /// **The Tao and Chinese Aesthetics**
Aynsley Sterling-Meeuwen
Brian Bruya, faculty mentor
History and Philosophy
- 3:30 p.m. /// **Melons or Sandwiches: Using Power Structures to Interpret Late-Qing Chinese History**
Josh Lyon
Tomoyuki Sasaki, faculty mentor
History and Philosophy

Room 301

cont.

- 3:45 p.m. /// **Chinese Footbinding: The Cultural Striving for Beauty and Acceptance**
Elise Gainer
Tomoyuki Sasaki, faculty mentor
History and Philosophy

Room 304

Moderator: John Palladino

- 2:45 p.m. /// **Special Education Teachers' Perspectives on Transitional Planning**
Leeann E. Jones
John Palladino, faculty mentor
Special Education
- 3:00 p.m. /// **Educators' Perspectives of Students with Emotional Impairments and Their Same-Sex Behaviors**
Stefanie Arrieta
John Palladino, faculty mentor
Special Education
- 3:15 p.m. /// **People Are People: Benefits of Inclusive Service**
Sarah Mueller
Jacquelyn McGinnis, faculty mentor
Special Education
- 3:30 p.m. /// **Properties of Matter**
Nick Greene
Patricia Williams-Boyd, faculty mentor
Teacher Education
- 3:45 p.m. /// **Earth: Space and Time—A Curricular Unit Challenging Students to Shoot for the Moon**
Justina Spinale
Mary Margaret Sweeten, faculty mentor
Teacher Education

Room 320

Moderator: Natalie Dove

- 2:45 p.m. /// **The Relationships Between Self-Esteem and Interpersonal Relationships**
Jennifer Lederman
Natalie Dove, faculty mentor
Psychology

Room 320

cont.

- 3:00 p.m. /// **Skinny Cup of Jo: The Disease Only the Wealthy Can Afford**
Sara Dudzik
Melissa Mantei, faculty mentor
Communication, Media & Theatre Arts
- 3:15 p.m. /// **Moving Toward a Health Conscious Society**
Nicholas Turicek
Sandra Pernecky, faculty mentor
Health Sciences
- 3:30 p.m. /// **Feeling Good: The Relationship Between Health and Happiness**
Chelsea Patricia Devitt
Minnie Bluhm, faculty mentor
Health Sciences
- 3:45 p.m. /// **Walkability and Pedestrian Systems: A Case Study of Eastern Michigan University and Ypsilanti, MI**
Greta Bolhuis
Heather Khan, faculty mentor
Geography and Geology

Room 330

Moderator: Deanna Mihaly

- 2:45 p.m. /// **Social Movements, Autonomy and the State in Latin America**
Eric Sippert
Richard Stahler-Sholk, faculty mentor
Political Science
- 3:00 p.m. /// **Under the Shadow of Francisco Franco: The Influence of Literary Censorship on Post Civil War Spain**
Carly Danae Evich
Alfonso Illingworth-Rico, faculty mentor
World Languages
- 3:15 p.m. /// **Children of the Disappeared in Argentine Film and Testimonies**
Melissa Ann Dreffs
Deanna Mihaly, faculty mentor
World Languages

Room 330

cont.

- 3:30 p.m. /// **Palestine: Occupation, Resistance, and Solidarity**
Ihsan Ghadieh
Judith Kullberg, faculty mentor
Political Science
- 3:45 p.m. /// **The Anthropology of Mass Genocide:
A Cross-Cultural Examination**
Benjamin Guidot
Bradley Ensor, faculty mentor
Sociology, Anthropology and Criminology

Room 344

Moderator: Thomas Cieslak

- 2:45 p.m. /// **Should EMU have a Football Program or Not?:
A Panel Discussion with EMU Students**
Eugene Evans, David Gibson, Daniel Mark Kretchman,
Jeremy Alonzo Lewis, Erin Elizabeth Traczek
and Alan Willman
Thomas Cieslak, faculty mentor
Health Promotion and Human Performance

Room 350

Moderator: Margaret Hanes

- 2:45 p.m. /// **Determining Microsatellite Variation in Three
Species of *Megistostegium***
Morgan Leigh Callewaert
Margaret Hanes, faculty mentor
Biology
- 3:00 p.m. /// **Inferring Population Structure and Mechanisms of
Population Differentiation in *S. purpurea***
Dustin Wiecek
Margaret Hanes, faculty mentor
Biology
- 3:15 p.m. /// **First Steps in Digitizing the EMU Herbarium**
Megan Wiemer
Margaret Hanes, faculty mentor
Biology

Room 350

cont.

- 3:30 p.m. /// **Acoustic Analysis of Derived and Non-Derived Palatal Consonants in Polish**
Danuta Allen
Beverly Goodman, faculty mentor
English Language and Literature
- 3:45 p.m. /// **Comparative Vowel Quality in English and German**
Robert Allen II
Beverly Goodman, faculty mentor
English Language and Literature

Room 352

Moderator: John Boyle

- 2:45 p.m. /// **Measuring Community Impact: A Student Perspective**
Kody Vitale
Claudia Petrescu, faculty mentor
Political Science
- 3:00 p.m. /// **The Human Immunodeficiency Virus and Our Community: Awareness**
Jimis Shukri
Sherry Bumpus, faculty mentor
Nursing
- 3:15 p.m. /// **Physician-Assisted Death: A Plea For Empathy**
Gabrielle Nicole Van Wassehnova
Michael Scoville, faculty mentor
History and Philosophy
- 3:30 p.m. /// **Assessing the Cost of Government and Health Care in America**
Jacob Rich
John Boyle, faculty mentor
Mathematics
- 3:45 p.m. /// **Health Care Cost Inflation: A Policy Analysis**
Nino Monea
Raymond Rosenfeld, faculty mentor
Political Science

Auditorium

Moderator: Susan Booth

- 2:45 p.m. /// **Paradise Valley of Detroit: A Forgotten Neighborhood**
Frederick Scott Karn
Ana Monteiro-Ferreira, faculty mentor
Africology and African American Studies
- 3:00 p.m. /// **A History of Housing Segregation in Detroit**
Carolyn Roe, Brittney Danielle Maczala,
Nathan William Polich and Samantha Carter
Russell Jones, faculty mentor
History and Philosophy
- 3:15 p.m. /// **Detroit is a Creative Corridor: Why Millennials are Reclaiming and Reinventing Detroit**
Erica Coran, Michael Siemasz and Tyler Murch
Sheila Sasser, faculty mentor
Marketing
- 3:30 p.m. /// **Transformation from Ordinary to Extraordinary: A Teaching Case Study in Creative Entrepreneurship**
Alissa Miller
Susan Booth, faculty mentor
Communication, Media & Theatre Arts
- 3:45 p.m. /// **The Heidelberg Project**
Paul Angelo Corsi
Susan Booth, faculty mentor
Communication, Media & Theatre Arts

Kiva

Moderator: Nick Romerhausen

- 2:45 p.m. /// **Examining the Relationship Between Public Relations Practitioners and Journalists**
Raven Gardiner
Regina Luttrell, faculty mentor
English Language and Literature
- 3:00 p.m. /// **“This Is It”: A Guide to Developing a Successful Event**
Bader Yousef
Christine Day, faculty mentor
Management

Kiva

cont.

- 3:15 p.m. /// **Hershey's Take 5 Relaunch**
Kart Ojasaar
David Marold, faculty mentor
Marketing
- 3:30 p.m. /// **Adult Attachment and Parent-Child Relations Among Adults with a Parent in the Military**
Lexi Forsyth
Heather Janisse, faculty mentor
Psychology
- 3:45 p.m. /// **Foster Care Youth Aging Out in the United States: Critical Communication Research**
Ashley B. Kerby
Nick Romerhausen, faculty mentor
Communication, Media & Theatre Arts

Student Art Gallery

Moderator: Jeffrey Bernstein

- 2:45 p.m. /// **A Mentoring Experience: Ten Minutes a Day Can Change a Kid's Life**
Khallid A. Wooten
Russell Olwell, faculty mentor
History and Philosophy
- 3:00 p.m. /// **Picture Books as Mentor Texts**
Michelle Nicole Carter
Mitra Dunbar, faculty mentor
English Language and Literature
- 3:15 p.m. /// **Honors College Tour: Innovation Through Diffusion**
Kerri Musick
Jeffrey Bernstein, faculty mentor
Political Science
- 3:30 p.m. /// **Facilitating Student Discussion: The Case of a Political Science Class**
Emma Fitzhugh
Jeffrey Bernstein, faculty mentor
Political Science
- 3:45 p.m. /// **Major Factors in the Development of Political Attitudes**
Hailey Huckestein and Steven Mikulic
Jeffrey Bernstein, faculty mentor
Political Science

COLLEGE OF ARTS AND SCIENCES



MICHAEL RICHARDSON /// DEPARTMENT OF POLITICAL SCIENCE

DEPARTMENT OF AFRICOLOGY AND AFRICAN AMERICAN STUDIES

Paradise Valley of Detroit: A Forgotten Neighborhood

Frederick Scott Karn

Ana Monteiro-Ferreira, faculty mentor

Paradise Valley of Detroit was a segregated community in Detroit where African Americans lived during the time period of the Great Migration (during and after World War II). There used to be a thriving community in Detroit that is now long forgotten. In the book, *Toast of the Town* written by Sunnie Wilson, Wilson chronicles his life and times of living in the Paradise Valley neighborhood. The community was destroyed during the forced integration that was caused by the construction of I-75. Most people do not remember the community, but there is still evidence today that exists which details the amazing culture that no longer exists.

Oral session D /// Auditorium /// 2:45 p.m.

Deindustrialization, Substandard Education, and Urban Poverty in Detroit

Nathaneil Winston

Melvin Peters, faculty mentor

Despite immense research by scholars on the impoverished conditions of Detroit, little is known about the factors that explain Detroit's drift toward poverty. The overall tone of the literature is negative/not reflecting plans for improvement and strictly focusing on negative depictions of Detroit. This study combines a historical case study approach with a multivariate time series analysis to examine the consequences of the decline of the manufacturing industry and an inadequate Detroit's Public Schools system. This study identifies disproportionate effects of both factors on African Americans.

Oral session C /// Room 352 /// 1:45 p.m.

DEPARTMENT OF ART

Detroit Survives

Thomas Geoffrey Amross
Daniel Sinclair, faculty mentor

The city of Detroit has accumulated quite the reputation in recent years. Detroit seems to be plagued by decay, scandal, and a violent history that is perpetuated by the media's constant focus on all the negative aspects of the city. In this project, I wanted to represent the determination of Detroit to rise up and reconstruct itself from all the negative connotations associated with it. I also wanted to capture the city's hard working, tough, and gritty spirit through my design choices. *Detroit Survives* encapsulates the spirit and heart behind the movement of our generation to rebuild and revive a broken city.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Eastern Michigan Athletics Rebranding

Zane Birchler and Xavier Jones
Ryan Molloy, faculty mentor

This project is a complete rebranding of the EMU Athletic Department. It includes a new logo design and new jerseys for EMU athletic teams.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

My Most Anticipated Films: Illustrative Poster Series

Jermaine Dickerson
Ryan Molloy, faculty mentor

Famous Baroque painters such as Paul Rubens created paintings that were emotionally intense and visually enticing. Ruben's paintings are so dynamically composed that even the clothes on his figures seem to move on the canvas. Centuries later, the painter Alex Ross conveys a similar aesthetic with almost god-like depictions of comic book characters and compositions that are just as compelling. Drawing inspiration from artist like Rubens and Ross, my objective with this poster project was to create dark and passionate scenes from my most anticipated films of this year and the next featuring my favorite comic and sci-fi characters.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Undergraduate Symposium 34: An Abstract Interpretation

Alison Figliomeni and Andrew Gariepy
Ryan Molloy, faculty mentor

This project focuses on the identity for the current Undergraduate Symposium, including the website and all printed materials for promotional use. Our design is inspired by the collaborative nature of the Symposium. The overlapping shapes and lines represent the relationships made when students from all academic areas come together to share their ideas.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

CyNext Zine

Eric Fine, Michael Randall, Adam Pete and Jermaine Dickerson
Daniel Sinclair and Andrew Maniotes, faculty mentors

What began as a theory of future society evolved into a collection of both direct and experimental applications regarding robots and cybernetics. Four graphic designers with very different artistic styles came together bringing their own research and artistic visions to create a document that focuses on the advanced robotics in a theoretical future. The overall aesthetic is comprised of hand-drawn work, digital rendering, photo manipulation, and collage while re-appropriating modern day tech-based articles for typographical treatment. The result is CyNext.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Submission to Communication

Eric Fine
Daniel Sinclair and Andrew Maniotes, faculty mentors

Submission to Communication is a collection of experimental imagery and writing dealing with how powerful media and communication have become. It explores the idea of how the Internet and technology have over saturated our daily lives. The collection is also filled with quotes and writings that deal with how fast the world has changed. Imagery in the collection provides visual exploration into the cyber world through experimentation with different devices, such as scanning video off a tablet and projecting the images onto a monitor to achieve a collage of a digital glitch.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Love is Equal

Eric Fine and Mary Miazgowicz
Daniel Sinclair, faculty mentor

Love is Equal was a propaganda poster project. The subject matter was about support for marriage equality. As partners, we worked to make a screen printed poster that supports love of all kinds. The look of the poster was a wedding invitation. Along with the poster we made a postcard for guests to show support for all kinds of marriage.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Hand Built Ceramics: Ancient Pots and Platters

Elizabeth Hatchett, Bronte Dupuis, Christopher Boudrie, Carter Schwarz,
Carol S. Wolfe, Hannah Dudek, Kassandra Kowtko and
Rebecca Mayleben
Diana Pancioli, faculty mentor

Students in beginning ceramics classes learn to make big pots like those that humans have been making and using as large storage containers for more than a thousand years. This display includes seven large pots that were made by beginning ceramics students, both majors and non-majors, and the three large platters that were made by an advanced ceramics major.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

The Puffball Chair: An Upholstery Experiment

Anat Hodish

John DeHoog, faculty mentor

For this project I was experimenting with carving upholstery foam into a volume that has a unique sculptural presence while also allowing for comfortable seating. The chair includes a pillow and footstool that nest into the seat space for storage.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

The Art of the Curve: Experiments in Bending Wood

Melissa Judd

John DeHoog, faculty mentor

In this project I am carefully testing the bending possibilities of wood in both steam and cold bending environments. I wanted to test these traditional techniques against Compwood, a new wood product, which has been mechanically compressed at high pressure to create a material that can be readily bent without heat. The furniture pieces I create are sculptural in form and follow patterns in nature. The curvilinear structures I make can only be possible with the usage of bent wood, so it is necessary to understand the different techniques that can be employed to create such organic designs.

Oral session C /// Auditorium /// 2:15 p.m.

Detroit Casino

Arezo Korourian

Daniel Sinclair, faculty mentor

This three poster series is about the casinos in Detroit. The first poster is a custom typeface, the second is about graphic fictions, and the third combines elements of the other two. In the third poster the type is randomized to create rhythm and interest while simultaneously depicting the emotions of being in a casino.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Thread

Arezo Korourian

Daniel Sinclair, faculty mentor

Focusing on typography, I wanted to design a new poster using my favorite quotation. I incorporated digital print with new elements in my work such as thread and stitches.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Time, Memory, Home Stamps

Arezo Korourian

Daniel Sinclair, faculty mentor

This stamp series is based on my personal experience about how I felt about time, memories, and home when I moved to the United States. I use these three words to reflect my feelings. The stamps and icons are designed with an Eastern theme to represent my experience and life prior to moving to the United States.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Water, Sun and the Holy Roast: The Ritual of Coffee

Julia Alice Lubas

Daniel Sinclair, faculty mentor

This work explores coffee and the ritual meanings that can be found in its history, process, and culture. Included are three posters, and an accompanying book featuring articles on coffee's botanical classification, discovery, culture, and more. For this work I wanted to focus on religious shrines that gave me inspiration for each design. It is meant to be complex and ornate.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Contemporary Art Event Branding: CORP Corporation

Julia Alice Lubas

Daniel Sinclair, faculty mentor

I created a contemporary art event titled *The Grand Opening of CORP Corporation*. The event consisted of viewers visiting the earthly headquarters of CORP Corporation, located in Detroit. During their visit they would experience the inner workings of this mysterious corporation that was hungry for recruitment. The viewer would encounter a world that appeared friendly and inviting but was controlled by an ominous agenda. The branding that I created for this contemporary art event consists of a poster, employee handbook, stickers, and a design for the website.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Life by Autophagy

Michael Brendan McCarthy

Gretchen Otto, faculty mentor

The concept behind this wall piece is the age-old idea, "Death makes way for life that makes way for death." The main figure is a female who has committed an act of Autophagy (to consume oneself) leading to her death, but also leading to the life of a number of poisonous plants and fungi. Plants and fungi featured in the piece are; Rosary Peas, Oleander, Nightshade, Death Caps and Destroying Angels. As the viewers of the piece look at it from the front, it seems as if the female's midsection is covered with plants (as if they're growing out of her) but from the side, the viewers see how each and every plant and fungi is connected to the piece.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Galaxies Collide: Astronomical Imagery on a Hand-Carved Cabinet

Tyler Moll

John DeHoog, faculty mentor

In four billion years our own Milky Way galaxy will collide with the Andromeda galaxy. The turmoil to be created by this future occurrence inspired me to create a piece of carved furniture using computer-generated imagery of the collision. The top carved section is made of walnut inlaid with silver and cut stones. The two drawers are hidden on the front, waiting to be discovered. The bottom is made from welded metal tubing with a dark patina.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Beersnob Brewery

Courtney Morrow

Daniel Sinclair, faculty mentor

This project challenged me to establish my own company and then brand all aspects necessary to market this upstart venture.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

America the Beautiful?

Courtney Morrow

Daniel Sinclair, faculty mentor

This project, a collaborative zine examining issues with America, was inspired by a newsroom monologue. Created with Erin Hulburt and Vicki Behene, the zine is packaged in plastic with a screen printed insert.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Combination

Courtney Morrow

Daniel Sinclair, faculty mentor

This project involves graphic fictions created from crumbled paper and trash.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Time, Memory, Home

Michael Randall

Daniel Sinclair and Ryan Molloy, faculty mentors

The concepts of time, memory, and home, are often vague in a general sense, but more detailed and interesting from an individual's perspective. This poster series explores those concepts, presented as *Fuel*, *Fortune*, and *Fortress*, and combines design with fine art by using digital illustration. The images are bright and colorful, yet dark with surrealist inspiration; they evoke a sense of both fun and play, and indoctrination, zombification, and even mutilation.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Interactive Design Experiment

Steve Schleuder

Ryan Molloy, faculty mentor

For my Introduction to Web and Interactive Media class I had to create either a drawing application or an image filter using software called Processing. I created a video filter inspired by stained glass windows. I chose stained glass because of the way light is transformed as well as the geometric patterns used to create stained glass windows. I took my application to different environments to record the changes in light and shape that occur.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Complex Systems

Taylor Stewart

Ryan Molloy, faculty mentor

A drawing tool, created using Processing, was made that utilized an original abstract typeface to write racial slurs. These pieces reflect on the obscurity of racism in today's society and the complexity behind the system of prejudice. The pieces are meant to provoke questions and conversation about racism in today's society. To create the composition I programmed the abstract font so that a user can type it using a keyboard. The letterform locations are randomized. The racial slurs were typed in repeatedly until compositions were formed.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

The Process of Enameling

Victoria Veit

Gretchen Otto, faculty mentor

The medium of enameling goes back 2,000 years. Enameling is the process of applying a thin coat of finely ground glass to metal and fusing it with intense heat (1200-1500 degrees). Enamels are applied to the base metal using a variety of techniques. After the cooling process enameling can be repeated multiple times to build up many thin layers of coloring. Layering creates depth and texture. The enameling process adds brilliant, rich, luminous, and permanent colors to metalwork.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Open Book Workshop

Carissa Wesson, Zane Birchler, Courtney Morrow, Alison Figliomeni, Steve Schleuder and Joseph Guenther

Ryan Molloy, faculty mentor

This project involves the creation of the promotional materials during a 10-day experimental workshop at the EMU Parsons Center. The project includes the design and production of a poster/mailer, postcard, application, and website for the workshop. The design of the work has to appeal to a wide audience ranging from artists, design professionals, art and design instructors, and students (both graduate and undergraduate). This project presented several challenges since the production of the poster was limited to an object easily mailed and produced in-house.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Kaleidoscope

Carissa Wesson

Ryan Molloy, faculty mentor

Writing a computer program to make art can create some challenging problems but at the same time can result in some interesting and unexpected designs and patterns. This project involved learning coding/programming and using that knowledge to create a series of art posters. I have created a series of three works utilizing the application I developed.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Infection Zine

Carissa Wesson, Thomas Geoffrey Amross and Brett Trombley

Daniel Sinclair, faculty mentor

Spreading information these days is just as easy as spreading disease. *Infection* addresses both issues and shows how easy it is for information to radiate out and consume the environment.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

DEPARTMENT OF BIOLOGY

Localized Expression of the Signaling Protein Ephrin-A5 in *Xenopus laevis* Embryos

Deena Ali

Robert Winning, faculty mentor

Eph receptors and ephrin ligands regulate processes in vertebrate embryonic development, such as cell separation and migration, by recognizing and repelling each other. Within this family, the ephrin-A5 signaling protein recognizes the Eph-A4 receptor. Previous studies indicate that ephrin-A5 protein is present at the zygote stage, while Eph-A4 is expressed at the later gastrula stage in *Xenopus laevis* embryos. Immunostaining of the ephrin-A5 signaling protein in *X. laevis* embryos is being done to determine if the protein is localized or widespread in embryos. Preliminary results indicate that ephrin-A5 protein is localized in early *X. laevis* embryos.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Is *Dreissena r. bugensis* outcompeting *Dreissena polymorpha* in Lake Huron bays?

Holly Brown

Steve Francoeur, faculty mentor

The Great Lakes are host ecosystems to invasive plant and animal species. Here we focus on the invasive mussels, *Dreissena spp.*, in the Saginaw Bay region of Lake Huron. *D. polymorpha* was first recorded in the late 1980s followed by *D. rostriformis bugensis* in the early 1990s. Our purpose is to determine if the latter invasive species has out-competed the former invader. To better understand mussel population sizes and distributions in Saginaw Bay, we collected samples along varying depths of transects, measured densities and populations sizes, and ran analyses on these data.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Determining Microsatellite Variation in Three Species of *Megistostegium*

Morgan Leigh Callewaert

Margaret Hanes, faculty mentor

Understanding the relationships between species is important because it can provide information about where and when species originated. My research aims to uncover genetic similarities and differences between three closely related plant species from Madagascar, and to identify the genetic mechanisms that structure populations of these species. A total of 73 DNA samples were genotyped for six microsatellite markers and a phylogenetic tree was reconstructed. This work will be valuable to other botanists on Madagascar, because knowledge about this plant group is extremely limited and insight into these plants would provide substantial help in both genomic analysis and phylogenetic research.

Oral session D /// Room 350 /// 2:45 p.m.

Gene Conversion at Fragile Site Breaks in *Saccharomyces cerevisiae*

Thomas Coates and Kaelen Medeiros

Anne Casper, faculty mentor

Fragile sites are regions within the genome that are highly susceptible to breaking during replication. Breaks at these fragile sites can be repaired using a number of different mechanisms, one of which is homologous recombination (HR), which can lead to loss of heterozygosity (LOH). LOH, in turn, can contribute to cancer development if it occurs in tumor suppressor alleles. We hypothesize that fragile site breaks are frequently repaired by a HR mechanism called gene conversion. We are in the process of testing this hypothesis by inducing breaks at a common fragile site in a *Saccharomyces cerevisiae* model yeast strain.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

eDNA Analysis Protocols for Identifying Blue Spotted Salamanders in an Aquatic Environment

Natalie Paige Colletti

Katherine Greenwald, faculty mentor

Environmental DNA (eDNA) analysis is a method of analysis in which DNA can be extracted from an environmental sample, like soil or water, without requiring direct handling of any target organisms. All organisms shed trace amounts of DNA into their environment in the form of skin cells, fecal matter, etc. This DNA can be isolated and amplified to test for the presence of specific species. My research focuses on testing the effectiveness of certain eDNA analysis protocols in determining the presence of Blue Spotted Salamanders in an aquatic environment. I have assessed several DNA isolation methods, and I am comparing my results to traditional field observations at the same sites.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Inferring Nutrient Limitation from Algal Relative Abundance in Great Lakes Coastal Wetlands

Gabrielle M. Costello

Steve Francoeur, faculty mentor

Biological productivity within an ecosystem is often limited by nutrient availability. Productivity in the Great Lakes is usually phosphorus-limited. However, within Great Lakes coastal wetland ecosystems, denitrification may increase the prevalence of nitrogen limitation. If these wetlands are nitrogen-limited, then, within these wetlands, nitrogen-fixing algal taxa should be relatively more abundant than taxa that cannot fix nitrogen. To test this hypothesis, algal relative abundance was determined at 27 Great Lakes coastal wetland sites. Nitrogen limitation inferred from these results was then compared to independent empirical measurements of nutrient limitation at these sites.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Determining Accuracy of DNA Synthesis During Repair by Homologous Recombination

Mikael Keith Dunn and Shahana Ahmed

Anne Casper, faculty mentor

In the yeast *S. cerevisiae*, inhibition of DNA polymerase alpha causes breaks at specific sites, called fragile sites. Fragile site breaks can be repaired by homologous recombination (HR). We identify yeast cells that repaired a fragile site break by HR during mitosis then evaluate if the DNA synthesis that happened as part of the repair process was accurate. We hypothesize that DNA synthesis during HR is inaccurate. To test the hypothesis, we use a mutant *lys2* reporter gene next to the fragile site. If DNA synthesis during repair is accurate, *lys2* will still be mutant. If inaccurate, the gene can be restored to its wild-type version.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Analysis of a Highly Variable *Alu* Element within the LDLR Gene

Katie Fiallos

David Kass, faculty mentor

Over one million *Alu* elements are scattered throughout the human genome. The sequence of an *Alu* element within exon 18 of the low-density lipoprotein receptor (LDLR) gene was found to be highly variable among individuals, possibly as the result of a gene conversion event. This investigation involves the development of an assay to readily assess known variants among individuals for a large-scale population analysis as well as to potentially identify variants associated with hypercholesterolemia.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Characterization of Candidate Proteins Potentially Involved in the Synthesis of GDP-glucose

Nadeen Majdi Habbas-Nimer

Aaron Liepman, faculty mentor

Glucomanan, a carbohydrate consisting of the sugars glucose and mannose, is found in cell walls of many plants and as energy reserves in some. Glucomanan synthesis requires the nucleotide sugar substrates GDP-mannose and GDP-glucose, however protein(s) involved in the synthesis of GDP-glucose are unknown. It is hypothesized that GDP-mannose pyrophosphorylase proteins have dual substrate specificity, producing GDP-mannose and GDP-glucose. Analyses of candidate GDP-mannose pyrophosphorylase sequences from *Arabidopsis thaliana*, produced as recombinant proteins in *Escherichia coli*, are presented.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

SEM and LM Analysis of Structural Hydrophobicity in *Nymphicus hollandicus* Feathers

Asia R.S. Hall

Glenn Walker, faculty mentor

Feathers of birds perform several important functions, one of which is to keep the bird dry. The hydrophobicity of bird feathers is determined not only by preening oil, but by barb/barbule arrangement and microstructure as well. This experiment utilized Scanning Electron Microscopy (SEM) and Light Microscopy (LM) to examine varying levels of hydrophobicity in cockatiel (*Nymphicus hollandicus*) feathers based on these structural differences. The SEM results were confirmed via LM measurement of contact angles of water droplets placed on feather surfaces after removal of preening oil.

Oral session C /// Room 320 /// 1:30 p.m.

Play Often, Play Hard, Be Happy: How Regular Intense Exercise Can Improve Your Quality of Life

Dexter Hobby

Howard Booth, faculty mentor

The purpose of this study is to gain information on how regular exercise and the intensity of that exercise will impact quality of life, particularly in older adults. It was hypothesized that both regularity and intensity will increase retention of athletic ability and enhance self-image. Both contribute to improved quality of life. By analyzing data from the literature on typical older adults and conducting a survey of elite masters athletes we found the results supported our hypothesis. Within limits, increased intensity while maintaining regular exercise has a marked positive effect on quality of life.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Evolutionary Analysis of the Rodent *mysTR* Endogenous Retrovirus

Alexandra Hofmann

David Kass, faculty mentor

An endogenous retrovirus is a non-infectious genetic element presumably originally derived from a retroviral integration into the genome. These elements may produce new copies in the genome via an RNA intermediate. A germ-line integration could be passed on to future generations. Our preliminary findings investigating the evolutionary history of the *mysTR* element suggest it is found in all members of the Muroidea superfamily of rodents, but may be highly active within deer mice. Isolating and analyzing DNA sequences of individual *mysTR* elements within different rodent genomes may provide insights into features associated with being a more successful genomic parasite.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Development of Methods to Identify Genome Composition in Unisexual Salamanders

Danielle Hulvey

Katherine Greenwald, faculty mentor

Unisexual (all female) *Ambystoma* salamanders reproduce by a method called kleptogenesis. This is when unisexuals take sperm packets laid by males of co-existing species, but may or may not incorporate the sperm genome into resulting offspring. This creates a complex of salamanders that can have two to five genomes. Our goal was to find a species-specific set of primers that amplified genome sections in unisexuals to determine which other species' genomes are present in the sample. We analyzed variation in population compositions across many ponds to figure out the proportion of individuals that have genomes from *Ambystoma laterale* and *Ambystoma jeffersonianum*.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Behaving Boldly: Impacts of Feeding Regime on Growth and Locomotion of *Lasiodora parahybana*

Samantha Alice Isselbacher
Cara Shillington, faculty mentor

Personalities (behavioral syndromes) in invertebrates are a leading area of biological research that offers important insights into ecological and evolutionary connections. We investigated personalities of tarantulas by recording traits on a shy-bold scale during feeding and locomotion. Spiderlings in high- and low-feeding treatments were analyzed for differences in behaviors and growth rates. Locomotory activity was monitored using video-tracking software, and we predicted that lower-fed tarantulas would be more active. Results suggest few trends in feeding behaviors, but higher-fed organisms had greater mass gains. Locomotory data are currently under analysis.

Oral session C /// Room 320 /// 1:15 p.m.

Determining Break Frequencies of Human Common Fragile Sites Carried on Yeast Artificial Chromosomes

Catherine Kaminski and Alicia Layer
Anne Casper, faculty mentor

Fragile sites (FS) are areas of the genome more susceptible to DNA breakage in cells under replication stress. These regions are associated with tumor suppressor genes and oncogenes, which can lead to tumorigenesis when mutated. Yeast Artificial Chromosomes (YACs) carrying inserts of human DNA from FS regions and control, non-FS regions were studied. We hypothesize that break frequencies in the YACs containing human FS DNA will be higher in cells under replication stress than in cells under normal conditions. We also hypothesize that the YACs with human FS DNA will be more unstable than YACs with non-FS DNA. Preliminary data on two FS-containing YACs supports our first hypothesis.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Phylogentic Relationship of *Peromyscus* Species Determined By Retrotransposons

Nathan Clark Kilian
David Kass, faculty mentor

Retrotransposons contribute to a large proportion of mammalian genomes. These include short interspersed DNA elements (SINEs) that have integrated at different times of evolution. SINE integrations are stable, and can potentially provide a molecular fossil record. This allows for the assessment of evolutionary relationships among organisms. By identifying presumably recently integrated SINEs from data generated in the ongoing *Peromyscus* genome projects, we can develop an alternative tool to DNA sequence data to construct a phylogenetic tree of *Peromyscus* species. This will help resolve a current controversy regarding the evolutionary relationships of these species.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Decision Making and Motor Control in the Rat Basal Ganglia: A Possible Role for Acetylcholine

Alexandra Amelia Lekson

Thomas Mast, faculty mentor

The basal ganglia integrate sensory and motor inputs to regulate cortical motor commands. Dysfunction causes motor disorders such as Parkinson's Disease. Here we investigate movements during a sensory-motor integration 'Go-NoGo-Stop' task. First an auditory cue plays, then the rat moves: 'Go-left', 'Go-right' or 'NoGo' based on tone pitch. In a few trials a 'Go' cue precedes a 'NoGo' cue and the rat is to 'Stop'. A correct movement choice earns a food reward. We examine task performance by the percent of correct trials and the response reaction time. We plan to ablate acetylcholine-releasing neurons within the basal ganglia and predict that 'Stop' movements will be disrupted.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

The Effects of Invasive Wetland Plant Species and Land Use on Stream Microbial Biofilm Activity

Jared Lobbestael

Kristin Judd, faculty mentor

Microbial biofilms are central to organic matter processing in freshwater streams. Wetlands are an important contributor of allochthonous dissolved organic matter (DOM) available in streams. A major source of wetland DOM contributed is leachates of decomposing hydrophytes. Thus, changes in wetland plant communities can potentially impact the activity and makeup of stream biofilms. Midwestern freshwater marshes have been strongly impacted by invasive plant species. In this study, we examine the effects of DOM leachates from the invasive species, *Phragmites australis* and *Typha X glauca*, on the activity of local stream biofilms developed on ceramic tiles.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Spatial and Temporal Patterns in Stream Microbial Community Physiological Capacity

Halley D. Marconnay

Kristin Judd, faculty mentor

The mineralization of organic matter is an essential ecosystem process carried out by microorganisms through enzyme catalyzed metabolic processes. There is still much to learn about how environmental conditions control spatial and temporal patterns in the physiological capacity of microbial communities. The goal of this study is to better understand what drives seasonal and watershed-scale patterns in stream microbial physiological capacity. This study compares community level physiological profiles and environmental conditions throughout the Huron River Watershed (18 tributary streams and six sites along the main stem of the river) during summer, fall and winter.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Instability at *Saccharomyces cerevisiae* Fragile Site FS2 Stimulates Mitotic Recombination

Shaylynn Delaney Miller

Anne Casper, faculty mentor

Common fragile sites (CFS) are pervasive in the DNA of many known species, including humans. The instability of CFS DNA sequences can lead to mitotic recombination in the event of a strand break. If this occurs near cancer-suppressing genes, such as tumor suppressor genes, abnormal cell growth could result. CFS instability increases when the cell is experiencing replication stress. In *S. cerevisiae*, this can be induced through the use of a modified galactose-dependent promoter region of polymerase alpha. Homologous recombination (HR) is one mechanism for repairing DNA breaks. Mitotic HR near FS2 was analyzed; more recombination was found at FS2 during periods of replication stress.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

LIM Kinase Activity in the EphA4 Signal Transduction Pathway

Diana M. Rigan

Robert Winning, faculty mentor

Binding of the EphA4 receptor with its ephrin ligand results in changes that cause cellular repulsion. This mechanism helps guide migrating cells and axons in vertebrate embryos. The intracellular events that lead to changes within the cell are not fully known, though the enzyme LIM kinase might play an important role. It is hypothesized that activation of EphA4 leads to downregulation of LIM kinase. It is predicted that inhibition of LIM kinase will cause changes in early embryos similar to EphA4 activation. Preliminary results from injecting a LIM kinase inhibitor into frog embryos suggest that inhibition of LIM kinase produces cellular effects reminiscent of EphA4 activation.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Pick Your Hot Spot: Temperature Preferences in Emperor Scorpions (*Pandinus imperator*)

Jesica Rubio

Cara Shillington, faculty mentor

Animals require specific body temperatures to optimize physiological processes. As ectotherms, scorpions regulate temperature environmentally. The group living displayed by *P. imperator* is unusual among scorpions, which are often solitary and cannibalistic. We studied the influence of temperature preferences (T_{pref}) on group living using a thermal gradient (15–35°C). A ranking scale was used to score the proximity of a scorpion to its nearest neighbor during group trials. Results suggest that forming aggregations had a stronger influence on individual position in the gradient than did temperature.

Poster group 2 /// Room 310 /// 1:30–3:40 p.m.

Epigenetic Alterations Associated with Speciation in European House Mice

Jumanah Saadeh

David Kass, faculty mentor

Epigenetics involves the inheritance of maternal or paternal signals to modify DNA without changes in DNA sequence. One mechanism is by DNA methylation, which is associated with changes in the expression of genes. Disruption of this signal in certain genes has been associated with hybrids of related species. This project involves analyzing specific genetic loci randomly isolated from a “demethylation library” of embryos from two related species of European house mice. We are assessing the specific sites that have undergone an epigenetic change and determining genes or neighboring genes in which these events have occurred to further understand epigenetics and its role in evolution.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

An Investigation into the Impact of Afterschool Science Clubs on Student Thinking in Science

Maha Siddiqui

Chiron Graves, faculty mentor

Despite over 10 years of K-12 science education reform efforts to improve scientific literacy, research on student views of the nature of science still shows that students hold misconceptions about science, scientists, and how science knowledge is generated. It begs the question, “Would supplementing student educational experiences in traditional science classrooms with afterschool science learning experiences lead to a change in student understanding of the nature of science?” The purpose of this project was to examine whether middle school student involvement in an eight-week long afterschool science club can change their understanding of the nature of science.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

The Origin of *mys*: A Highly Active Retrotransposon in *Peromyscus*

Ashlee Smith

David Kass, faculty mentor

Mammalian genomes contain many copies of transposable elements (TEs). Over 40% of the DNA sequences in the human genome consist of TEs. The *mys* retrotransposon (TE) was identified in the white-footed mouse (*Peromyscus leucopus*) and other rodents of the family Cricetidae. In assessing the evolutionary origins of this TE, it appears that it is limited to the genus *Peromyscus*, whereas other cricetid rodents contain a related element. We are analyzing *mys* in more detail to determine if it was derived from the related element, and to decipher the basis of its apparent escalation of activity within genomes of four closely related *Peromyscus* species.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Effect of Common Fragile Site Flexibility Peaks on Mitotic Recombination in Yeast

Valerie Sponyoe

Non presenting co-author: Quinn Ellison

Anne Casper, faculty mentor

Common fragile sites (CFS) are areas of the chromosome that are susceptible to DNA breakage when placed under replication stress. CFS breaks near tumor suppressor genes can lead to cancer. Previously, we have shown that in cells under replication stress, breaks at a yeast fragile site stimulate homologous recombination (HR) events that lead to loss of heterozygosity. We hypothesize that a sequence motif called a flexibility peak found in human fragile sites also will stimulate HR. To test this hypothesis, we have inserted this flexibility peak into the yeast *Saccharomyces cerevisiae*. This organism allows us to view the effects of this sequence on mitotic recombination.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

The Coaggregation of Human Gastrointestinal Bacteria

Natalie Michelle Stoyhoff

Daniel Clemans, faculty mentor

The human gastrointestinal (GI) tract is teeming with billions of microbes, some of which are essential to the development of the immune system and the production of metabolites that humans need to survive. The nature of this unique ecosystem and how bacteria impact it are poorly understood. The purpose of this study is to better understand how bacteria interact with each other within the human GI tract. Coaggregation is the cellular interactions between genetically distinct bacteria. We present data about on the specific coaggregation interactions between select GI tract microbes and the nature of the molecules that mediate those interactions.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Are You in Your Right Mind? Handedness in the Emperor Scorpion (*Pandinus imperator*)

Jessica A. Twydell

Cara Shillington, faculty mentor

"The right half of the brain controls the left half of the body; this means only left handed [scorpions] are in their right mind." Lateralization is the localization of activity to either the right or left side of the brain. Handedness is characterized by the dominant limbs in animals such as crabs, horses, and parrots. This is the first study of this trait in scorpions. Through a series of five trials per individual, captive scorpions were offered one cricket. Handedness was determined by various measures of claw preference during feeding. Results suggest that scorpions display lateralization and handedness by preferentially feeding with their dominant claw.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Inferring Population Structure and Mechanisms of Population Differentiation in *S. purpurea*

Dustin Wiecek

Margaret Hanes, faculty mentor

The carnivorous Purple Pitcher Plant, *Sarracenia purpurea*, is found throughout the eastern United States and Canada. These plants use their prey-catching ability to inhabit nutrient-poor bogs and fens. The separation of these unique habitats across Michigan and the short seed dispersal distance of the species provide an opportunity to investigate genetic variation within and between populations and to reconstruct the evolutionary history of the groups. Five nuclear genes were sequenced from 70 individuals from 7 populations across Michigan. Populations differ significantly in genetic variation and are structured across the state in three groups: northern, middle, and southern.

Oral session D /// Room 350 /// 3 p.m.

First Steps in Digitizing the EMU Herbarium

Megan Wiemer

Margaret Hanes, faculty mentor

The herbarium at EMU houses approximately 40,000 preserved plant, fungal and algal specimens that are systematically arranged as a resource for teaching and research. The aim of this project is to database, barcode, annotate, and digitally image 6,800 herbarium specimens (representing 2,070 North American species) from 20 plant families. This data will be integrated with similar data collected at 14 other herbaria in association with the grant "Plants, Herbivores, and Parasitoids: A Model System for the study of Tri-Trophic Associations" and used in future studies of climate change, plant distribution, biogeography, and systematics.

Oral session D /// Room 350 /// 3:15 p.m.

Meta-analysis of Male and Female Function in Plants with Contrasting Architecture and Mating Systems

Lisa Wyse

Gary Hannan, faculty mentor

A plant has limited resources to invest in growth and reproduction. A plant's inflorescence architecture and mating system are predicted to influence investment in sexual function. Investment in male and female function (pollen and ovules) represents one measure of such balance. However, few studies have considered these factors in combination. We analyze existing data to test the hypothesis that pollen:ovule ratio is contingent upon combined plant architecture and mating system. Analysis of literature suggests that studies of some combinations of plant architecture and mating system are underrepresented in the literature.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

DEPARTMENT OF CHEMISTRY

Synthesis of Large-Ring Chelates of Platinum(II) as Novel Antitumor Drugs

Adefolake Adesewa Bakare

James D. Hoeschele, faculty mentor

Cisplatin is the prototype of platinum-based antitumor drugs. Derivatives of Cisplatin have been developed in order to overcome clinical problems connected with toxicity, narrow spectrum of action, and resistant tumors. Recently, a Cisplatin analog, Kietplatin, was identified as a potential new antitumor drug. The latter complex features a bidentate amine bound to a platinum (II) center, forming a 7-membered ring. The formation of chelate rings with more than 6 members is generally disfavored in platinum complexes. In an effort to develop novel potential antitumor drugs, we have identified a pathway for the synthesis of amine chelate platinum (II) complexes containing more than 7-members.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Characterization of FAM129B, a Protein Implicated in Melanoma

Brittany Berger

Hedeel Evans, faculty mentor

FAM129B is a protein important for cell invasion. It has a molecular weight of 83 kDa (AA1 - 746) with a pleckstrin homology domain near the amino end and a proline rich region near the carboxyl end. FAM129B is a target of the MAPK cascade and may promote cell invasion by suppressing apoptosis. The protein was purified in *E. coli*, and methods that include affinity chromatography, gel filtration, and bioinformatics were used to characterize its structure. The possible effects of two new melanoma treatment drugs on FAM129B were also investigated.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Effect of Carbinol Substituents on Product Stereoselectivity in a Tandem aza-Cope-Mannich Reaction

Antonios Marios Nikolaos Chionis

Maria Milletti, faculty mentor

Vinyl oxazolidines undergo the aza-Cope-Mannich (ACM) reaction to yield acyl pyrrolidines stereoselectively. Experimental evidence shows that when the oxazolidine is methylated at the carbinol carbon product stereoselectivity increases. To determine whether this is due mainly to electronic or steric effects we model the salient steps of the ACM reaction for three oxazolidines with an electron donating substituent (-CH₃), an electron withdrawing substituent (-CF₃), and no substituent, respectively, at their carbinol sites. The data indicates that the effect of the methyl substituent is mainly electronic and that steric effects are minor.

Oral session A /// Room 352 /// 9:15 a.m.

Asymmetric Platinum (IV) Complexes as Potential Antitumor Drugs

Cristian Virgil Chiroasca

James D. Hoeschele, faculty mentor

Cisplatin is an FDA-approved anticancer drug that is used globally. While many cisplatin analogs have anticancer activity, low aqueous solubility often limits their potential usage as drugs. Using chloroamine analogs of cisplatin as precursors, we are preparing asymmetric platinum (IV) complexes to increase solubility while maintaining features that act on cancerous cells. Results show that a variety of asymmetric platinum (IV) complexes have increased solubility in water and organic solutions, which could have a significant medicinal impact. We are cooperating with Dr. Maria Castro at the University of Michigan to study the effect of these analogs on the Stat-3 signaling pathway.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Evidence for Microcystin-Producing Forms of Cynobacteria in Ford and Whitmore Lakes

Dixxon Darlington, Jewel Belle Jackson and Jacob Dailey

Steven Pernecky and Steve Francoeur, faculty mentors

Cyanobacteria, also known as blue-green algae, is a phylum of bacteria that forms blooms that fix nitrogen and grow in waters with high phosphorus concentrations. These blooms also are capable of producing various toxins that may cause physical irritation or even death in humans, animals, and plants. The objective of this study was to determine the phosphorus concentrations of both Ford and Whitmore Lakes, and to discover whether the cyanobacteria that grow in these lakes contain genes that have been linked to the production of microcystin toxins.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Identification of Red Dyes in Archaeological Textiles by DART-MS: Sample Cleaning and Preparation

Calvin John Day

Ruth Ann Armitage, faculty mentor

Archaeological textiles are rare and often found in poor condition. Identifying any remaining dyes can tell archaeologists how humans behaved and interacted in the past. Dye compounds can be analyzed directly from clean samples using DART-MS, but the same compounds are difficult to detect in contaminated samples. The purpose of this research is to develop quick sample preparations that improve the analysis of red dye compounds in highly contaminated textiles using DART-MS.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Synthesis of 1,2,4,5-Tetraaminocyclohexanes and Their Potential Use as Ligands for Platinum

Amanda Dewyer

Timothy Friebe, faculty mentor

Cisplatin ($\text{Cl}_2\text{Pt}(\text{NH}_3)_2$) is the most widely recognized member of a group of anti-cancer agents incorporating platinum and an amine ligand. While searching for other potential ligands, we found that platinum complexes have been made from 1,2-, 1,3-, and 1,4,- diaminocyclohexane ligands, and it occurred to us that 1,2,4,5-tetraaminocyclohexanes with the proper stereochemistry could potentially coordinate two platinum atoms. The literature showed that simple tetraaminocyclohexanes have rarely been reported, which led to our goal of synthesizing this potentially useful ligand. Our efforts to make the desired product will be presented.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Importance of Chirality of the Lewis Acid Catalyst in an aza-Cope-Mannich Reaction

Amanda Dewyer

Maria Milletti, faculty mentor

Density functional methods are used to compare relative energies of the starting material and iminium cation intermediates in an aza-Cope-Mannich tandem reaction. The initial ring-opening step of the reaction is modeled using both an achiral as well as chiral Lewis acid catalyst acting upon various substrates. Reaction energies are used to determine whether chirality of the Lewis acid improves selectivity in the reaction of one isomer of the starting material preferentially to the other. The results indicate whether it is worthwhile to pursue the use of the chiral Lewis acid as the catalyst to improve overall reaction selectivity.

Oral session A /// Room 352 /// 9 a.m.

Performance of United States Students on the International Chemistry Olympiad Exam

Kent C. Digwe

Larry Kolopajlo, faculty mentor

According to the U.S. Department of Education, only 16% of American high school students are proficient in mathematics, and are interested in a STEM career. Furthermore, the recently released 2012 PISA scores point to what has been called intellectual stagnation. This seminar investigates the performance of U.S. students on the lesser known but important International Chemistry Olympiad Examination. How have U.S. students performed on this exam, and how do Chemistry Olympiad scores correlate with PISA scores?

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Exploring the aza-Prins: Pinacol Mechanism as an Alternative to the aza-Cope-Mannich Mechanism

Andrew Durden

Maria Milletti, faculty mentor

We use computational methods to model the synthesis of substituted acyl pyrrolidines. There are two possible mechanisms for this reaction (Cope rearrangement followed by Mannich cyclization or Prins cyclization followed by pinacol rearrangement) and we seek to determine what electronic characteristics of the substrate may favor one over the other. To this end, we map the reaction energy profile for two systems with differing protecting groups. We find that for the system with an electron donating substituent the first mechanism is energetically favored, while in the case of an electron-withdrawing substituent the reaction occurs as a single, concerted step, with no intervening intermediate.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Polymer Micelle Construction and Use in Catalytic Systems

Philip David Ewing

Gregg Wilmes, faculty mentor

Catalyst storage and recovery has historically been one of the most difficult and expensive parts of running a modern chemical synthesis. With the aid of compatible polymer systems it is possible to greatly simplify the storage and reuse of catalysts. The aim of this study is to create a variety of polymer-catalytic systems and measure their effectiveness at simplifying chemical synthesis. This involves the multistep synthesis of different diblock copolymers in an oxygen free environment and binding them to the desired catalysts. These systems can then be used repeatedly in place of using the pure catalysts with easier recovery and storage.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Structural Requirements for a Certain 3D Outcome in the Aza-Cope-Mannich Reaction

Christopher Lloyd Friebe

Harriet Lindsay, faculty mentor

We have developed a Lewis-acid catalyzed version of an organic chemistry reaction called the aza-Cope rearrangement-Mannich cyclization. This reaction has the potential to form a specific three-dimensional structure even though multiple 3D structures are possible. In most cases, our research group has found that this reaction provides good 3D selectivity. However, some molecules undergo the reaction slower and with less selectivity than others. To further investigate these differences, we have made a series of reactants to investigate variables that affect the three-dimensional structure of the product and the rate of the reaction.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Reactivity Assessment of 4,4'-Substituted Chalcones via NMR Spectroscopy

Christine Hart and Chelsey Kiefer

Ingo Janser, faculty mentor

Chalcones possess many biological activities such as inhibition of enzymes or the ability to kill cancer cells. However, due to their sometimes malicious biological effects, their application as potential drug candidates has been widely neglected in drug development. We investigated the influence of various aromatic ring substituents on the reactivity of the chalcones. Being able to understand the reactivity of chalcones is important to reduce the malicious side effects and to increase their benign biological activities.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

The Determination of the Concentration of Atmospheric Gases by Gas Chromatography

Chris J. Haskin

Gavin Edwards, faculty mentor

The study of common greenhouse gases such as methane (CH_4) is important because concentration can be linked to added absorption of emitted terrestrial radiation, leading to warming of the atmosphere. This research measures the concentrations of common greenhouse gases in the air surrounding Eastern Michigan University using Gas Chromatography coupled with Thermal Conductivity Detection. Development of an auto-sampler system for long-term use on the EMU campus will create a viable way to monitor greenhouse gas concentrations throughout the year. Although the experiment is ongoing, preliminary data suggest this methodology could be used to detect atmospheric methane.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Producing Medically Relevant Compounds Using a Novel and Efficient Three-Step Synthesis

Sherif Hassanien

Harriet Lindsay, faculty mentor

This research aims to selectively form a specific 3-dimensional orientation of molecules called acyl pyrrolidines. These molecules are building blocks for biologically and medically active compounds. Our research group produces acyl pyrrolidines using a reaction called the aza-Cope rearrangement Mannich cyclization (ACM). In the past, we used molecules called amino alcohols or oxazolidines as reactants for the ACM. We have discovered a novel way of forming pyrrolidines using a new ACM reactant called an imino alcohol. This new method selectivity generates a three-dimensional structure that has been hard to access, and does this in a more environmentally responsible way than earlier methods.

Oral session A /// Room 352 /// 9:30 a.m.

Computational Study of PAI-1 and Some of Its Inhibitors

Brittany Jewell, Mordechai Sadowsky and Caitlin Baumer

Maria Milletti, faculty mentor

We examine the nature of molecular interactions between Plasminogen Activator Inhibitor-1 (PAI-1) and some of its small-molecule inhibitors. PAI-1 is a large protein involved in the process of breaking down blood clots in the body and inhibiting PAI-1's actions is important in curing diseases such as diabetes and atherosclerosis. In this work we use a mix of quantum and molecular mechanics methods to analyze how each inhibitor binds within PAI-1's active site and determine which molecular characteristics lead to a high degree of activity. We identify important residues in the active site and how they bind with specific centers in the inhibitor.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Simultaneous Detection of Cellular DNA Damage from UV Radiation Using Capillary Electrophoresis

Robert Thomas Limmer

Jeff Guthrie, faculty mentor

Human exposure to ultraviolet radiation (UVR) is both beneficial, since it aids in the synthesis of vitamin D, and hazardous, since it can cause DNA damage that results in skin cancer. Our study uses capillary electrophoresis (CE) with laser-induced fluorescence (LIF) to measure the amount of DNA damage in cells exposed to UVR. UVR causes two major sources of damage; pyrimidine 6-4 pyrimidone photoproducts (6-4PP) and cyclobutane pyrimidine dimers (CPD). The goal of this research is to measure CPD and 6-4PP DNA damage simultaneously using primary antibodies to recognize the damaged sites, and two different colored fluorescent secondary antibodies to allow detection by CE-LIF.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Steps Toward the Development of a Structure-Activity Relationship of Novel Inactivators of PAI-1

Jason Matthew Miller

Cory Emal, faculty mentor

Plasminogen activator inhibitor-1 (PAI-1) is an endogenous serine protease inhibitor that is key to the fibrinolysis pathway in mammals. The ability to alleviate elevated levels of PAI-1 has been identified as a potential course of treatment for ailments and conditions such as diabetes, atherosclerosis, obesity, stroke, and certain types of cancer. A series of novel inhibitors of PAI-1 has been synthesized and screened for biological activity. These compounds were designed with the intention to improve on previous generations of polyphenol-based inhibitors of PAI-1. The design rationale, synthesis, and structure-activity relationships of this series of compounds will be addressed.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Designing and Using Peptides to Disrupt the D1-D2 Dopamine Receptor Complex Implicated in Depression

Briana Moe, Jacob Reiss and Yllka Vladaj
Non-presenting, co-author: Megan Connolly
Deborah Heyl-Clegg and Hedeel Evans, faculty mentors

Major depression is an illness associated with significant loss of function and quality of life as well as a high mortality rate. Increased interaction between the D1-D2 dopamine receptors is observed in the brains of patients diagnosed with major depression in comparison to the normal population. In this study, small peptides were designed, synthesized, purified, and used to disrupt the purified D1-D2 receptor complex *in vitro*. Bioinformatics, SDS-PAGE, dot-blotting, Western blotting, and immunoprecipitation were methods used to determine the effects of the peptides on receptor coupling.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Mathematical and Conceptual Skill in General Chemistry II

Drew T. Morrow
Larry Kolopajlo, faculty mentor

General Chemistry II is a required course for most science majors, but because of its emphasis on physical and analytical chemistry, it is very demanding of students, and many students have difficulty with it. This project studies student performance on exams, and seeks to determine whether student success depends more on conceptual competency or mathematical skill level. The goal is to address such problems in course redesign. Student misconceptions are also determined.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Design, Synthesis, and Evaluation of Novel Inhibitors of Plasminogen Activator Inhibitor-1

Olufunke Grace Oyelade
Cory Emal, faculty mentor

Plasminogen activator inhibitor-1 (PAI-1) is a mammalian protein that is a primary regulator of the fibrinolysis pathway. PAI-1 is an inhibitor of both tissue-type and urokinase-type PA in plasma. The presence of increased levels of PAI-1 is a well-established risk factor in various disease conditions like development of atherosclerosis, diabetes, stroke and certain forms of cancer. In the present study, we describe the synthesis of novel small molecules that aim to reduce physiologically active PAI-1 levels. This study resulted in the identification of small-molecule inhibitors of PAI-1 that displayed *ex vivo* IC_{50} values in the low micromolar range.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Hydrophobic Aromatic Modification to Increase Activity in the Antimicrobial Peptide Tachyplesin

Yeji Abigail Park

Deborah Heyl-Clegg, faculty mentor

Tachyplesin is an antimicrobial peptide found in horseshoe crabs. In previous studies, the Cys residues were removed to eliminate the circular conformation, providing the linear lead sequence KWFRVYRGIYRRR. In this study, the Phe residue was substituted with bicyclic aromatic amino acids to observe the influence of hydrophobicity on antimicrobial activity. It was hypothesized that enhanced aromaticity also would promote activity and membrane disruption because of the possibility for pi-stacking interactions. Several bioassays were employed to test the hypothesis. Ideally, the modified Tachyplesin will eliminate bacterial resistance, introducing new antibacterial peptides to the medical field.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

The Effects of Additional Substituents on the 3D Structure of Acyl Pyrrolidines

Jamie Marie Reder

Harriet Lindsay, faculty mentor

The objective of this research is to produce various types of acyl pyrrolidines and investigate their 3D structure. These molecules serve as a common building block for many medically active compounds, so finding a way to produce them could be useful in the development of treatments for several diseases. The complex structure of the target molecules makes them more difficult to synthesize than similar ones that were synthesized previously in our research group. Specifically, an additional chain of atoms is chemically inserted on the reactant. The challenges in making the molecules and the effect of the extra atom chain on the 3D structure of the products will be discussed.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Ethacrynic Acid Derivatives; Synthesis of Glutathione-S-Transferase Pi (GSTP1) Inhibitors

Yuan Ross and Sean Joseph Blackburn

Ingo Janser, faculty mentor

A series of ethacrynic acid (EA) derivatives has been synthesized in order to find novel anticancer compounds. The synthesis was accomplished by a three-step reaction: a Friedel-Crafts, an S_N2 , and an Aldol condensation reaction. Efforts have been made to optimize the reaction conditions to increase the yields of the corresponding derivatives. Subsequent steps will involve testing their inhibitory activity on glutathione-S-transferase pi (GSTP1), a detoxifying enzyme responsible for the development of cancer and chemotherapeutic resistance.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Short Peptides as Small Molecule Inhibitors of Mechanisms Implicated in Alzheimer's Disease

Martin Solano

Deborah Heyl-Clegg and Hedeel Evans, faculty mentors

Nuclear import of insulin-like growth factor binding protein-3 (IGFBP-3) via importin- β has been implicated in the neuronal apoptosis of Alzheimer's disease. Humanin, an endogenous peptide, is known to prevent apoptosis by binding to IGFBP-3 and preventing its entry into the nucleus. Humanin benefits the body in many ways, with mechanisms both inside and outside of cells. In this study, we design short peptides that bind IGFBP-3 in a manner similar to humanin. A successful small peptide makes an attractive model for a non-peptide drug that might be more bioavailable than a peptide. This research may lead to economically feasible treatments for neurodegenerative diseases.

Oral session B /// Room 330 /// 10:15 a.m.

Signaling Mechanisms of the Neuro- and Cytoprotective Peptide, Humanin

Stephen Sudekum and Hui Zhang

Non-presenting, co-author: Evert Njomen

Hedeel Evans and Deborah Heyl-Clegg, faculty mentors

Humanin is a small 21 or 24 amino acid peptide, encoded in the mitochondrial genome. It has neuro- and cytoprotective effects in diseases such as Alzheimer's (AD). Humanin appears to exert its beneficial effects via extracellular and intracellular interactions. Extracellularly, it interacts with a tripartite receptor (gp130, WSX1, CNTFR), and with the formylpeptide-like-1 receptor. Intracellularly, it interacts with BAX, tBID, IGFBP3, and TRIM11. In order to one day reach a treatment for AD, we need a better understanding of humanin's interactions. The useful tool of bioinformatics is used in this study to design and test different versions of the peptide.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Cephalotaxine Analogues—Synthesis of Potential Anticancer Drugs

Chelsea Marie Swanson

Ingo Janser, faculty mentor

Cephalotaxine, a natural organic compound found in *Cephalotaxus* species has been shown, in mice, to possess anti-leukemia properties. However, it is too toxic to be used in anticancer treatment. The goal of this research is to synthesize cephalotaxine analogues with reduced or no toxicity. Research has been focused on the synthesis of benzazepines, a base structure of cephalotaxine. Various protecting group techniques have been employed in order to increase the yield of the synthesis.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Tracking Air Pollution Plumes by Back Trajectory Analysis

Chelsey Wakefield Taylor and Katelyn Ann Cichon

Gavin Edwards, faculty mentor

Ozone is an EPA regulated air pollutant that has been shown to damage human health even at low concentrations. Concentrations of this gas have been measured on the EMU campus by the Atmospheric Chemistry Group since 2008. However, when assessing ozone concentrations, the question must be asked whether this pollution is local or has been transported to EMU from elsewhere by prevailing winds. In this poster, ozone data from Summer 2012 and 2013 are analyzed by investigating the origins of the air-masses by using an internet based air-mass trajectory model. Model runs suggest many ozone “plumes” measured at EMU may have a significant transport signature associated with them.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Detection of Glutathione and Arginine with Silver Nanocolloids and Ultra Violet-Visible Spectroscopy

Jevit Tith

Tim Brewer, faculty mentor

Silver nanoparticles are of interest due to their applications in cancer treatment, biosensors, data storage, and improving solar panels. Silver nanoparticles exhibit special optical properties due to a phenomenon known as localized surface plasmon resonance (LSPR). Silver nanocolloids may be utilized to develop a cheap, sensitive, and selective method to detect organic bio-molecules for medical diagnosis. The purpose of this research is to develop an optical sensor to quantitatively detect arginine and glutathione with silver nanoparticles and Ultra Violet-Visible Spectroscopy. Results indicate that silver nanoparticles are selective towards glutathione in the presence of both analytes.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Direct Analysis in Real Time Mass Spectrometry as a Confirmatory Test for Blood

Sylvia Torres

Ruth Ann Armitage, faculty mentor

Presumptive tests are used in forensic science to detect trace amounts of blood or to identify potential blood stains. Confirmatory tests are implemented to confirm the presence of blood and origin. In this study, three presumptive tests—Kastle-Meyer, tetramethylbenzidine (TMB), and luminol—were compared based on their sensitivity in identifying heme on dry bloodstains. The TMB test was the most sensitive out of the three used. Direct analysis in real time mass spectrometry (DART-MS) was applied as a confirmatory test. Heme was readily detected by DART even at low concentrations in dried bloodstains on fabric, leading to a potential new confirmatory test in forensic science.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

An Introduction to Women in Science for Secondary Students

Amanda Troyer

Larry Kolopajlo, faculty mentor

Many high school students have little knowledge of the contributions of women in science. The goal of this project is to design a video presentation dealing with women in science, and an interactive game to assess student knowledge. This project helps meet NSTA standards regarding diversity and the Nature of Science.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Developing an Integrated Science Lesson to Promote Scientific Proficiency

Christopher Valasin

Amy Flanagan Johnson, faculty mentor

Scientific proficiency requires students to be able to explain phenomena using a breadth of scientific knowledge. For students to be able to create multifaceted scientific explanations, they must connect observations of phenomena in the world around them to cognitive models created from their previous experiences. In order to investigate how students incorporate prior knowledge from specific content areas and use cognitive models created from their experiences, an integrated density lesson was created for an afterschool program at a local middle school. This presentation describes both the lesson taught and the lessons learned through interacting with the students.

Oral session C /// Room 301 /// 2:15 p.m.

Development of Real-Time Video Analysis Method for Nanoparticle Reactions

Lois Vasquez

Tim Brewer, faculty mentor

Nanoparticles have applications in fields such as solar devices and biological sensors due to their various optical and electronic properties. Reactions involving nanoparticles can be analyzed in real-time with Surface Plasmon Resonance (SPR) instrumentation, which is a biosensing spectroscopy technique that capitalizes on the properties of light and electrochemistry. The focus of this project is to develop a method using video analysis and modeling software to record information in real-time and analyze data, specifically involving laser light refraction changes over time due to reactions between nanoparticles and various solutions.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Effect of a Bulky Substituent on the Stereoselectivity of a Reaction Leading to Acylpyrrolidines

Alyssa Winkler

Maria Milletti, faculty mentor

Density functional methods are used to model the rate-determining step of the tandem aza-Cope-Mannich reaction leading to a substituted acylpyrrolidine product using boron trifluoride as an acid catalyst. The effect of a substituent at the vinylic position of the iminium cation intermediate is considered with respect to optimizing stereoselectivity in the pyrrolidine reaction product. Activation barriers for the aza-Cope rearrangement reaction step and a series of C-C bond rotations are calculated for each of the four possible iminium cation stereoisomers and compared to those of the unsubstituted pyrrolidine.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

DEPARTMENT OF COMMUNICATION, MEDIA & THEATRE ARTS

A Social (Alumni) Network: CTAC 495L Experiences with Social Media and Cloud-Based Data

Andrew Paul Abad and Sara Wilkins

Kathy Stacey, faculty mentor

Working with Eastern Michigan University's department of Housing and Residence Life, an online community of department alumni was created through work in a CTAC 495L Communication Capstone course. Utilizing social media and online technologies, this program allows the creation and management of a network for EMU Housing and Residence Life and department alumni. The use of this system compiles a database of members and eases both accessibility and networking with the targeted group through newsletters, a Facebook group, and further utilization of electronically mediated channels.

Oral session A /// Room 301 /// 8:30 a.m.

The Effects of Social Media on Relational Satisfaction

Rebecca Lorene Archibald

Sam Shen, faculty mentor

The advances in technology alter the ways we interact with each other. For some, the use of technology can facilitate a relationship; for others, technology can complicate aspects of a relationship. The current study examines the implications of social networking websites within romantic relationships. It aims to link perceived privacy violations to the relational satisfaction that a person experiences within a relationship. It seeks to distinguish the social implications of declaring oneself as "In a Relationship" on social networking sites. Furthermore, it defines how social media can affect the satisfaction of one's romantic life.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Shrinking Women: Interpretation Examining the Space Women are Allowed to Occupy

Karine Bagoumian and Ashley B. Kerby

Amy Johnson, faculty mentor

Drawing on numerous sources from different genres we provide a critical lens through which society can view the inverse relationship between women's physical and social/economic space. Through the medium of interpretive performance, we examine how the combination of behavioral norms and beauty standards that have been passed down through generations have literally shrunk the female form as an attempt to balance out the proverbial and patriarchal gender scale. Sources include: poetry, scholarly articles, dramatic scripts, prose, and lyrics.

Oral session B /// Kiva /// 10 a.m.

Alzheimer's Association: Community Awareness and Education

Samantha Baldwin

Jeannette Kindred, faculty mentor

The purpose of this research was to assist the Alzheimer's Association: Great Lakes Chapter in determining community knowledge and perceptions of the organization and dementia. A pilot study was conducted with a small group of Eastern Michigan University students to uncover what they already knew and how they learned it. Through the use of focus groups and surveys we learned that there was an overall lack of knowledge and awareness among the participants. In addition, we also learned that there is an overall lack of communication between the organization and their community. By improving their communication, they can establish a stronger relationship and increase awareness.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Scenic Design Process

Rowan V. Barrie

Jeromy Hopgood, faculty mentor

This visual presentation details my work as assistant scenic designer for EMU Theatre's production of *To Kill A Mockingbird*. This presentation includes images and text documenting the process of creating the visual realm of a play. The process began with the analysis of the script, the period, and visual research required to start a design concept. It includes the props necessary to form a detailed and convincing world as well as the constraints and opportunities endemic to the style of selective realism and the necessary materials and paperwork to turn these ideas into a physical set on the stage.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

The Rhetoric and Psychoanalysis of *World of Warcraft*

Ben Bower

Nick Romerhausen, faculty mentor

Video games are often viewed as forms of entertainment, but if viewers gaze past the pixels there is much more to be discovered. In Blizzard Entertainment's *World of Warcraft* there is a plethora of rhetoric that has influenced culture in profound ways. Through the use of psychoanalysis, these important details of virtual realms are revealed and display much more than a simple game. It is vitally important to analyze video games beyond the code and view the impact that they have on communication, culture, and beyond.

Oral session C /// Auditorium /// 1:45 p.m.

The Heidelberg Project

Paul Angelo Corsi

Susan Booth, faculty mentor

Imagine you're dreaming; walking through a small town. The clutter of houses seems normal until you come to one in particular. This house is covered with colorful dots of every size. Suddenly all the beautiful houses around you are on fire. Your peaceful dream is now a blazing nightmare. Enter the Heidelberg Project. Detroit's Heidelberg Project was first created in 1986 by artist/activist Tyree Guyton as outdoor arts installations that would clean up and bring attention to his decaying McDougal-Hunt neighborhood. Now 30+ years later it has suffered from several arson attempts. Has the Heidelberg Project's initial intent been saved? What are the next steps for this Detroit icon?

Oral session D /// Auditorium /// 3:45 p.m.

Skinny Cup of Jo: The Disease Only the Wealthy Can Afford

Sara Dudzik

Melissa Mantei, faculty mentor

Using unhealthy weight control methods directly affects the self-image of increasing numbers of young men and women, leading to bullying and self-hatred rather than recovery and support. The story of a privileged girl named Jo paints a picture of giving in to social pressures and self-destruction to please others. Research has shown that an eating disorder epidemic exists in the wealthy demographic in the U.S. Reason number four in a research article titled *Five Reasons to Date a Girl with an Eating Disorder* states that "she probably has money of her own." This presentation discusses why many victims of eating disorders are likely to be wealthy.

Oral session D /// Room 320 /// 3 p.m.

The Hidden Mystery: Arts Integration in Urban Schools

Sr. Mary Perpetua Ha

Meriah Sage, faculty mentor

Debates in education escalate as achievement gaps continue to widen, and urban schools suffer most. Achievement gaps can narrow and even disappear with arts integration. Students will stop falling behind and schools will become more rigorous. Arts integration is an instructional strategy that uses art across the curriculum. Harnessing the arts to core subjects means that students do not merely reproduce facts, but use knowledge in intellectual and creative ways. These programs consistently defy teacher expectations. Arts integration in urban schools allows students to live beyond threatening settings and master core content through inquiry and creation.

Oral session B /// Room 301 /// 10:45 a.m.

Foster Care Youth Aging Out in the United States: Critical Communication Research

Ashley B. Kerby

Nick Romerhausen, faculty mentor

My research uses a critical approach to understanding the current problems of aging out and the process by which youth are graduated from the foster care system in the United States. Systemic emancipation of more than 26,000 children every year poses risks for the nation's economic and social welfare. I examine the physical and communication practices of a system that leaves young adults "out in the cold," and propose critical research for solutions on personal and political levels to give my audience the desire and ability to create and communicate change.

Oral session D /// Kiva /// 3:45 p.m.

Projection Design: Process and Application

David Jack Koltunchik

Jeromy Hopgood, faculty mentor

This presentation demonstrates the process and applications of projection design using my assistant projection design for "The Shape of Things" as the focal point and example. Photos and various texts about the process of creating a projection design for a theatrical setting are on display, including research, sketches used in the design, and images showing the progression from the initial ideas in digital format to the final projections seen on stage.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Why African Inclusion in the United Nations Security Council Could Eradicate Poverty around the World

Kelly McDonald

Melissa Mantei, faculty mentor

The United Nations has sought to bring equality and diminish poverty throughout the world. However, the UN continuously recycles resolutions, language, and recommendations with little change. It is time for a fresh perspective to be brought to the United Nations Security Council to ensure the change that is so desperately needed. This presentation addresses two possible solutions: the United Nations' proposal to establish a New Global Human Order and the inclusion of an African nation among the UN Security Council's permanent members. These steps, if taken together, could lead to the eradication of poverty worldwide.

Oral session C /// Room 352 /// 2:15 p.m.

Transformation from Ordinary to Extraordinary: A Teaching Case Study in Creative Entrepreneurship

Alissa Miller

Susan Booth, faculty mentor

It has been said that myths and storytelling are not just for putting children to sleep, but for waking adults up. That is the goal of Alchemy, Inc., a nonprofit organization that works with urban youth at risk for dropping out of high school. Faced with the issue of low graduation rates, difficulty counseling these youth, and the love of myth and drumming, university admissions counselor Kwamee Scruggs had several options. He chose to create Alchemy, Inc. With the aid of storytelling and African drumming he has helped over 1,200 youth in the greater Akon, Ohio area since 2003, guiding them to transform themselves into something extraordinary.

Oral session D /// Auditorium /// 3:30 p.m.

Genre Evolution: Has the Spectator Culture Really Grown Up?

Katherine Robey

John Cooper, faculty mentor

This paper examines the cultural influences on the emerging television genre of reality TV. Because reality TV is such an elastic term, this paper suggests "spectator TV" as a sub-genre that would lead to some meaningful insights on the mutually affective relationship between what we are and what we watch.

Oral session C /// Room 304 /// 2:15 p.m.

A Comparison of Non-Profit Arts and Cultural Funding, Domestic and Abroad

Christopher Zavac

Pam Cardell Cato, faculty mentor

Arts and cultural funding have deeply connected roots that tie back to patriotism and economic growth. Many countries use joint funding programs to support their culture and art together. The aim of this study is to develop a better understanding of how foreign governments compare to the U.S. with regards to the treatment of non-profit arts and cultural funding. This is a comparative study of several different nations that will deal with how they work within their government systems to financially support arts and cultural events as well as organizations and individuals.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

DEPARTMENT OF COMPUTER SCIENCE

File Encryption and Communication Security Using Publicly-Available ‘Pretty Good Privacy’ Software

Robert Levi Barry

Michael Zeiger, faculty mentor

Pretty Good Privacy (PGP) is a 128-bit key encryption software created by Phil Zimmerman in 1991 mainly for signing, encrypting, and decrypting texts, emails, files, directories, and disk partitions. PGP uses a serial encryption method consisting of hashing, data compression, symmetric-key cryptography, and public-key cryptography. The combination of conventional and public-key encryption methods allows for the convenience of sending data using public keys but with the speed of conventional encryption techniques. All versions of PGP have used a 128-bit encryption for the public key and continue to provide reasonable protection against all but the most powerful code-breaking programs.

Oral session A /// Room 350 /// 9 a.m.

Computational Study of Investment Strategies

Andrew Greiner

Suchindran Maniccam, faculty mentor

This work studies asset allocation strategies and their investment returns using a computer program. Various asset classes such as large cap stocks, small cap stocks, foreign stocks, and bonds are studied using historical data. The effects of regular contribution, rebalancing, and investment time are studied. Optimal asset allocation strategies are derived using the program.

Oral session C /// Student Art Gallery /// 1:45 p.m.

Implementation of Graphical User Interfaces in Java

Edward Philip Gurnee and Nicole Downer

Elsa Poh, faculty mentor

Graphical User Interfaces, or GUIs, are what allows a user to interact with a program outside of the command line interface; they allow users with an easier method of interacting with a computer. Our project uses a GUI as way to implement a computer game version of the board game Settlers of Catan. This project was done entirely using the Java programming language and focuses on abstract classes, derived classes, exception handling, and file I/O, all while dealing with the Swing and AWT frameworks.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Demonstration of Cryptography Using a Unique Data Structure

Jacob Keen McIvor and Rikhard Waissi

Elsa Poh, faculty mentor

Our program demonstrates the process of encrypting and decrypting data. Most encryption and decryption uses algorithms to scramble sensitive data. Our program uses the structure of a 3D array to add a layer of encryption. Our program intends to meet AES (advanced encryption standard) standards. We will demonstrate the process behind encryption and decryption by using a graphical representation of the process.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

The Central Processing Unit (CPU) Virtually Demystified

Carlos Mora

Li Zhang, faculty mentor

Computers have become a ubiquitous part of modern life yet many of us have a very limited understanding of how they actually work. Through the use of the freeware logic program, Logisim, I create a virtual CPU and a few simple programs to run on it. The goal is to demonstrate and provide some measure of clarity on how these tiny devices actually work.

Oral session A /// Room 350 /// 8:45 a.m.

An Investigation of the HITS Web Search Algorithm

Cade W. Sperlich and Tyler Charles Hoffman

William Sverdluk, faculty mentor

The HITS algorithm, developed by Jon Kleinberg, generates a ranking of web pages based on links to and from each page. Our program follows links from a small set of pages obtained from a text-based search engine to generate a larger graph of related pages. Using the HITS algorithm, each page in this graph is assigned two scores, indicating its value as an authority and as a hub. Over many iterations, pages' hub scores influence the authority scores of pages they link to, and their hub scores are influenced by how highly ranked the authorities they link to are. We wish to compare the ranking of our implementation of this algorithm to the output of popular search engines such as Google.

Oral session A /// Room 350 /// 8:30 a.m.

DEPARTMENT OF ECONOMICS

Hyperinflation: The Birth of a Worthless Currency

Marla Beretta Bastie

James Saunoris, faculty mentor

June 1921, the German economy faced high inflation that not only destroyed their currency but also their economy. This very high and accelerated rise in the price level of goods and services is known as hyperinflation. Recently, Zimbabwe experienced rapid hyperinflation with rates around 120% in January 2008 that would exceed 79 billion percent at the end of the year. Given these two cases, this research compares and contrasts various episodes of hyperinflation with the intent of understanding their development. A better understanding of the development of hyperinflation offers insights on ways to prevent it in other countries, and in restoring and maintaining a sound currency.

Oral session B /// Room 301 /// 11 a.m.

Taylor's Rule

Kara Lynne Binning

Professor David Crary, faculty mentor

Taylor's Rule, a mathematical formula that uses inflation and GDP output gap, is often used as a guideline to which the federal funds target rate could be compared in evaluating monetary policy. The original Taylor's Rule used an assumed coefficient of 0.5 on output and inflation gaps. Because the level of the federal funds rate is contingent on several different economic variables, this study uses statistical methods to create a more complex equation incorporating these additional variables and estimating appropriate coefficients. This study also conducts tests to evaluate how the coefficients have matched historical Federal Funds rate settings under different Federal Reserve Chairs.

Oral session A /// Room 344 /// 8:45 a.m.

Federal Open Market Committee (FOMC) Simulation

Kara Lynne Binning, Andrew Felder, Gannon LeBlanc, Nino Monea and Thomas Stockwell

David Crary, faculty mentor

This panel consists of a simulation of the Federal Open Market Committee (FOMC), the organ of the Federal Reserve that sets monetary policy throughout the country. Actual meetings are two-day discussions of economic data culminating with a vote on policy. This presentation will be condensed, but students will present, analyze, and debate the same kinds of economic and financial data that the FOMC would consider before taking a policy action. Students will go beyond the statistics to explain what they truly mean, the forces that drive them, and differing interpretations of them.

Oral session A /// Room 344 /// 9 a.m.

The Global Economic Effects of Going Green: Industry Creation, Transformation, and Destruction

Karen Elizabeth Nelson

Mehmet Yaya, faculty mentor

Going green has had many effects on the global economy, creating new industries and transforming or destroying established ones. The industries examined are renewable energy, the integration of renewable energy into final energy consumption and as a source of manufacturing; waste management, how much waste is generated, how it is reused, destroyed, or exported; the light bulb industry, the phasing out the incandescent bulb for the energy saving CFL; and an outlook for the coal fired power plant based on a recent downward trend in its use and growth. The global environment for these industries is followed by sections examining them in four nations: China, Brazil, the U.S., and Germany.

Oral session A /// Room 304 /// 9 a.m.

Analyzing the Effectiveness of the Federal Reserve

Thomas Stockwell

James Saunoris and Abdulah Dewan, faculty mentors

The Federal Reserve is the central bank of the U.S. and the lead monetary policy institution in the country today. Since its inception in 1913, many have debated whether the Fed and its policies have made the economy worse or better off than its predecessors, or whether we need a central bank at all. This study will analyze the Fed's effectiveness by looking at recessions before and after 1913 as well as analyzing what the Fed's effect has been on the statutory mandates of inflation, unemployment, and interest rates.

Oral session A /// Room 344 /// 8:30 a.m.

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

Acoustic Analysis of Derived and Non-Derived Palatal Consonants in Polish

Danuta Allen

Beverly Goodman, faculty mentor

Polish makes use of a large inventory of palatal consonants. Stops often palatalize to fricatives or affricates in derived words. The basic research question is whether non-derived palatals (kasza 'groats') and palatals derived from stops in diminutives (ptak 'bird' - ptaszek 'little bird') exhibit different properties that can be empirically measured by means of acoustic analysis. A pilot study was conducted to analyze both types of palatals from recorded data with respect to (i) total duration of the sound, (ii) stop-fricative length ratio in affricates, and (iii) frequency for energy concentration in fricatives.

Oral session D /// Room 350 /// 3:30 p.m.

Comparative Vowel Quality in English and German

Robert Allen II

Beverly Goodman, faculty mentor

Vowel quality in English, which tends toward diphthongization (in which vowels are produced with an offglide) differs from that of many languages, such as German, in which vowel quality is pure (i.e. without an offglide). For my project, I recorded a list of English and German words with a particular focus on [u], using native speakers of English and of German (both of whom speak the other language as a foreign language) and examined the differences using a speech analysis program called "Praat." Marked differences were found between the vowels produced by the English speaker and the German speaker.

Oral session D /// Room 350 /// 3:45 p.m.

The Reasoning and Pedagogical Techniques for AAVE in K-12 English Language Arts Education

Megan Anthony

T. Daniel Seely, faculty mentor

Nonstandard dialects are often argued to have no place in a classroom setting. That argument will be refuted and ample reasoning to include nonstandard dialect, specifically AAVE (African American Vernacular English), will be provided. Beyond simply arguing for the use of AAVE in classrooms, three basic pedagogical techniques will be examined for implementation in English Language Arts classrooms.

Oral session C /// Kiva /// 1:15 p.m.

Lost Translations: Hegemonic Tensions in the Writing of Julia Alvarez and Edwidge Danticat

Jasmyn Barringer

Heather Neff, faculty mentor

Sociologist Juan Flores states that minorities are "without closure and conclusion," leaving their pasts for faulty assessment and filling their future with anxiety. Writers who are both immigrants and members of minority groups struggle to acculturate themselves, but often find that assimilation causes lasting psychological damage, cultural amnesia, and emotional trauma. This presentation examines the tensions exerted by the effects of American cultural hegemony in the works of two celebrated Caribbean writers, Julia Alvarez of the Dominican Republic, and Edwidge Danticat of neighboring Haiti.

Oral session A /// Student Art Gallery /// 8:30 a.m.

Helpful Harry or Hurtful Harry? The Beneficial Side of the *Harry Potter* Series

Kaylee Dawn Brown

Lacey Hoffman and Ramona Caponegro, faculty mentors

In spite of wide disapproval of the epilogue in *Harry Potter and the Deathly Hallows*, the series has therapeutic value to readers who are victims of child abuse because of its epilogue. Psychologists have used the series to initiate discussion about patients' own experiences. The conditions of abuse are established when we meet Harry and the Dursleys. He copes with hardship and neglect and finds hope at Hogwarts, which gradually becomes a nightmare. Harry endures traumatic experiences and is constantly vulnerable to the threats and powers of adults; as a result, there is therapeutic value in an epilogue that shows that a victim of child abuse can cope and live a functional life.

Oral session C /// Room 344 /// 1:30 p.m.

Incest and Empire in Daniel Defoe's *Moll Flanders*

Kaitlin Lorraine Browne

Abby Coykendall, faculty mentor

Moll Flanders opens with the promise of a sensational tale about a woman who married five times, including once to her own brother. Yet both the act and eventual repudiation of incest is more than a mere plot twist. Advancing Ellen Pollak's argument linking Moll Flander's incest with a system of sexual exchange, I argue that the moral correction of Moll's incestuous relationship is not only to maintain a gender hierarchy, but that it also represents the regulation and control of the American colonies through the language of kinship.

Oral session B /// Kiva /// 11 a.m.

Shiny Colored Tokens: Female Racial Minorities in J.K. Rowling's *Harry Potter* Series

Tiffany Nicole Browne

Gina Boldman, faculty mentor

It can be argued that minority characters are mere tokens in J.K. Rowling's *Harry Potter* series. Female minority characters Angelina Johnson, Pavarti and Padma Patil, and Cho Chang have limited plot lines and serve only as accessories to male characters. All four females represent stereotypes commonly attributed to their cultural background, including but not limited to superior athleticism, meekness, and oversensitivity. Their inclusion provides further reinforcement of ethnic and racial misconceptions in the minds of child and young adult readers. This paper will analyze Rowling's shortcomings in terms of depicting minority women throughout her internationally acclaimed series.

Oral session C /// Room 344 /// 2:15 p.m.

Levels of Ownership

Drake Carr

Joseph Sacksteder, faculty mentor

Projecting an image onto a public surface forces the viewer to make a connection between the image and the location of the projection. For this presentation I selected fragments of conversations overheard in public spaces like buses and food courts. This “found language” was then typed and arranged graphically and set against a pink background. I returned the language to the public by projecting it onto various surfaces in public spaces, like tall buildings and sidewalks. The project aims to experiment with and explore the meaning of ownership and individual interpretation of language and human interaction in public spaces.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Picture Books as Mentor Texts

Michelle Nicole Carter

Mitra Dunbar, faculty mentor

Mentor texts are pieces of literature used to help students make powerful connections to their own lives and take risks in writing. Teachers can use picture books as models to improve students' writing skills and motivate students to write creatively. This presentation will show how picture books used as mentor texts in all grades can provide a scaffolding of concise language and visual support to improve writing skills.

Oral session D /// Student Art Gallery /// 3 p.m.

Young Adult Literature Catching Fire: Voices from the Classroom

Emily Colletti

Ramona Caponegro and W. Douglas Baker, faculty mentors

In past decades, the literary genre of Young Adult Literature was not considered appropriate for secondary school curriculums; some people claimed that the books lacked literary merit and did not fully engage students in the reading process. But times are changing. Through reader response surveys on the well-received *Hunger Games* trilogy by Suzanne Collins, the insights of American high school and college students, as well as Czech students abroad, reveal that many people connect well to the topics present in Young Adult stories. This presentation explores why these stories should be taught today, and the ways in which they can be effectively incorporated into the curriculum.

Oral session C /// Room 344 /// 1:15 p.m.

Examining the Relationship Between Public Relations Practitioners and Journalists

Raven Gardiner

Regina Luttrell, faculty mentor

The relationship between public relations practitioners and journalists has changed over the years. At times tumultuous, yet always intertwined, a public relations practitioner depends on a journalist. Likewise, a journalist depends on a public relations practitioner. Through close and careful content analysis, this presentation analyzes the historical perspectives, industry perceptions, and the evolution of the relationship over the years.

Oral session D /// Kiva /// 2:45 p.m.

Feminism and Gender in *Are You There, God? It's Me, Margaret*

Shelby Hallenbeck

Jessica Kander, faculty mentor

Judy Blume is one of today's most well-known children's literature authors, particularly amongst pre-teen girls. Blume's most popular work, *Are You There, God? It's Me, Margaret*, was seen as revolutionary in its treatment of puberty, religion, and budding sexuality in relation to the maturation of young girls upon its 1970 release. Despite its popularity, the novel problematically maintains traditional gender roles by portraying female characters as self-centered and narcissistic and male characters as immature and deprived.

Oral session B /// Kiva /// 10:45 a.m.

Alice's Adventures in Hogwarts: An Exploration of Female Development in the Dreamworld

Jessica Anne Johnsen

Lacey Hoffman and Ramona Caponegro, faculty mentors

In *Alice's Adventures in Wonderland* Alice and the Queen of Hearts display a role reversal based on perceived age and social influence also seen in *Harry Potter* between Hermione and Bellatrix. Hermione is the more sensible of the two, while Bellatrix often displays more erratic behavior. The characters' relationships with each other and their surroundings demonstrate that maturation is vital for functional growth. This growth is stunted in both cases by a sort of madness, which is either willfully embraced or blindly obeyed. Bellatrix, through her devotion to Voldemort, is killed in battle while Hermione embraces a more mature rationale and lives on to have a family.

Oral session C /// Room 344 /// 1:45 p.m.

Out with the Old and In with the New Woman and Man in Victorian and Contemporary Family Literature

Geneva Korytkowski

Ramona Caponegro, faculty mentor

In the Victorian era the first wave of feminism surfaced in several influential family novels that modeled the “New Woman” instead of reinstating the “Old Girl.” Characters from the novels *Little Women*, *Villette*, *Jane Eyre*, *The Little Lychetts*, and *Tales from Shakespeare* are the primary foci as they modernize the Victorian women in the *fin de siècle*. Now we see a trend similar to first wave feminism beginning to happen with boyology. The *Hunger Games* and *Will Grayson, Will Grayson* show examples of how a “New Man” is defined in contemporary society.

Oral session B /// Kiva /// 10:15 a.m.

The Barista Blogs: Coffee Talks with Daily Strangers

Heather Rose Lawrence

Jill Darling, faculty mentor

I have been a barista for the past five years and have compiled a variety of human interest stories about the customers. My goal is to present a perspective that I do not think many people regard. My job is to see people before they start their days, before the big interview, before their kids’ first day of school. I want to use my “fly-on-the-wall” position and my talent of writing to create a blog. Some stories use words, others are only comprised of images, sound poetry, and other various mediums. I plan on getting the blog up and ready for an extended time period and to have an established website that people are welcome to look at after the Symposium.

Oral session C /// Auditorium /// 2 p.m.

Redefining Symbolism: Samuel Taylor Coleridge and “The Rhyme of the Ancient Mariner”

Michelle Lietz

Laura George, faculty mentor

One of the most compelling aspects of the Romantic period in British literature is the focus on redefining traditional symbols. Many of the Romantic Era poets seemed especially drawn to the reassigning of meanings to various conventional symbols as well as the redefinition of commonly held connotations. This kind of redefinition created a sense of cognitive dissonance for many in the time period, allowing for a growing sense of arbitrariness in regards to symbols and meanings. Samuel Taylor Coleridge focuses the question of the symbol itself in his “Rhyme of the Ancient Mariner,” exploring the arbitrary nature of symbols and meaning within society.

Oral session A /// Kiva /// 8:30 a.m.

Joy Harjo and Contemporary Native American Identity

Michelle Lietz

Alexandra Norton, faculty mentor

By merging traditional influences, narrative poetic styles, and postmodern influences, Joy Harjo uses both form and theme to explore the many issues and complications related to contemporary Native American identity in her poetry. This unique style adds an important and powerful voice to Native American Literature, reinforcing the importance of both the traditional and the contemporary.

Oral session D /// Room 204 /// 2:45 p.m.

Pennies On Their Eyes: Gullah Culture and ‘Otherness’ in Nikky Finney’s *The World Is Round*

Daniel W. Long

Alexandra Norton, faculty mentor

In her 2003 collection of poetry, *The World Is Round*, Nikky Finney explores what it is to be part of a marginalized community within an already-marginalized section of the population. The Gullah/Geechee culture of the Carolina Sea Islands is a waning subsection within the African American community. Through close textual analysis of the poems in *The World Is Round*, as well as using research on the Gullah/Geechee, this study highlights the importance of this lesser-known group of people, not only to American history, but to American literary culture.

Oral session C /// Kiva /// 1:30 p.m.

Narrative, Time and Enclosure in *Dog Day Afternoon* and *Do the Right Thing*

Adam Mitts

Abby Coykendall, faculty mentor

This presentation examines tropes of temporal and spatial enclosure in *Dog Day Afternoon* and *Do the Right Thing*, films that each traumatically rupture yet ultimately return to the capitalist working day as a state of normalcy. These films ultimately reveal not only how the conservative force of catharsis persists in postmodern cinema, but also how counter-cultural films can incite the desire for social change despite the limitations of their narrative form.

Oral session C /// Room 304 /// 1:30 p.m.

The Gaze Back: Reclaiming Femininity and Narrative in *Vertigo* and *Rear Window*

Christopher Moriarty

Abby Coykendall, faculty mentor

Hitchcock's *Vertigo* (1958) and *Rear Window* (1954) challenge precepts of film in narrative and cinematic execution. Psychoanalytically, the films affront the male-dominated gaze of Hollywood because the woman assumes the role of the antihero, forcing the male role into impotence and neurosis. At their zenith, these films reverse the male gaze by manipulating the audience into recreating their active watching/gazing into a passive “watching someone watching” by projecting Hollywood’s abject understanding of femininity and the female body onto the male character’s masculinity and body.

Oral session C /// Room 304 /// 1:15 p.m.

Synesthesia Amidst a Sacrificed Safety

Isaac Pickell

Sarah Smarch, faculty mentor

It takes a careful literary brush to paint metaphors of synesthesia that do not come off as contrived. While deft manipulation of sensory diction and imagery can add depth and density to a piece, reaching too far can lead down a slippery slope. This is particularly true in quasi-erotic fiction. How then, does one confuse the reader's senses without making them giggle or yawn? This presentation brings synesthesia off the page and into the nose. Twenty-five sheets, twenty-five vials, twenty-five scents, twenty-five chapters. The presentation and subject blend together. Sex, sadness, and love as indistinguishable as sight, smell and touch.

Oral session A /// Kiva /// 8:45 a.m.

Narrative Reaction as a Feminist Tool: Analyzing Ursula K. Le Guin's Poetry

Ian M. Sargent

Alexandra Norton, faculty mentor

Ursula K. Le Guin's poetry in her volume *Incredible Good Fortune* uses exposition and setting to allow her characters to react to social conditions that are addressed in second-wave feminism. These reactions are criticisms in poetic form and display an acute awareness of feminist issues without having to address them in the traditional sense.

Oral session B /// Kiva /// 10:30 a.m.

Drowned

Catherine Shay

Christine Hume, faculty mentor

Drowned is a graphic narrative. Through texture, line, and structure this comic re-presents the story of two young girls at the lake. This project grew from a recorded first person narrative to a two-page comic.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

False Portrayals of Empowerment of Female Characters in J.K. Rowling's *Harry Potter*

Amelia Harlan Stecker

Lacey Hoffman and Ramona Caponegro, faculty mentors

Patriarchy's inherent desire to subordinate women is fulfilled through culture, including the literary phenomenon, J.K. Rowling's *Harry Potter* series. Close examination of female characters shows that they exist along a spectrum of active and passive feminine behaviors, including morality, levels of activity, sensuality, benevolence, complexity of character, and place within the interdependent roles among characters and within institutions. While some characters are portrayed more favorably, all are subject to misogyny, which limits and predetermines their roles, exemplifying the impenetrable inequality of the various institutions in *Harry Potter* and reflecting our own inequities.

Oral session C /// Room 344 /// 2 p.m.

Past and Present Letters of Renaissance Apartments

Garrett Stralnic, Alyssa Martinez, Carrie Henderson and Sean Ruona
Christine Hume, faculty mentor

Communication has evolved dramatically, but the innate need to connect with another remains. This project explores the power that a nearly extinct method of communication, letter writing, has to facilitate relational bonds. In this exploration, we questioned the judgments we make in choosing what information to disclose or conceal, the permanence of the written word, and the importance of community and the everyday. We created a collage of stories in the form of letters as a basis for connecting residents across time, in an epoch of instant communication, where it is possible to instantly communicate with geographically distant friends, and in a transitional and temporary living space.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

***Popol Vuh* for Dummies: Explaining the “Mayan Bible” to the Uninitiated**

Megan Rose Timpf
Thomas Ulch, faculty mentor

The *Popol Vuh* is the religious book of the K'iche'-Mayan people found predominantly in the highlands of Guatemala. The book includes the creation and eventual destruction of the K'iche'-Mayan people. After keeping it hidden, the K'iche'-Mayan people entrusted Father Ximénez with transcribing and translating the text into Spanish. The aim of this presentation is to make a very complicated and important text accessible to those who have limited knowledge of the K'iche'-Mayan myth-body.

Oral session C /// Room 204 /// 1:15 p.m.

The Shift is Alive and Well

Tiffany A. Westcott
Beverly Goodman, faculty mentor

This study examines the patterns of vowel articulation across three generations of speakers from Belleville, Michigan. I am interested in differences in the effect of the Northern Cities Sound Shift (NCS). The NCS has been proposed to affect major urban areas. To what degree has the shift infiltrated smaller, outlying communities? I examined and analyzed recorded data collected from three female speakers ages 20, 46, and 70. The results reveal the younger speaker is the most affected, while the oldest speaker is the least affected. Having obtained these interesting generational differences in a preliminary study, I will next analyze a large sample to confirm these results.

Oral session A /// Room 320 /// 9 a.m.

DEPARTMENT OF GEOGRAPHY AND GEOLOGY

Walkability and Pedestrian Systems: A Case Study of Eastern Michigan University and Ypsilanti, MI

Greta Bolhuis

Heather Khan, faculty mentor

In an effort to combat high levels of obesity, many communities have embraced and promoted walkability and pedestrian systems. These communities must measure the level of service of pedestrian systems in order to evaluate successful walkability. This report analyzes walkability and pedestrian systems in the City of Ypsilanti directly surrounding Eastern Michigan University's campus in regard to directness, continuity, street crossings, aesthetics and amenity, and security.

Oral session D /// Room 320 /// 3:45 p.m.

Aspects of the Crystal Chemistry and Structure of Povondraite

Brittany Cymes

Christine Clark, faculty mentor

Povondraite is a mineral belonging to the tourmaline group, having an ideal formula of $\text{NaFe}^{3+}_3(\text{Fe}^{3+}4\text{Mg}_2)(\text{Si}_6\text{O}_{18})(\text{BO}_3)_3(\text{OH})_3\text{O}$. Povondraite is poorly studied due to the paucity of samples, but published data show a disparity of structure and chemistry in multiple cation sites. We have been collecting additional data to investigate this anomaly further.

Oral session A /// Room 352 /// 8:45 a.m.

Quantifying the Early Evolution of Macroalgae

Matthew LeRoy

Steve LoDuca, faculty mentor

Macroalgae ("seaweeds") are important primary producers in modern marine ecosystems, yet relatively little is known about their evolutionary history and ecological significance in ancient ecosystems because they have been little studied in the fossil record. This project obtained measurements from scaled digital images of early Paleozoic (525-400 million years old) macroalgae fossils preserved as flat compressions. These measurements were then applied to simple geometric models to quantify biologically significant metrics, such as surface area, volume, and surface-area-to-volume ratios and these values were compared across time to elucidate evolutionary patterns in the group.

Oral session C /// Room 320 /// 1:45 p.m.

Community Resiliency: Proposal for Engagement Toward Survival with Ypsilanti and EMU

Erica Colleen Mooney

Robert Jones, faculty mentor

Sparked by facilitating EMU's focus groups for Ypsilanti's Climate Action Plan in 2011, I began research on ways to work together to reduce emissions. How have other municipalities worked with institutions toward healthy relationships? An exploration of emerging resources plus a comparison of state examples provides many diverse answers. Based on understanding the endeavor of sustainability as inherently interdisciplinary, the scope of models and best practices reviewed is broad. Focus on economical efficiency and accessibility underscore the community based actions suggested. By coordinating existing Ypsi and EMU efforts, our intertwined identities can succeed in viable, creative ways.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Relating the Crystallography and Chemistry of the Tourmaline Mineral Group

Connor Vandivier

Christine Clark, faculty mentor

Tourmaline is an important mineral group due to its unique characteristics such as piezoelectric qualities, hardness, and its ability to essentially "record" geologic information. Until around 10 years ago, only about 15 species of this mineral were known. Within the last decade, however, over 30 more were identified. The speed at which these discoveries have been made, combined with advances in technology, have allowed the crystal structure of this mineral to be more deeply understood. My research relates the crystallography of tourmaline to its chemical composition and assures that assumptions previously made relating the two are correct.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Free Wireless Internet in Ypsilanti, Michigan

Cassandra Verras and Maxime Hernandez

Tony Bedogne and Richard Sambrook, faculty mentors

Over the summer of 2013 our team conducted research regarding the presence of a free wireless Internet service, Wireless Ypsilanti. GPS coordinates were collected using mobile GIS technologies, namely Trimble Juno GPS systems and ESRI ArcPad for data capture. Our team conducted field assessments to gauge where free wireless access was available, and assembled attribute data that categorized the strength as high, medium, low, and non-existent. We created a heat map to display strength of signal. Included in the goals of the research project is an ongoing attempt to broaden the community interest in the availability, future expansion, and benefits of a free wireless service.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

DEPARTMENT OF HISTORY AND PHILOSOPHY

Kierkegaard's Rotation Method as Applied to Nietzschean Philosophy

Natalie Elizabeth Anschuetz

Jeremy Proulx, faculty mentor

Soren Kierkegaard describes boredom as one of the great downfalls of man; it is through boredom that one is forced to recognize the finite, even pointless nature of one's own existence. Only by alternating the pleasurable activities of one's life can one stave off this boredom. This Rotation Method, which Kierkegaard himself described as inadequate due to its superficial nature, is deepened and empowered when applied to Nietzsche's philosophy: an alternation not simply of pleasure, but of personal will, intent, and power to create purpose in a purposeless universe.

Oral session C /// Room 350 /// 2:15 p.m.

American Colonies: The Importance of European Honey Bees in United States History, 1622-1851

Jacob Martin Benn

John Knight, faculty mentor

The European honey bee is the bee most useful to agriculture. Honey bees were among the agricultural stock imported to the North American colonies by the English, but this was primarily for honey and wax. Very little was understood about the role honey bees played as pollinators. Native bees, such as bumblebees, also act as pollinators, but cannot be reliably controlled, making them less efficient than their European cousins. The importation of European honey bees into North America was vital to the success of the United States itself because these bees were more productive than native bees, their hives could be controlled, and they spread across the country on their own.

Oral session B /// Room 352 /// 10:30 a.m.

Plan Dalet: The Forced Palestinian Exodus

Daniel Saul Berman

John Knight, faculty mentor

A myth during the Israeli 1948 War for Independence was that Arab leaders gave direct orders for the Palestinians to evacuate their homes in occupied zones. Revisionist Zionist historians have proven that approximately 5% left under orders from Arab leaders. Tens of thousands of Palestinians left their land due to direct action by the Israeli military. Plan Dalet was a Zionist plan to conquer major Palestinian cities and force Palestinians out of their homes using terror tactics, including bombardment with mortars, firing machine guns into the cities, and in some cases murdering innocent civilians.

Oral session C /// Room 204 /// 1:45 p.m.

Family Business to Modern Corporation: Ford Motor Company Leadership Under Henry, Edsel and Henry II

Rebecca E. Canell

Linda Pritchard, faculty mentor

This presentation analyzes aspects of leadership at Ford Motor Company under the first three generations of Ford men who ran the company for more than 70 years. The leadership styles of the Ford men reflect the type of business model that Ford Motor Company followed at the time. The company under Henry and Edsel was run as a family or traditional business, where one man held great power within the company. When Henry II took control of the company in 1945, he reorganized the company into a modern corporation with a hierarchical business structure. To show the differences, four categories are explored: creativity and vision, employee relations, industry knowledge, and business delegation.

Oral session B /// Room 352 /// 10:45 a.m.

“Who Gives a Dam?”

Eric Edward Christian

Kathleen Chamberlain, faculty mentor

From 1901 to 1913, John Muir led the Sierra Club in its opposition to the transformation of the Hetch Hetchy Valley into a water reservoir. Many political figures worked against Muir to approve the construction of the dam for the supply of water intended for San Francisco. One of the leading advocates for the dam was Gifford Pinchot. He saw it as necessary to utilize natural resources, as opposed to Muir's view of preserving them. In 1913 Congress approved construction of the dam. Within this paper I explore why the construction of the dam was necessary for San Francisco. I evaluate why John Muir opposed the dam, and why Gifford Pinchot felt the dam was essential.

Oral session A /// Room 304 /// 9:15 a.m.

The Enterprise: Technology and Turning Points in the Pacific During World War II

Todd L. Christopher

Joseph Engwenyu, faculty mentor

The paper discusses how technology and military tactics during World War II influenced the major battles, and how the USS Enterprise (CV-6) kept America in the fight in the Pacific. Examples are drawn from Pearl Harbor and the battles of Coral Sea and Midway.

Oral session B /// Room 304 /// 10:30 a.m.

Espiritismo: An Afro-Indian Belief System

Michelle Elise Cox

James Egge, faculty mentor

Espiritismo popular is a Caribbean religion that incorporates folk Catholicism and French Spiritism into indigenous African and American Indian beliefs. It appropriates powerful symbols and practices from other religions and assigns them new, local meanings. Espiritistas negotiate culture, gender and ethnicity through their ritual practices while maintaining religious authenticity by claiming direct revelation from the spirit world. While much of the academic literature treats Espiritismo as a form of French Spiritism, it predates French Spiritism and includes alternative healing practices and a form of spirit possession that indicate a non-European origin for the belief system.

Oral session D /// Room 204 /// 3 p.m.

Change in Michigan's Government Branch Articles Between Four Constitutions

Emma Fitzhugh

Linda Pritchard, faculty mentor

Every American lives under a dual-constitutional system, the federal constitution and a state constitution. State constitutions, unlike the federal constitution, on average have been rewritten three times. Michigan is no exception to this, adopting four different constitutions since entering the Union in 1837. Scholars have suggested three forces that drive states to rewrite their constitutions (national politics, political culture and ordinary politics). This case study analyzes the influence these three factors had on the Legislative, Executive and Judicial Articles of the Michigan Constitutions of 1835, 1850, 1908 and 1963.

Oral session B /// Room 352 /// 11 a.m.

Chinese Footbinding: The Cultural Striving for Beauty and Acceptance

Elise Gainer

Tomoyuki Sasaki, faculty mentor

Footbinding was a tradition in China that involved breaking and bending a woman's feet until they reached a desirable length and width that accorded with cultural standards of beauty. Even though the process as well as the results were dangerous and unhealthy, the majority of women wanted their feet to be bound, for if they were not there would be threats of dishonor and ostracism. Although it is undesirable now, for over one thousand years women underwent this practice following cultural instincts to strive for beauty, which was viewed as necessary for women in China. The aim of my presentation is to explore the cultural imperatives that kept footbinding alive.

Oral session D /// Room 301 /// 3:45 p.m.

Changes in World War II Domestic Propaganda Posters (1941-1944)

Sarah Elizabeth Giles

Linda Pritchard, faculty mentor

This study concentrates on the changes in World War II domestic propaganda posters produced in the U.S. between 1941 and 1944. The changes in the posters are evident in the imagery, text, and target audiences that were portrayed in the posters. The changes in these elements of the posters suggest that the focus of the posters shifted from the war overseas to American lives on the home front. This study analyzes the changes in the characteristics of the posters from the early years to the later years of the war to provide evidence that the focus of the posters changed.

Oral session B /// Room 304 /// 10 a.m.

Two Theories of Perception: John Locke and George Berkeley

David Goodyear

Margaret Crouch, faculty mentor

What is the significance of a philosophical theory of perception? In the 17th and 18th centuries, philosophers John Locke and George Berkeley put forth radically different theories of sensory perception. These theories had an impact on conceptions of reality and cast doubt on the existence of a material world. What began as a study of perception ended by raising fundamental questions concerning the nature of experience and reality.

Oral session C /// Room 350 /// 1:15 p.m.

Living History: How Oxford Offered the Chance to Walk Through the Past

Amanda Goulet

Russell Jones, faculty mentor

This presentation looks at how EMU's semester abroad program at Oxford University can transform our view of history. I showcase how studying at Oxford presents the opportunity to experience the places where history happened. It also examines how the one-on-one tutorial system employed by Oxford University provides the foundation for a different way of thinking about how we study history and exemplifies how the victor plays a role in how history is understood.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Racial Policies, Genocide, and Anthropology in Nazi Germany

Benjamin Guidot

Jesse Kauffman, faculty mentor

From Hitler's appointment as Chancellor in 1933 until the fall of the Third Reich in 1945, Germany implemented wide ranging racial and genocidal policies based on the work of German anthropologists. German anthropologists were influenced by the political and social contexts of Nazi Germany and adhered to the "Führer Principal." Both willing and unwilling German anthropologists worked to bring anthropology in line with what they believed Hitler's wishes to be. This project examines the relationship between the Nazi state and anthropology through an exploration of "anthropological observations" in the Tarnow Ghetto and of anthropologists at the Kaiser Wilhelm Institute.

Oral session A /// Student Art Gallery /// 9:15 a.m.

A Comparative Study of Black Collective Resistance in Brazil and Jamaica

Shohei Isobe

Mary-Elizabeth Murphy, faculty mentor

History tells us that from the very beginning of European encounters with Africa, Europeans treated the continent of Africa and its people as if they owned them. Nevertheless, enslaved Africans were not passive about their situation, but rather, often militant and rebellious; they broke tools, refused to work, or ran away. Some Africans even formed their own runaway slave communities. In my presentation, I explore the historiography of slavery in the Atlantic World and offer two case studies of runaway slave communities: the Quilombo in Brazil and the Maroons in Jamaica, which illuminate black collective resistance in the cause of freedom in the Atlantic World.

Oral session A /// Student Art Gallery /// 9:30 a.m.

Zhuangzi and the Adaptable Body

Josh Lyon

Brian Bruya, faculty mentor

Daoist philosophy owes a great debt to the writings of Zhuangzi. As an early part of the tradition, his ideas have subsequently had a wide influence on Oriental philosophy including those of health and medicine. His text repeatedly speaks of humans and their bodily existence, but how should this be understood? The connection between self and physicality is explored and then compared to the *zhiren*, one of his ideal types. Furthermore, Zhuangzi uses a viewpoint of this-worldly mysticism that fuses mind, anatomy and physiology. He conceives form through specific spatial metaphors and function as adaptive transformation and flow to various situational and environmental demands.

Oral session A /// Kiva /// 9 a.m.

Melons or Sandwiches: Using Power Structures to Interpret Late-Qing Chinese History

Josh Lyon

Tomoyuki Sasaki, faculty mentor

Scholars generally agree that China suffered major decline after the Opium Wars. But was the last dynasty inherently moribund and isolationist? Popular and nationalist views of the 1912 Revolution see the preceding decline as a natural ending: foreigners had carved up China like a melon and despotic rulers had rotted its core. But I will argue that it is more fitting to see the decline and change through layers of class and spheres of power. Radical changes in the commercial sphere of power had interlocking effects on military and political spheres, forming new or hybrid institutions that contextualize the actions of elites in the course of Qing history.

Oral session D /// Room 301 /// 3:30 p.m.

Irrationality and Poetic Philosophy: The Nature of Truth in the *Zhuangzi*

Adam Malinowski

Brian Bruya, faculty mentor

The widely held interpretation of the early Chinese philosopher Zhuangzi as a relativistic skeptic results in absolute philosophical nihilism. Arguing that this is a belief deduced through reason alone, I propose that irrationality and the more “poetic” dimensions of the human mind allow us to read the *Zhuangzi* as a truly life affirming text. It is Zhuangzi’s linguistic craftsmanship that gives us hints to a nature of reality that is not unknowable and rife with contradiction, but replete with the interdependent notions of polarity and paradox, one that we can all “awaken” to.

Oral session C /// Room 350 /// 2 p.m.

The Emcha or the Ronson? The Controversy over the M4 Sherman Tank

Bryan Andrew Maul

Jesse Kauffman, faculty mentor

When the M4 Sherman tank first arrived on the battlefield in 1942, it was one of the most advanced tanks in the world. A mere two years later, however, the Sherman had achieved a reputation as a death trap that was inferior to the German tanks it faced during the fighting in France. Yet American armored divisions using a superior tank faced some of their greatest defeats in 1942, and in 1944 achieved many of their greatest victories. Over the course of this presentation, I will examine the development of the Sherman tank, find out why it performed the way it did, and explore what the Second World War can teach us about conflicts today.

Oral session B /// Room 304 /// 10:15 a.m.

The Coptic Church of Egypt: Its History and Future

Mary Kathleen Perrotta

Mark Whitters, faculty mentor

The Coptic Church of Egypt is the largest Christian community in the Middle East. It is the cradle of monasticism and the heir to a liturgically and spiritually rich history. To this day, the Coptic Church of Egypt endures significant persecution, and it is currently facing an uncertain future. The Muslim Brotherhood desires to rid Egypt of all Christianity, most especially that of the Copts. While the differences between the Copts and Roman Catholics are long standing, unity is desired by both and perhaps agreements are in their future.

Oral session C /// Room 204 /// 1:30 p.m.

A History of Housing Segregation in Detroit

Carolyn Roe, Brittney Danielle Maczala, Nathan William Polich and
Samantha Carter

Russell Jones, faculty mentor

In the early 1900s a manufacturing boom in Michigan led to a great migration of southerners/// both white and black///moving north in search of work. The North was a beacon of hope for poor southerners, especially blacks, looking to escape Jim Crow oppression and make a life for themselves. However, tensions arose and problems began to emerge as the demographics of Detroit shifted. De facto housing segregation, through various means and institutions, came to ensure separate and unequal housing conditions and a host of other social issues that continue to impact the city today.

Oral session D /// Auditorium /// 3 p.m.

Leibniz and the Unstuck Self

Michael S. Schersten

Margaret Crouch, faculty mentor

In this paper I investigate Leibniz's metaphysics of time and his concept of the self through the analysis of Kurt Vonnegut's novel *Slaughterhouse Five*. The novel centers on Billy Pilgrim who, midway through his life, becomes unstuck in time and perceives his experiences achronologically. While considering Leibniz's metaphysics with regard to Billy's experience can be enlightening, I show that Vonnegut and Leibniz suffer fatal incompatibilities regarding personal identity and the metaphysics of time.

Oral session C /// Room 350 /// 1:45 p.m.

Ideologies of Power in Ancient Israel

Gregory Schwab

Philip Schmitz, faculty mentor

This paper explores the geopolitical context of Old Testament texts using extra-biblical archaeological sources. It argues that the increasingly negative treatment of foreign deities in biblical texts is a reflection of the historical breakdown in diplomatic relations between Israel and neighboring kingdoms. The exclusive veneration of Yahweh in Judaism is also seen as a response to foreign imperialism. This paper postulates that the belief systems of the region of ancient Israel can be divided into three main phases: polytheism (in the pre-biblical period), monolatry (one deity reigning over a pantheon of deities), and finally monotheism (belief in only one god).

Oral session C /// Room 204 /// 2 p.m.

Descartes' Legacy: An Emotional History Through the Lens of Modern Philosophy

Catherine Shay

Margaret Crouch, faculty mentor

Cartesian dualism, the notion that mind and body are distinct substances, has implications for any account of emotion and mental illness. These implications, in my view, are damaging to our understanding of emotion and mental illness. In this presentation, I explain these implications and apply them to issues in my own family.

Oral session C /// Room 350 /// 1:30 p.m.

The Tao and Chinese Aesthetics

Aynsley Sterling-Meeuwen

Brian Bruya, faculty mentor

Western aesthetics revolve around the question "what is art?" Chinese aesthetics, however, focus on the relationship of the Tao and art. The concept of "xuwu" [nothingness] is at the core of Taoist philosophy. How the concept of nothingness is used in art is essential to understanding the aesthetic value of Chinese landscape paintings. Exploration of the concept of nothingness leads to a greater understanding of Chinese aesthetics.

Oral session D /// Room 301 /// 3:15 p.m.

And Rhythm Will Know No Color: A Study of Racial Integration in Rhythm and Blues

Taylor Styes

John Wegner, faculty mentor

After World War II, popular music in America underwent a transition. "Race" music began to "crossover" and gain acceptance to an integrated audience. There was, however, much resistance. In Ohio, two figures contributed to this development: Syd Nathan of Cincinnati and Alan Freed of Cleveland. Nathan was a record producer and Freed a disc jockey. This study has three purposes. First, to gauge the degree to which Nathan influenced Freed's performances. Second, to determine if one or the other of these individuals was subjected to greater attacks from detractors. Third, to chart the degree to which these two individuals appealed to a "crossover" audience.

Oral session A /// Student Art Gallery /// 8:45 a.m.

Persia Interrupted: Why Eisenhower Supported the End of Democracy in Iran

David William Swan

John Knight, faculty mentor

In 1953, President Eisenhower approved a covert operation orchestrated by the CIA that deposed Iran's democratically elected Prime Minister, Mohammad Mosaddeq. The democratic rule of Mosaddeq was replaced by the oppressive rule of Reza Shah. During his presidency, Eisenhower repeatedly proclaimed a belief that the United States was morally bound to protect democracy throughout the world and that all nations possessed the right to choose their own form of government without interference from other nations. This presentation discusses the conditions that led to Eisenhower's decision to approve a U.S. led covert action that betrayed his expressed principles and the people of Iran.

Oral session C /// Room 204 /// 2:15 p.m.

Physician-Assisted Death: A Plea For Empathy

Gabrielle Nicole Van Wassehnova

Michael Scoville, faculty mentor

The concept of physician-assisted death has been, for many years, a subject shrouded in controversy. Many questions are raised when the idea is discussed: Who should be allowed this right? What conditions need to be met beforehand? There are also many fears surrounding the subject, including the idea that it will become available to anyone and everyone. One should also consider the way health care, certain medical conditions, and the basic concept of human rights play a part in this debate. I explain how these factors make it important to legalize physician-assisted death. I also explain why it is only morally right to extend this empathetic gesture to those in need.

Oral session D /// Room 352 /// 3:15 p.m.

A Mentoring Experience: Ten Minutes a Day Can Change a Kid's Life

Khallid A. Wooten

Russell Olwell, faculty mentor

This presentation presents research and personal experience on the impact of mentoring programs on today's youth. Today's at-risk youth have plenty of potential to make positive changes in their community but lack the direction needed to help them grow into responsible adults who advocate for a positive change in their community. This session demonstrates the effects of a structured mentoring program and how such programs help build principles such as self-efficacy, academic achievement, and community involvement.

Oral session D /// Student Art Gallery /// 2:45 p.m.

Joe Louis: The Black Atlas and A Nation's Hope

Ashlyn Julia Zarate and Dillon Kangas

Russell Jones, faculty mentor

Joe Louis was the boxing world champion between 1937 and 1947, defending his title 25 times. This presentation will explore the interwoven themes of nationalism and race in Louis' career and his role as a black athlete from the divided city of Detroit. He was a symbol of hope and possibility for black America and for Detroit, and on the forefront of the reevaluation of the role of race in sports.

Oral session A /// Student Art Gallery /// 9 a.m.

DEPARTMENT OF MATHEMATICS

Assessing Multicollinearity: Theory and Applications

David Cheedie

Tanweer Shapla, faculty mentor

Multicollinearity refers to the situation in which predictors in a linear model are correlated, which is a violation of the applicability of least squares regression. In the presence of multicollinearity, the estimates of regression coefficients are indeterminate and the standard errors of estimates become infinitely large. Therefore, it is imperative that we consider the presence of multicollinearity when dealing with real life data and fit multiple linear regressions for prediction of the response using several predictors. This presentation investigates the presence of multicollinearity using a step-by-step approach in real life data using popular tests.

Oral session D /// Room 104 /// 3:45 p.m.

Sampling Distribution with Simulation in R

John Diorio

Khairul Islam, faculty mentor

Sampling distributions and the central limit theorem play an important role in estimation and in testing hypotheses. In this presentation, we explore the concept of sampling distributions and the central limit theorem using simulation. We simulate random samples from various discrete and continuous probability distributions using the open source statistical software R, and verify normality of simulated sampling distribution and the central limit theorem. This technique aids proper understanding of sampling distributions and the central limit theorem and of their applications.

Oral session D /// Room 104 /// 3:30 p.m.

Visualization of Fractals

Tyler Hensley

Ken Shiskowski, faculty mentor

First coined in 1975 by Benoit Mandelbrot, a fractal is a mathematical set that exhibits some level of self-similarity. Fractals of interest also demonstrate a great deal of amazing complexity. Over the past four decades, fractal geometry has grown substantially as a branch of mathematics, and has become increasingly important in practical applications. In the 1970s and 80s when fractals were first being visualized, limited computational power inhibited one's ability to visualize the sets. With modern computers, this is no longer the case. We sought to generate accurate visual representations of several fractals at varying scales using efficient algorithms.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Assessing the Cost of Government and Health Care in America

Jacob Rich

John Boyle, faculty mentor

In America, the Federal Government's debt exceeds \$70 trillion (\$17 trillion "on the books" and \$53 trillion in "unfunded liabilities"). My presentation discusses the sustainability of the current cost of government and health care in America and the country's ability to pay its debts over a 75-year horizon. With the use of regression analysis and actuarial mathematics, I forecast the impact of current economic trends, predict average annual growth rates, develop pro forma income statements, and create a benchmark study comparing health care in America to other countries to assist the development of solutions that will ensure a sustainable America.

Oral session D /// Room 352 /// 3:30 p.m.

DEPARTMENT OF MUSIC AND DANCE

***Andante* and *Rondo* from Concerto in E-flat Major by Johann Nepomuck Hummel**

Michael Block

Carter Eggers, faculty mentor

Johann Nepomuck Hummel (1778-1837) was an important composer of the late Classical period. Concerto in E-flat was composed for Anton Weidinger, inventor of the keyed trumpet that was the first fully chromatic trumpet freed from the limitations of the harmonic series. The second movement, *Andante*, is very lyrical and expressive while the third movement, *Rondo*, is quite the opposite, brisk, lively and requiring considerable virtuosity on the part of the performer. Throughout the *Rondo*, portions of the main theme are reiterated and embellished all the while building to an extremely energetic fanfare-like ending.

Oral session A /// Auditorium /// 8:45 a.m.

Trance Dance and Transcendence: Movement as a Healing Practice

Kayleigh Crummey

Joanna McNamara, faculty mentor

The societal phenomenon of dissociation between the body and the mind is universal. Nevertheless, the prescriptive measures taken to resolve this, or the lack thereof, differ by culture. Dance, in both past and current times, has often been an effective means for reassembling psycho-physiological health. From the percussive nature of the rhythms created, to the unharnessed nature of the body's form, people dance to heal themselves. Through an analysis and comparison of the Egyptian Zar and Japanese Butoh dances, this project will parallel the ways in which people utilize movement as a form of curing personal and social afflictions.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Dance for Easing the Grieving of Death

Abigayle J. Cryderman

Joanna McNamara, faculty mentor

Every culture both past and present discovers a means of coping with death. In some cultures, dance plays a significant role in sustaining the memory of a loved one, long after the service and burial have passed. The aim of this project is to explore the role of dance in celebrating the dead through an examination of the intrinsic and extrinsic features of the African Dogan "Death Dance" and the Hispanic "Day of the Dead" dance.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

The Hindemith Harp Sonata: A Stroke of Genius in Contemporary Music for the Modern Pedal Harp

Celisa Gutierrez

Ruth Myers, faculty mentor

The Sonata for Harp by Paul Hindemith has captivated harpists since its conception in 1939 after his exile from Nazi Germany. It continues to be held in high esteem today. Hindemith wrote sonatas for every instrument in the orchestra helping to expand concepts in new music. The contemporary sonata introduces new forms and new harmonies creating a dramatic and idiomatic addition to the standard harp solo and competition repertoire.

Oral session C /// Auditorium /// 1:30 p.m.

Reading Between the Lines: W. A. Mozart's Clarinet Concerto in A Major, K. 622

Sarah Elizabeth Hardaker

Sandra Jackson, faculty mentor

Austrian Composer Wolfgang Amadeus Mozart (1756-1791) was one of the most significant composers of the Classical Era. Mozart wrote the Clarinet Concerto in A Major, K. 622, in Vienna during the last year of his life for his friend, clarinet virtuoso Anton Stadler. The three movements are: I. *Allegro* (fast), II. *Adagio* (slow) and III. *Rondo: Allegro*. The Clarinet Concerto is one of the most popular concertos in the clarinet repertoire because of the soaring and expressive melodies that resonate throughout the piece.

Oral session B /// Auditorium /// 10:30 a.m.

J. S. Bach: Suite No. 1 in G Major for Unaccompanied Cello: Prelude, Sarabande, Gigue

Max Hiler

Scott Woolweaver, faculty mentor

J. S. Bach (1685-1750) composed his six suites for unaccompanied cello around 1720/1721. Each suite is comprised of a prelude followed by dance movements that, in Bach's time, pushed the limits of what could be played on the cello. I will be performing three movements of Bach's Suite No. 1 in G Major, BWV 1007 on the viola: *Prelude*—The most well-known movement of the suites, utilizing string crossings and improvisatory in nature; *Sarabande*—A French court dance with Spanish origins, in slow 3/4 time; *Gigue*—A lively dance in triple meter that originated from the British jig.

Oral session A /// Auditorium /// 9:15 a.m.

Culture Stripped

Miryam Johnson

Joanna McNamara, faculty mentor

Culture grounds one in place and time, and provides one with a sense of pride. African-Americans, however, find it very difficult to trace one's national lineage. Bereft of a culture rooted in known national or tribal foundations, the African-American people created their own culture that allowed them to identify with one another and create their own celebrations, holidays, ceremonies, and art forms. This project explores two of the most prevalent and significant dance forms created by African-American people in the 19th century, namely the Lindy Hop and Hip-Hop dance.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Grand Pas de Deux from Don Quixote

Amber Lawson and Patrick McCrae

Joanna McNamara and Wendi DuBois, faculty mentors

The *Grand Pas de Deux* from *Don Quixote* was originally choreographed by Marius Petipas in 1869 to music by Leon Minkus, and later staged by Alexander Gorsky in 1900. Today's performance was staged by choreographer Wendi Du Bois for dance majors Amber Lawson and Patrick McCrae, and is a section from the fuller version of the ballet, which was presented in Pease Auditorium this past December.

Oral session B /// Auditorium /// 10:45 a.m.

Down a River of Time: Concerto for Oboe by Eric Ewazen

Kelly McBride

Kristin Reynolds, faculty mentor

Born in Cleveland in 1954, Eric Ewazen has become a distinguished American composer. His concerto for oboe and orchestra, *Down a River of Time* (1999), was commissioned by Linda Strommen in memory of her father. After experiencing the loss of his father, writing this work became Ewazen's personal meditation on life and death. Each movement of the piece, 1) "... past hopes and dreams", 2) "...and sorrows", 3) "...and memories of tomorrow", examines a different aspect of life, death, and grief. The title draws from an article that described the beloved souls of passed relatives as "moving, though they can't feel the current, down a river of time."

Oral session A /// Auditorium /// 9:30 a.m.

Doolallynastics: A Brief Torture for Solo Trombone

Matthew Nienow

Donald Babcock, faculty mentor

Brian Lynn wrote *Doolallynastics* (A Brief Torture for Solo Trombone) for British actor and trombonist John Kenny in the 1980s. Lynn began his musical career as a violinist but soon fell in love with the trombone when he entered the Junior Royal Academy of Music in England. Lynn's *Doolallynastics* is educationally beneficial to a student trombonist because it reaches outside traditional techniques to include jazzy glissandos and rips plus vocalizations with and without playing. The work also contains extreme ranges and awkward rhythms and leaps.

Oral session B /// Auditorium /// 10 a.m.

Robert Muczynski: Time Pieces

Andrew Scott Novak

Sandra Jackson, faculty mentor

Robert Muczynski was born in Chicago, Illinois in 1929. A pianist, Muczynski received a degree in composition from DePaul University. His Carnegie Hall debut was at the age of 29, performing his own compositions. He retired from the University of Arizona in 1988, and is known as one of America's most distinguished contemporary composers. He died in 2010, but his music remains a staple. Clarinetist Mitchell Lurie premiered *Time Pieces* at the International Clarinet Congress in London on August 15, 1984, with Muczynski accompanying on the piano. *Time Pieces* contains four movements, and is a beautiful piece that truly encapsulates the expressive qualities of the clarinet.

Oral session A /// Auditorium /// 9 a.m.

Concerto No. 1 in G Minor, by Max Bruch (1838-1920), Second Movement: Adagio

David Shann

Dan Foster, faculty mentor

Max Bruch was a notable German romantic composer and conductor. He wrote an estimated 200 works, his Violin Concerto in G Minor being recognized as his masterpiece. The concerto as we know it today, however, is the product of revision by virtuoso violinist Joseph Joachim, who premiered the edited version on January 5, 1868. Unusually, the first movement is a "Vorspiel" (Prelude) that links directly to the second movement. The second movement is the heart of the concerto. It is a seven-part Rondo form, the sections structured A-B-A-C-A-B-A. Its soaring melodies have been favorites of all who hear them. Richard Strauss even used motives from this movement in his *Alpine Symphony*.

Oral session A /// Auditorium /// 8:30 a.m.

The Sound of (Music) Water: *Jeux d'eau* by Maurice Ravel

Trang Vo

Gary Pedersen, faculty mentor

Jeux d'eau, often translated as “Fountains” or “Water Games,” is a work for solo piano by Maurice Ravel. The piece is dedicated to Gabriel Fauré and is prefaced by an epigraph from a French symbolist poet, Henri de Régnier (1864-1936): “The river god laughs as the water tickles him.” *Jeux d'eau* is inspired by the musical sound of water. One will hear the sprays of water, the cascades, the brooks, the bubbling and rippling droplets of water. The presentation includes a complete performance of *Jeux d'eau*.

Oral session B /// Auditorium /// 10:15 a.m.

Dance-Scapes

Kelly Waltz, Mikhayla Dolson and Patrick McCrae

Joanna McNamara, faculty mentor

This presentation features the dances of three choreographers who developed an original movement vocabulary for the purpose of expressing a theme of significance in his or her life. The performance includes “The Onslaught,” by Patrick McCrae to music by Vitamin String Quartet, “The World is Not Enough,” by Kelly Waltz to music by John Zorn and, “Reflections,” by Mikhayla Dolson to music by Dustin O’Hollaron.

Oral session B /// Auditorium /// 11 a.m.

DEPARTMENT OF PHYSICS AND ASTRONOMY

Accelerometer in High Altitude Ballooning

Adam Bloom and Mark Price

Dave Pawlowski, faculty mentor

The purpose of this high altitude ballooning project is to measure meteorological data in the middle and lower Earth atmosphere. Our high altitude balloon will carry an instrument payload to an altitude of 100,000 ft above Earth’s surface. The instrument payload contains sensors to measure pressure, acceleration, temperature, and magnetic field data up to that altitude. A 3-axis accelerometer will be used to calculate wind speeds. Wind direction can be determined by a GPS device that provides positional tracking. We expect the wind speed to increase with altitude until the balloon enters the jet stream. Accelerometer function, build integration, and results will be discussed.

Oral session A /// Room 104 /// 8:30 a.m.

Quantifying the Predictability of the Solar Wind

Jeffrey Lee Flegal

Dave Pawlowski, faculty mentor

This project focuses on analyzing solar wind and the interplanetary magnetic field (IMF) data in effort to quantify the predictability of the solar wind so that it is possible to better predict the negative effects of space weather on the Earth's ionosphere and thermosphere. Our goal is to investigate the periodicities in the data using Fast Fourier analysis on the data. Currently, we are using distributions of the standard deviation of the solar wind measurements to classify the noise in the solar wind. This analysis will allow us to quantify observations of the ionosphere based on the level of noise in the solar wind.

Oral session D /// Room 104 /// 3:15 p.m.

Amateur Weather Ballooning

Guy Hamburger and Jason Robert Feys

Dave Pawlowski, faculty mentor

We will construct, launch, and recover a weather balloon. Throughout its three-hour flight, 30 kilometers above ground, the payload will measure atmospheric temperature, pressure, humidity, and wind speed. This data will be transmitted to a ground station during the flight in addition to being stored onboard the payload. Accurate weather predictions and climate change research require such data. The decrease in atmospheric pressure with rising altitude will cause the balloon to expand until it ruptures. This will send the payload free falling until the parachute deploys. We expect the atmospheric pressure to decrease exponentially with increasing altitude and will present such findings.

Oral session A /// Room 104 /// 8:45 a.m.

Measuring the Stratosphere: Magnetic Fields

Matthew Koehler and Lauren Thelen

Dave Pawlowski, faculty mentor

The purpose of this project is to study the atmosphere up to the stratosphere, and gain experience in doing a research and design project. The goal of the design project is to send a weather balloon to this level to record temperature, pressure, acceleration, wind speed and magnetic field. The launch will be in early April. As the balloon rises, it is expected that wind speed increase as temperature, pressure and magnetic field decrease. When the balloon enters the stratosphere, we expect temperature to increase. Also, the balloon may enter the jet stream dramatically increasing the wind speed. Our team will present the use and implementation of the magnetometer.

Oral session A /// Room 104 /// 9 a.m.

Confocal Raman Imaging Microscopy I

Matthew Koehler and Lauren Thelen

Wade Shen and Vijay Mannari, faculty mentors

When a laser beam is focused on a compound, photons of the laser hit the electrons inside. The electrons absorb the photons and jump to the excited states. When they return back to the lower energy states, the new photons with different wavelengths are emitted. The spectrum of emitted wavelengths, which is characteristic of composites of the compound, provides us the structural information of the compound. This technique, called Raman Spectroscopy, combining with Confocal Microscopy, lets us focus the laser beam to a sub-micron point and carry out horizontal and vertical scan, thus studying variation of the composites at the surface as well as at the different depths of a compound.

Oral session C /// Room 330 /// 2 p.m.

Analysis of the Restoration of the Historic Maple Bridge

Cameron M. Kubitskey

Ernest Behringer, faculty mentor

The historic Maple Bridge in Ann Arbor was restored in 2003 with the addition of a post-tensioning cable support system. I calculated the force acting on each truss member of the bridge to understand this restoration, created a simulation to visually represent these forces, and determined which members could use more support. I found that the bottom members toward the middle of the bridge were subject to the greatest stress. These results confirm the need for a cable support system to relieve a portion of the tensile stress. I describe the calculations and the support system in detail to provide an example of the work that engineers do to determine the safety of a structure.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Physical Applications of Conformal Mapping

Brandon Ryan Laycock

Diane Jacobs, faculty mentor

A conformal map is a function that preserves angles and has a domain and range in the complex plane. Conformal mappings are instrumental for solving problems in engineering and physics that can be expressed in terms of functions of a complex variable but exhibit inconvenient geometries. By choosing the appropriate mapping, a less than ideal geometry can be transformed into a more convenient geometry. This powerful mathematical technique can be used to solve interesting problems in fluid flow particularly when there is an obstacle in the flow stream. The focus of this project will be to investigate fluid flow around a spherical object.

Oral session D /// Room 104 /// 2:45 p.m.

Constructing an Inverted, Periodically Driven, Damped Pendulum to Study Chaotic Motion

Andrew David Miller and Dustin Pepper
Ernest Behringer, faculty mentor

Following the work of Berger and Nunes Jr., we built an inverted, periodically driven, damped pendulum to study the transition from periodic to chaotic motion. We designed the parts of the pendulum using a computer aided design program and then made the parts from aluminum and brass. After assembly, we performed video analysis of the motion to determine properties of the pendulum, and explored different operating conditions in an effort to produce chaotic motion.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Collecting Data of Atmospheric Temperature Up to 100,000 Feet Using a Weather Balloon

Iain Marshall Rhodes and David Juenemann
Dave Pawlowski, faculty mentor

The goal of this project is to launch and recover a weather balloon. This balloon will measure its acceleration, the temperature, the pressure of the atmosphere in its path, and the magnetic field. We expect that the atmospheric temperature decrease as altitude increases through the troposphere, and then rise. We expect to observe the point of inversion, the tropopause, at 30,000 ft. We will use the temperature measurements recorded by the payload to examine the relationship between altitude and atmospheric temperature. We will present the final design of our balloon, how we plan to measure temperature, and a detailed explanation of what we expect to find in terms of atmospheric temperature.

Oral session A /// Room 104 /// 9:15 a.m.

Confocal Raman Imaging Microscopy II

Lauren Thelen and Matthew Koehler
Wade Shen and Vijay Mannari, faculty mentors

It has been proven that adding silicon nano-particles to polymer coatings could improve the mechanical and tribological properties of the coatings. It is interesting to know how the nano-particles are distributed in the coatings. We used a Confocal Raman Imaging Microscope System to carry out the investigation, scanning the coating with the exciting laser beam layer-by-layer, five microns each step up to about 300 microns deep. Examining the intensity of the characteristic silicon spectrum at different depths shows a very uniform distribution of the silicon particles in the coating with a fluctuation of less than 0.1%. The small variation may be due to the curing process.

Oral session C /// Room 330 /// 2:15 p.m.

Going Chaotic: Generating the Bifurcation Diagram of a Discrete Map with an Electronic Circuit

Genna Lynn Touchette

Ernest Behringer, faculty mentor

Discrete maps are rules that specify how to transform input values into output values, and are especially useful for examining the development of chaotic behavior in simple, non-linear systems. Here, we describe the construction of an electronic circuit conceived by Edward H. Hellen. This circuit uses a particular discrete map to generate a bifurcation diagram that allows the rapid identification of regimes of chaotic behavior. This circuit, when modified, enables the exploration of related discrete maps, such as the Lorenz map, and could be adapted into an advanced instructional lab for future students.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Modeling a Chaotic System: A Mechanical Duffing Oscillator

Susan Vivier

Ernest Behringer, faculty mentor

A dynamical system that exhibits significant sensitivity to initial conditions is considered chaotic. An example of such a system is an inverted, periodically driven, damped pendulum, which can be a mechanical Duffing oscillator. The aim of this project is to develop mathematical and computational models that describe the behavior of this oscillator, and to use these models to explore the transition to chaotic behavior. These models, and the predictions made with them, will be discussed in detail.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

It's a Whole New Enterprise: Imaging and CCD Surveys via the Sherzer Observatory Secondary Telescope

Robert John Windas

Norbert Vance and Nick Arnold, faculty mentors

An entirely new robotic telescope, CCD camera and guide system, a plethora of cables and connections, and robust software allows for student operation of point and click imaging and surveys, all from the comfort of a warm room under light polluted skies via Sherzer Observatory's secondary dome. An outline of efforts to install, calibrate, operate, and select potential observation programs given Michigan's skies is presented in this shake down run that tested both the students and faculty involved.

Oral session D /// Room 104 /// 3 p.m.

DEPARTMENT OF POLITICAL SCIENCE

Border Security and Immigration Policy

Theodore Nicholas Alvarez
Raymond Rosenfeld, faculty mentor

This paper addresses immigration policy with a focus on border security along the United States-Mexican border. The policy problems stemming from border security as it pertains to immigration are defined. The security risk and policy issues that stem from an insecure border are presented, and the current policy landscape and policy alternatives are discussed. The benefits and consequences of the current policy options are laid out, and a policy recommendation is presented. The paper concludes with an evaluation of the political landscape surrounding immigration and border security, identifying the key actors and the political feasibility of reform.

Oral session B /// Room 204 /// 10:15 a.m.

Securing America's Northern Border: An Analysis of Current and Proposed Policy

Katherine Anderson
Raymond Rosenfeld, faculty mentor

This research brings to light the unique challenges faced in securing the U.S.-Canada border from illegal immigration. An analysis of existing programs includes a look at the use of new technologies as opposed to traditional infrastructure. A discussion of recently proposed policy examines S.744 and H.R.1299 and an analysis of these alternatives emphasizes the differing opinions of our two political parties as well as the difficulties both will face in passing legislation. Finally, a recommendation is made encouraging both parties to compromise in order to pass legislation that would effectively secure our northern border.

Oral session B /// Room 204 /// 10:30 a.m.

Edward Snowden: Hero or Traitor? Privacy Rights and National Security

Nicholas Beaton
Kathy Peterson, faculty mentor

The constitutionality of the National Security Agency's cyber security operations after September 11, 2001 is discussed and a historical context from the National Security Act of 1947 to the Patriot Act of 2001 is examined. Additionally, the compromise between national security and the individual's right to privacy will be explored.

Oral session A /// Room 204 /// 9:30 a.m.

Intellectual Property in the Modern Era: A Conundrum

Devin Bruen

Mark Maironis, faculty mentor

In the face of powerful technologies, lawmakers struggle to keep up. Constantly grappling for control in the virtual realm, the new frontier of digitalized media are at odds with traditional intellectual property laws upon which the United States has always relied. My study exposes the current state of this conflict, as well as multiple views on the ethics pertaining to the newest generation of intellectual property holders.

Oral session A /// Room 301 /// 9:30 a.m.

Foreign Aid: Behind the Scenes

Jessica Bussell

Volker Krause, faculty mentor

This research discusses the various state actors who give and receive foreign aid. The world is becoming increasingly interconnected, so this research looks at states as individuals and within groups. Examining state actors involved in foreign aid allows for a more comprehensive understanding of what motivates states to give foreign aid. Some examples of motivating factors include forming economic trade partners, and reaching the Millennium Development goals. The main goal of this research is to understand what motivates states or groups of states to give aid, and to use this information to predict who will be giving and receiving foreign aid in the future.

Oral session A /// Room 204 /// 9 a.m.

Invasive Species in the United States: A Policy Analysis

Amanda Campbell

Professor Raymond Rosenfeld, faculty mentor

Non-native exotic "invasive species" within an ecosystem can cause harm to the environment, the economy or human health. Invasive species threaten areas across the United States, and their entry remains an intentional and unintentional problem. New policies are being considered to eradicate, control and manage these species. Different pathways of entry make it difficult to address this issue linearly. The Great Lakes region and other transportation hubs are plagued by invasive species creating challenges within the policy arena. An efficient course of action that will target individual and localized invasive species surrounding a particular pathway is the focus of this research.

Oral session A /// Room 304 /// 8:45 a.m.

The Utilization of Performance Reforms in Education: Can They Improve Education Quality

Samuel Sterlin Cummings and Andrew Felder

Barbara Patrick, faculty mentor

New Public Management, with its emphases on accountability, has attempted to make public sector organizations function similar to those in the private sector. Federal Race to the Top and No Child Left Behind policies have promoted the adoption of such principles among the states by linking funding to their implementation. While all 50 states have developed performance policies, the policies vary in strength and rigor. This research develops a performance index to measure the strength of each state's performance policies. The performance index and other state factors are used to assess factors affecting states commitment to the performance management movement.

Oral session C /// Room 352 /// 1:15 p.m.

An Analysis of the Extent of Presidential Power in Regard to Drone Strikes

Kaitlyn Dugas

Barry Pyle, faculty mentor

The use of drones by the United States of America in targeted killings raises numerous moral, ethical and legal questions. This study focuses on the constitutionality and general legality of such actions and answers the question: Does the President possess adequate power, either unitary or granted, to order the strikes against foreign nationals and American citizens? In answering this question, the study looks at presidential power from the perspective of each of the three branches of the U.S. government and from the viewpoint of international law in order to understand how much power the President has to order targeted killings.

Oral session A /// Room 204 /// 8:45 a.m.

Facilitating Student Discussion: The Case of a Political Science Class

Emma Fitzhugh

Jeffrey Bernstein, faculty mentor

This case study analyzes four simulations in an introductory political science course with the intent to identify student learning in the simulation and in group collaboration. Though the discussion and collaboration between students involved political science topics, the skills students brought into the classroom and acquired during the course can be used in numerous professional fields. The presentation focuses on the scaffolding of assignments and learning that lead up to the classroom simulations. It also highlights the skills students developed surrounding group collaboration and students' individual insights on decision making.

Oral session D /// Student Art Gallery /// 3:30 p.m.

Palestine: Occupation, Resistance, and Solidarity

Ihsan Ghadieh

Judith Kullberg, faculty mentor

The question of Palestine has been addressed in the United Nations for decades and many resolutions calling for the return of Palestinian territories and the protection of the rights of Palestinians have been adopted. Yet, the ethnic cleansing of Palestinians in the occupied territories of the West Bank continues. This paper examines the mechanisms used by Israel to expel Palestinians from their homes and land. It also explores the various modes of resistance used by Palestinians. Despite the growing solidarity of Israeli citizens with the Palestinian resistance, Israel continues its practices, undermining the demands of its citizens and responding to a non-violent movement with violence.

Oral session D /// Room 330 /// 3:30 p.m.

International Political Economy: How Does Freedom Correlate with Economic Success?

Trevis Quincy Harrold

Dave Ivers, faculty mentor

To evaluate government programs and the overall state, it is necessary to say that individuals are “entitled” both to a free living and a life that is not controlled. This paper explores the normative implications for government action of presumption that people are allowed free rights and how that affects their economic success, as measured in terms of GDP by the World Bank. The conclusions are that to a certain extent the amount of freedom a country has, as determined by Freedom House for example, does have an effect on how successful the state’s economy is. Generally, the more freedom a country has, the higher the GDP per capita is.

Oral session A /// Room 204 /// 9:15 a.m.

The Eurozone Economic Crisis and the Divergent Paths of Unity

Kaitlyn Elizabeth Hill

Nitya Singh, faculty mentor

The Eurozone economic crisis, which began in 2008, has had far-reaching and destructive effects on the future of Europe, its trading partners, and the global economic system as a whole. In order to begin to understand the implications it has for the future of Europe as a whole, it is important to look at why different member states suffered such divergent repercussions. This research seeks to explain this divergence by focusing on the experiences of Germany and France and comparing them to one another. The question answered is why does the French economy continue to suffer heavy losses while the German economy has seen comparatively little effect?

Oral session C /// Student Art Gallery /// 2 p.m.

Major Factors in the Development of Political Attitudes

Hailey Huckestein and Steven Mikulic

Jeffrey Bernstein, faculty mentor

This study aims to better understand the epistemological implications of a student's major field of study on both the content and the depth of their political knowledge. Based on data from EMU's undergraduate student body, we examine how college major influences how new political information is absorbed and internalized. Current research shows a clear positive correlation between education and political knowledge. This study proposes to explore the ways in which students are trained to assimilate new data, how such data impact their political awareness, and how they respond to the various overtures the political world makes to court their attention.

Oral session D /// Student Art Gallery /// 3:45 p.m.

Congress: A Brighter Tomorrow or More of the Same

Christopher David Kippola

Edward Sidlow, faculty mentor

A recent article by Norman Ornstein in the *Journal Foreign Affairs* was entitled "Worst Congress Ever." In fact, the recently concluded congressional session produced less legislation than the Congress in the late 1940s that was dubbed by Harry Truman as "the do-nothing Congress." This project seeks to examine those trends, and predictions for the 2014 congressional elections, that might allow an informed judgment as to whether we can expect more, and better, when the new Congress convenes in 2015.

Oral session A /// Room 204 /// 8:30 a.m.

The Policy Problem of High Skilled Immigration

Andrew S. Kocis

Raymond Rosenfeld, faculty mentor

Much of the debate on immigration policy focuses on immigrants here illegally, and how to keep people out of the country. Very little of it is centered on how to attract immigrants who are highly skilled. Currently there are thousands of jobs going unfilled in critical STEM fields, and not enough American college students are graduating with STEM degrees. Immigrants are needed to fill these positions, and our current worker-visa program is painfully outdated and unable to keep up with the growth in STEM occupations. This paper explores the issue and analyzes policy alternatives.

Oral session B /// Room 204 /// 10:45 a.m.

The Honors College: What's the Benefit? By What Mechanism? Further Thoughts

Anjali T. Martin

Jeffrey Bernstein, faculty mentor

Following a presentation last year examining the impact of the Honors College on political knowledge and the role of potential social networks, this poster continues the project by looking at four American Government courses over the course of a semester for changes in political knowledge levels and the creation of social networks. This poster clarifies what social networks look like for students, both honors and non-honors, from the beginning of the semester to the end and will draw conclusions based on these networks and the levels of political knowledge. Finally, the information presented will be done in a manner that encourages discussion of how social networks impact textbook knowledge.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Security Challenges Along the Mexican-American Border: An Analysis of Immigration Policy

Justin Massey

Raymond Rosenfeld, faculty mentor

An important issue in immigration policy is border security. Border security impacts drug smuggling and the ability of illegal immigrants to enter the U.S. in search of employment. Common solutions include building a wall or fence to impede immigrants from crossing the border, hiring of Border Patrol agents, and use of technology. The struggle in Washington D.C. between Republicans and Democrats plays an important role in addressing this problem. Until a final decision can be made, Mexicans will continue to flee their country for a better life, and the U.S. Government will continue to search for ways to stop them.

Oral session B /// Room 204 /// 11 a.m.

Stop and Frisk: A Progressive Evolution

William Douglas McDonald

Mark Maironis, faculty mentor

Created in the case of Terry v. Ohio in 1968, the policy of Stop and Frisk has garnered support as an acceptable police practice over the last few decades. This expansion of the stop and frisk policy has led to the modern day traffic stop as well as the on-street patdown known as a "Terry Frisk". This expansion of police power has served to minimize our Fourth Amendment protection against unreasonable searches and seizures. This active policy of Stop and Frisk is examined as well as the history of the legislation and landmark Supreme Court case from which this practice was born and from which our constitutionally-afforded rights have become challenged.

Oral session B /// Room 204 /// 10 a.m.

Detroit: A Budgetary Analysis

Nino Monea and James Tatum

Barbara Patrick, faculty mentor

On July 18, 2013, Detroit became the largest city in United States history to file for bankruptcy, signaling a profound moment in the history of the Motor City and municipalities around the country. This paper explores the lead-up to the bankruptcy, the current state of affairs in the city's finances, and the exit plan for the emergency manager appointed by the governor. In addition to examining the city's current fiscal circumstances, stakeholders and their reactions to the bankruptcy are identified. Lastly, several reforms are proposed to help alleviate the city's long-term debt load.

Oral session C /// Room 352 /// 1:30 p.m.

Health Care Cost Inflation: A Policy Analysis

Nino Monea

Raymond Rosenfeld, faculty mentor

Health care spending in the United States has risen dramatically over the last 50 years and continues to be a strain on family budgets, a driver of national debt, and a drag on the economy. This paper seeks to provide a policy solution to ameliorate the rate of health care spending without undue cuts to beneficiaries. After the nature of health care inflation is examined, a number of policy alternatives are compared in terms of costs, benefits, and policy feasibility. Ultimately, a policy recommendation is made and its implications are explored.

Oral session D /// Room 352 /// 3:45 p.m.

Honors College Tour: Innovation Through Diffusion

Kerri Musick

Jeffrey Bernstein, faculty mentor

In fall 2012 the Office of Admissions and Honors College collaborated on the creation and implementation of the Honors College Tour. Eastern Michigan University experienced their largest freshman class and the Honors College doubled in size this year. The outreach mechanism was born out of a concern for increasing diversity and enrollment. This research seeks to explore the effectiveness of the program in meeting those goals in both a quantitative and qualitative sense during its first year, but also the unexpected impact it had on each department as separate entities and inter-departmentally.

Oral session D /// Student Art Gallery /// 3:15 p.m.

Promoting Democracy Through Election Observation: The Experience of EMU Students in El Salvador

Jessica M. Northrup, Kaitlyn Elizabeth Hill, Ihsan Ghadieh,
Rebecca N. Thomas and Sayem Khan
Judith Kullberg and Randal Baier, faculty mentors

International election observation has contributed significantly to the development of democracy around the world. In this panel, EMU students who served as election observers in the presidential election in the Central American nation of El Salvador in February 2014 explain the process of election observation, discuss their experiences as observers, and explore the role of elections in strengthening Salvadoran democracy.

Oral session B /// Room 344 /// 10 a.m.

Business Incubation in the United States and Michigan

Bradley Scott Peters
Arnold Fleischmann, faculty mentor

Business incubation is a wide variety of strategies and programs designed to help entrepreneurs create and nurture new businesses. These strategies and programs can be tailored to give targeted support to under-resourced minority groups and are an important contribution to economic development. Incubated businesses have higher success rates and retain more local investment capital than non-incubated businesses. Michigan has a wide variety of business incubation programs that empower entrepreneurs and help bring new ideas to the marketplace. This study examines business incubation across the United States and evaluates business incubation across the state of Michigan.

Oral session B /// Room 352 /// 10 a.m.

Policy Analysis of Current Storm-Water Practices in the United States

Jacquelyn Marie Richards
Raymond Rosenfeld, faculty mentor

Storm-water pollution is based upon sediments, chemicals, and nutrient runoff from homes, construction, industrial and agricultural practices. This pollution, which is difficult to identify and control, now accounts for over half of our water quality problems. Recent studies have shown that increasing amounts of lakes, rivers and streams are not meeting existing water quality standards. The goal of this research is to gather information to describe the nature and source of the storm-water problem, current policies to address the issue, new policy alternatives, and a political analysis.

Oral session A /// Room 304 /// 8:30 a.m.

Search and Seizure: A Study on the Development of the Fourth Amendment

Michael David Richardson
Mark Maironis, faculty mentor

The interpretation of the United States Constitution is still a matter of great dispute. The fourth amendment to the Constitution is one area whose interpretation has evolved over time. Best known for its discussion of what constitutes a legal search and seizure, the ambiguous nature of the fourth amendment creates room for interpretation. The effect of this ambiguity can be seen in the varying definitions of what constitutes a valid search and seizure. Ultimately, defining an individual's right to privacy turns on defining the fourth amendment. This presentation sheds light on this by displaying how the law has changed over time.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Social Movements, Autonomy and the State in Latin America

Eric Sippert
Richard Stahler-Sholk, faculty mentor

Social movements have become an important part of the political realm in Latin America, overthrowing and installing leaders as well as challenging capitalism and the state itself. The study will attempt to classify social movements into four different categories by the amount of autonomy they exercise from the state and then look at the effectiveness of each of these different groups. Through examining different strategies and outcomes from social movements in Bolivia, Brazil, Ecuador and Mexico, I aim to demonstrate that greater autonomy from the state yields greater effectiveness in accomplishing a movement's objectives.

Oral session D /// Room 330 /// 2:45 p.m.

State Business Tax Expenditures: Transparency and Reform

James Tatum

Joseph Ohren, faculty mentor

Every deduction, exemption, and tax credit entered into the tax code, whether at the local, state, or federal level, represents an expense by the public entity which established it. Donald Marron of the Tax Policy Center called it “spending through the tax code,” in his report by the same name. Tax expenditures include the kind of benefits taxpayers seek every year at H&R Block, ranging from the federally awarded child tax credit, to the benefits reaped by multinational companies like General Electric. My research examines the lack of transparency of these tax expenditures that are applied to the business side of the tax code at the state level.

Oral session B /// Room 352 /// 10:15 a.m.

Measuring Community Impact: A Student Perspective

Kody Vitale

Claudia Petrescu, faculty mentor

The topic of my presentation is assessing and addressing community needs from a nonprofit perspective. I will share my experiences from the Student Funders Group, which is taking place throughout this winter 2014 semester. This project involves raising money and distributing it to local charitable organizations in the form of competitive grants. My presentation will capture the research, field work, and interviews with nonprofit professionals that went into the group decision-making. I will provide a summary of the data collected, the needs addressed, the metrics we used to select the grant recipients, the challenges we faced, and the lessons learned in overcoming them.

Oral session D /// Room 352 /// 2:45 p.m.

United States-China Trade Relationship and the WTO: Conflicts and Cooperation

Congzhe Xu

Nitya Singh, faculty mentor

My goal is to discover what the Chinese and the U.S. governments' trade relationship is within a global perspective. Have certain aspects of U.S. and Chinese trade policy contributed to conflicts between the two nations? If so, what are the trade issues between China and the U.S.? Especially, why have China and the U.S. had so many conflicts since China's accession to the WTO in 2001? What kind of trade relationship will China and the U.S. have in the future?

Oral session C /// Student Art Gallery /// 2:15 p.m.

DEPARTMENT OF PSYCHOLOGY

Effect of EPIC Panel Presentations on the Attitudes of EMU Students Toward LGBT Individuals

Silvana Alfaro-Bordon

Natalie Dove and Meriah Sage, faculty mentors

With sponsorship by the Center for the Study of Equality and Human Rights, this study investigates the impact of Eastern Pride and Identity Coalition (EPIC) panels on the attitudes of students at EMU. EPIC is a group of students, faculty, staff and community members who go into classrooms to talk about their personal experiences in the LGBT community. Through baseline assessment and a post-panel assessment to determine variations in attitudes, this study discerned how these panels influence students' attitudes toward LGBT populations. Research findings depict overall attitude change, as well as correlations among personal and demographic characteristics and reactions to the panel.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

The Relationship Between Warfare-Based Video Game Play and Subsequent Perceptions of War

Jacob Anderson

Natalie Dove, faculty mentor

The current project will investigate the research literature to date on warfare-based video games and players' subsequent perceptions of war. It is hypothesized that individuals who play warfare-based games will have more romanticized ideals regarding actual war and conflict as compared to people who play other types of electronic games. This relationship will also be investigated as a function of amount of time spent playing, political ideology, and education level. The moral implications of warfare-based media consumption will be discussed. These results could ultimately inform future game development and the Entertainment Software Ratings Board (ESRB) ratings.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Exploring the Link Between Perceptions of Women and Media Viewing: *Showgirls vs Tomb Raider*

Melissa Blackstone

Natalie Dove, faculty mentor

Exploring the link between media exposure and real world perceptions of women can help outline ways in which oppression of women and the prevalence of rape culture are sustained by media representations. As such, the current study explores how individuals are affected by representations of women in movie trailers. Participants were asked to view three movie trailers and respond to a questionnaire with a series of measures for analysis. By understanding the possible links between the media and rape culture, we can analyze and identify cultural and media factors that contribute to widespread violence against women, as well as possible ways to lessen or prevent some of this violence.

Oral session C /// Room 304 /// 1:45 p.m.

Recall Fluency and Prejudicial Judgments: How Thinking Less Counter-Stereotypical May Not Be So Bad

Troy G. Deskins and Max Monahan
Rusty McIntyre, faculty mentor

Recall fluency of negative stereotypes was examined for prejudicial judgments. Participants who thought of fewer stereotypic, or more counter-stereotypic examples of African-Americans made more prejudicial judgments of Blacks than did participants who thought of more stereotypic or fewer counter-stereotypic examples. Results are interpreted as consistent with models of heuristics.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Adult Attachment and Parent-Child Relations Among Adults with a Parent in the Military

Lexi Forsyth
Heather Janisse, faculty mentor

The role a parent plays in a child's life has consistently been shown to affect how they engage in relationships in adulthood, though these findings have been inconclusive with regard to military children. Therefore, the purpose of this study is to gain a better understanding of adult attachment and relationship quality among those who had a parent in the military during their childhood. The current study asks adults to retrospectively respond about their own childhood responses to parental deployment, allowing for an examination of the child's own perception of the deployment and the effects that having military parents have on children's attachment style in adulthood.

Oral session D /// Kiva /// 3:30 p.m.

Visuomotor Adaptation and Cognitive Decline in the Elderly

David Garcia and Dinah Hudson
Jin Bo, faculty mentor

Visuomotor adaptation is the adjustment of planned movements in response to sensory input. Increasing error feedback has been shown to enhance adaptation (Patton, 2006; Wei et al., 2005). Research has also indicated the mildly demented participants may rely more on visual feedback when making movements (Dick et al., 2001). This study examines the role of visual error feedback on visuomotor adaptation in neurotypical and mildly demented participants. A center-out adaptation task is used where the error feedbacks are either regular or enlarged (gain of 2:1). It is predicted that demented individuals will show worse adaptation in the regular but not in the enlarged feedback condition.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Working Memory Assessment in Neurotypical Children and Adults

Ryan Goodcase and Khalil Boussi

Non-presenting, co-author: Alison Colbert

Jin Bo, faculty mentor

Working memory (WM) refers to the system responsible for short-term maintenance and manipulation of information. There exists controversy regarding the development of WM in children and its contribution to symptoms of neurodevelopmental disorders. Part of this controversy stems from a lack of consistent WM measurement. This study aims to assess the validity of a WM task (computerized change-detection) across development. Neurotypical adults and children will be used for developmental comparison. Older children are expected to have similar results as adults, consistent with developmental variance hypotheses.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Brain Coherence in Alpha, Beta, and Gamma Frequency Bands in Autism Spectrum Disorder

Ryan Goodcase, TyRonda Devon Smith and Kaitlyn McFarlane

Non-presenting, co-authors: Annette Richard and Fara Di Noto

Renee Lajiness-O'Neal, faculty mentor

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder with social communication impairment. ASD is diagnosed based on behavior, as the biological mechanisms underlying it are still unclear. The aim of this study is to find a potential biomarker in participants diagnosed with ASD by comparing their brain coherence with neurotypical participants. Brain coherence, a measure of synchronous brain activity between regions, will be calculated using magnetoencephalography. Different frequency bands are each associated with different forms of cognition; for this reason, brain coherence will be computed within the alpha (8-13 Hz), beta (14-30 Hz), and gamma (30-80 Hz) frequency bands.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

The Effect of Perceived Father Involvement on Mothers' Relationships with Their Young Children

Emily Therese Gutman

Alissa Huth-Bocks, faculty mentor

A sample of 120 primarily unmarried, diverse, low-income mothers was interviewed over time and was videotaped with their 2-year old children during a play interaction. The play interactions were coded for both negative and positive maternal behaviors and affect. This study examined how mothers' perceptions of involvement by the children's fathers correlated with mothers' affect and behaviors displayed in the play interactions, which served as a proxy for mother-child relationship quality. It was hypothesized that mothers who perceived their relationship with the child's father as poor (based on a number of indices) would display more problematic behaviors toward the child.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Political Ideology and Gender Bias in the Workplace

Daniel J. Henley

Natalie Dove, faculty mentor

Gender bias remains to be a serious problem in the workplace. Samples of fictional applicant information and mock interview transcripts will be created in order to simulate a hiring process. For this, both the sex of the fictional applicant and their prospective occupation will be manipulated for a total of four variables. Each participant will be randomly assigned to read through one of the four possible applicant transcripts. This will be followed with a nine-point hireability scale and a nine-point political ideology scale. The hypothesis is that conservatives, more than liberals, would be more likely to hire women for traditionally gender-typed positions than gender atypical positions.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

The Transcendence of Archetypal Behavior in Quentin Tarantino's *Pulp Fiction*

Keith Brian Hester

Rusty McIntyre, faculty mentor

Quentin Tarantino's script focuses on declarative acts of mental and physical trauma that force his characters to reflect upon the very decisions that have placed them in such distressing situations. Orientating at a crossroads between past, present, and future each character has to make a decision to continue to the criminal life or to leave it behind. The story of *Pulp Fiction* is one of identity crisis brought upon by trauma and epiphany as it allows each character to wake up from their numbed and mundane slumber, giving them the opportunity to transcend their archetypal behavior and replace it with something new.

Oral session A /// Kiva /// 9:15 a.m.

Q Methodological Study of Subjectivity and Objectivity

Maria Karimova

Dennis Delprato, faculty mentor

Research has shown not only that subjectivity and objectivity are vital concepts in scientific studies, but also that human tendencies toward duality reinforce their opposition. This study uses a Q methodological approach to measure viewpoints of faculty in the College of Arts and Sciences at EMU by having them sort a list of potential viewpoints on the subject onto a matrix ranging from agree to disagree. It is evident that objectivity and subjectivity differ, but this study was designed to evaluate the level of difference, explore how the concepts are defined in people's thinking, and determine families of viewpoints. The Q method allows these viewpoints to be analyzed scientifically.

Oral session A /// Room 352 /// 8:30 a.m.

The Relationships Between Self-Esteem and Interpersonal Relationships

Jennifer Lederman

Natalie Dove, faculty mentor

The topic of my project surrounds self-esteem and how the various forms of self-esteem affect interpersonal relationships. I will be taking into account gender differences and performance self-esteem, state self-esteem, and social self-esteem. Collecting data through an online survey tool, there will be a demographics section followed by numerous questionnaires asking the participants about commitment, self-esteem, attachment, for example.

Oral session D /// Room 320 /// 2:45 p.m.

The Relationship Between Female Self-Objectification and Involvement in Extra-Curricular Activities

Tanjare McKay

Karen Saules, faculty mentor

In contemporary society, women can adopt flexible gender roles, ranging from “masculine” to those considered “androgynous” to a stereotypical female gender roles. Despite greater freedom to adopt more diverse roles some women continue to adopt traditional gender roles, in which self-objectification may persist. Self-objectification occurs when women view themselves through the perspective of an observer and engage in chronic self-surveillance. We examined self-objectification among female EMU students as a function of participation in campus clubs and sports. Contrary to our hypothesis, we found no relationship between self-objectification and extracurricular activities.

Oral session A /// Room 330 /// 9 a.m.

Relationship Between Female Paternal Attachment and Future Romantic Relationships

Carla Nodi

Natalie Dove, faculty mentor

The objective of this project is to research the relationship between a female’s attachment to her father and the effect it has on her future romantic relationships. Data has been collected from women through an online survey assessing paternal attachment, attachment in relationships, sexual history, sexual self-esteem and instances of child abuse, and domestic violence. The data from this research contributes to our theoretical understanding of attachment and is useful in a clinical setting when working with marriage, relationship and family issues.

Oral session A /// Room 330 /// 9:15 a.m.

Exposure to Intimate Partner Violence, Behavior Problems and Weight Status in Preschool Children

Mayra Rivas-Rocha

Heather Janisse, faculty mentor

Intimate partner violence (IPV) is a growing public health concern disproportionately affecting children and their families. This study examined the relationship between maternal reports of exposure to IPV and preschool-age children's behavior and physical health, particularly obesity. Participants consisted of 100 predominantly African American (92%), primary caregivers of children enrolled in Head Start programs in the city of Detroit. Results indicated that primary caregivers who reported more incidents of IPV also reported more internalizing and externalizing behavior problems in their preschool children. No significant relationship was found between weight status and behavior problems.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

The Influences of Early Life Experiences on Perceptions of Leading Women

Jazmin J. Rodgers

Natalie Dove, faculty mentor

Women are key contributors to an organizational environment, and the stereotypic perceptions of powerful women are often misconstrued. Many previous studies have empirically investigated perceptions of women in power in today's market. These studies have not focused on how early life environments and variables related to an individual's upbringing influence self-perceptions and the roles women play in the workplace. The purposes of this study are to describe the perceptions of women in today's workplace, how individuals' early life experiences correlate with their perceptions of women in the workplace, and how early life influences correlate with women as organizational leaders in groups.

Oral session A /// Room 330 /// 9:30 a.m.

An Analysis of Student Subjectivity: Application of Q Methodology

Sheila Lynn Sears

Dennis Delprato, faculty mentor

What interests are important to the students at Eastern Michigan University? The data collected the Psychology 103 lab will help answer this question by using Q methodology. Q methodology reduces the gap between subjective (qualitative) and quantitative (objective) research. Various items will be administered for students to rank order in terms of their personal points of view (interests). The program PQ Method will be used to search for and extract factors ("families" of students with related views). Not only will this study look at the similarities and differences of how the participants rank the items, it will also investigate the levels of importance placed on the items.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Examining Neural Synchrony in Autism During Resting State with Magnetoencephalography (MEG)

TyRonda Devon Smith, Ryan Goodcase and Kaitlyn McFarlane
Non-presenting, co-authors: Annette Richard and Fara Di Noto
Renee Lajiness-O'Neal, faculty mentor

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder with social communication impairment. The etiology of ASD has yet to be determined, and it is typically diagnosed by observations of behavior. Abnormalities in synchronous neural activity have been hypothesized to be a core pathophysiological mechanism. Magnetoencephalography can measure synchronous neural activity during resting state, when the brain is not consciously engaged in cognitive processing. Coherence is a measure of the synchronicity. We examined differences in coherence during resting state in ASD compared to NT in an attempt to identify a potential biomarker and illuminate a core etiological mechanism.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Predicting Treatment Outcomes in a Psychology Training Clinic Setting

Lauren Turner
Non-presenting, co-author: Meagan Carr
Karen Saules, faculty mentor

Psychology Training clinics (PTCs) serve important functions, both for educational purposes and service delivery, but treatment outcomes of PTC clients are poorly understood. To make best use of available resources, it is important to know which clients are best served by PTCs. All clients seen at the EMU PTC complete the Prime-MD Patient Health Questionnaire (PHQ) at intake and the Outcome Questionnaire 45 (OQ-45) at each session. These instruments measure symptom frequency and type, overall functioning, and distress. We hypothesize that those who have mild to moderate distress, screen positive for a probable anxiety disorders and/ or have high self-worth will have better outcomes.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

DEPARTMENT OF SOCIOLOGY, ANTHROPOLOGY AND CRIMINOLOGY

The Kiowa Before and After the Europeans' Arrival

Dakota Aitson

Bettie McGowan, faculty mentor

The Kiowa Indians of the Plains have a long history that is central to their cultural identification, and were greatly affected by the changes brought by the coming of the Europeans. The Kiowa journey through these changes, and their effort to protect their cultural lifeways is legendary. The long-standing challenge to survive, through native land and colonization, is the topic of my presentation. This story connects to my own family's history. Now decades later the Kiowa continue their artistic excellence, as well as their struggle for reclamation of what they have lost, in the hopes that they will instill awareness and understanding in the minds and hearts of the next generation.

Oral session D /// Room 204 /// 3:45 p.m.

Prehistoric Rock Material Selection for Heating Purposes

James Beaumont

Bradley Ensor, faculty mentor

Unlike archaeological research on raw material selection and technological suitability for most artifact categories, there is little research on rock materials used for heating purposes in prehistoric societies. Fire-cracked rock (FCR), a ubiquitous byproduct of repetitive heating, is often overlooked in analyses. However, rock selection should also illustrate people's understanding of raw material properties. Given its heat conductivity, igneous rock should appear in high percentages. This hypothesis is tested with FCR materials collected by the EMU Archaeology Field School at Site 20WN37. The analysis of FCR could broaden prehistoric material selection research.

Oral session C /// Room 104 /// 1:15 p.m.

Caste, Class and Cousins: Kinship Change in Modern India

Michelle Elise Cox

Bradley Ensor, faculty mentor

In India, economic change and urbanization are disrupting traditional occupations, homogenizing formerly diverse kinship practices. The states of West Bengal and Tamil Nadu provide examples of economic and social pressures that disproportionately affect the lower castes, who imitate upper caste family structures in order to improve their status. Changes in marriage systems and residential patterns are observed and the impact of these changes on the status of women in formerly matrilocal communities is especially profound.

Oral session B /// Room 104 /// 10 a.m.

The Anthropology of Mass Genocide: A Cross-Cultural Examination

Benjamin Guidot

Bradley Ensor, faculty mentor

Genocide, the intentional destruction of an identifiable group, is one of the most pressing issues confronting humanity today. Were the Holocaust, the Rwandan genocide, or other instances of genocide unique historical events? Through a cross-cultural examination of the local and sociocultural dimensions of genocide in Nazi Germany, Rwanda, Bosnia, Cambodia, and Guatemala, an anthropological cross-cultural hypothesis is developed to explain the origins and causality of genocide.

Oral session D /// Room 330 /// 3:45 p.m.

Bridges Out of Poverty: An Ethnography of the Changing Role of “Choice” Food Pantries

Linda M. Harrison

Cynthia Gabriel, faculty mentor

Client Choice Food Pantries allow clients to choose their own foods in a setting similar to a regular grocery store. Many benefits are attributed to Client Choice Pantries, including a sense of dignity, increased satisfaction, and reduced food waste. In addition, some pantries offer case management services to help clients become independent. The impact of these interventions has the potential to be profound, on both individual and societal levels, by decreasing the incidence of hunger and poverty. This research explored the attitudes and behaviors of clients and workers at a local Client Choice Food Pantry to determine how both groups perceive the value of services provided.

Oral session C /// Room 352 /// 2 p.m.

Spatial Analysis of a Historic Farmstead in Southeast Michigan

Hannah Catherine Hilbert

Bradley Ensor, faculty mentor

Spatial analyses of artifacts at archaeological sites inform on the organization of activities in past societies. Moreover, prior models of farmsteads in Southeast Michigan can be tested with spatial data at a 19th to 20th century farmstead (site 20WN37) investigated by the EMU Archaeology Field School. This analysis evaluates the former models and their utility for future interpretations on historic farmsteads in Southeast Michigan.

Oral session C /// Room 104 /// 1:30 p.m.

Cranio-Facial Manifestations of Language in the Bio-Cultural Evolution of the Genus *Homo*

Hannah Catherine Hilbert
Megan Moore, faculty mentor

Though patterns of dental wear, muscle-attachments, and nerves are generally attributed to dietary stress and mastication patterns, there is evidence that speech production may also play a role. The purpose of this project is to extrapolate from previous research how changes in the cranio-facial skeleton can be caused by the production of language. The aim is to understand how we produce sounds today (and the potential artifacts of that speech production) in order to find similarities in fossilized craniofacial remains so that additional hypotheses may be formed toward a better understanding of the bio-cultural evolution of speech and language production across the genus *Homo*.

Oral session B /// Student Art Gallery /// 10:45 a.m.

Patterns of Dental Enamel Hypoplasia in a Medieval French Population: Evidence of Malnutrition

Taylor BL Kirchoff
Megan Moore, faculty mentor

This project investigates childhood health of an early medieval French population through the examination of enamel hypoplasias (LEH= a sign of growth stunting preserved in tooth enamel). The sub-sample (n=10) is from an early medieval cemetery of Saleux in Northern France (N=2000). This study supports previous research indicating that these individuals suffered from some malnutrition, also demonstrated by high infant mortality rates and short life expectancies. Preliminary findings demonstrate several occurrences of LEH, varying in severity and approximately equally distributed between sexes (females 36%, males 46%). The stunting typically occurs after weaning between 3 and 6 years of age.

Oral session B /// Student Art Gallery /// 11 a.m.

The Opaque Self: Exploring the Complex Racial Identity of White College Students

Caleb D. Kruzell
Kevin Karpiak, faculty mentor

Early proponents of Critical White Studies asserted that whiteness is an unmarked racial category. This claim was complicated by later empirical studies that, while maintaining the real life consequences of white identity, highlighted its many possible forms. This presentation builds on this work by exploring expressions of whiteness by white-identifying college students. Using data gathered in a series of informal interviews, this presentation addresses the following questions: How do white college students construct their racial identity? And, how are forms of racial privilege sustained despite changing attitudes toward race?

Oral session B /// Room 320 /// 10:45 a.m.

Breaking Down and Assimilating: Processes of Culture and Kinship Change on the Japanese Islands

Justin Michael Lancon

Bradley Ensor, faculty mentor

Expanding global capitalism is shaping kinship practices worldwide. This paper examines two cases in which global economic factors changed the lives and structures of societies. Capitalism and Japanese Hegemony since the mid 1800s led to a change in Ainu kinship from a traditional cognatic and patrilocal pattern to more bilateral and neolocal patterns. Western economic influence in the second half of the 19th century drove mainstream Japanese to shift away from patrilocal and patrilineal patterns to a more bilateral and neolocal system. The two case studies demonstrate that changing economic systems and the resulting social upheaval can change a society's kinship practices dramatically.

Oral session B /// Room 104 /// 10:15 a.m.

Native Americans in Literature

Michelle Lietz

Bettie McGowan, faculty mentor

This project will include an examination of the historical portrayal of Native Americans in literature written by non-natives, as well as the history and impact of the emergence of Native American Literature written by Native American authors. The importance of literature to the survival and growth of Native American cultures is today a vital aspect of cultural continuity.

Oral session B /// Room 301 /// 10:30 a.m.

Herders and Capitalism: Changing Kinship Among Two Pastoral Societies in Emerging Free Markets

Jake Manderfield

Bradley Ensor, faculty mentor

Changes in hegemonic economic systems often alter traditional kinship practices of indigenous peoples, but in the case of two nomadic pastoral societies, these changes seem less profound. This paper focuses on the traditional kinship practices of the Khalka and the Sami, as well the ways in which their kinship strategies have adapted to hegemonic economic systems. The results of this paper show that while many kinship strategies are altered or abandoned, certain strategies associated with nomadic pastoralism remained, such as post-marital residence. This paper shows that nomadic pastoralists often retain many aspects of kinship in the presence of emerging free markets and privatization.

Oral session B /// Room 104 /// 10:30 a.m.

The Role of Media in the Formation of Social Distance

Adam Moody

Kristine Ajrouch, faculty mentor

This paper will present data collected from EMU students using Bogardus' Social Distance Scale to explore the extent to which various racial/ethnic groups are ranked close or far. Findings show that the groups identified as furthest are: Muslim, Arabs, and African Americans. Results will be compared and contrasted to historical patterns of social distance among university students. This will be followed by an analysis of the social underpinnings of prejudice. In particular, the role of the media will be considered. As an agent of socialization, the media plays a large part in creating an image of ethnic groups for those who would otherwise have little contact with members of these groups.

Oral session C /// Room 304 /// 2 p.m.

Revitalization of the Language of the Pokagan Potawatomi, Taking Back Our Language and Our Culture

Amber Ann-Rose Morseau

Bettie McGowan, faculty mentor

The Pokagan Potawatomi tribe of Michigan is making great strides in revitalization of our language and our culture. In the summer of 2013, I took part in workshops for Pokagan adults and children to regain the language. Language renewal is a source of community pride and strength, and most of all, a testament to our resilience as a people.

Oral session D /// Room 204 /// 3:30 p.m.

Analysis of Prehistoric Activities at Site 20WN37: Findings from the EMU Archaeology Field School

Marc Rogers

Bradley Ensor, faculty mentor

Archaeological analyses on the spatial distributions of artifacts and buried features provides insight on how prehistoric peoples lived. Although common in archaeology, there have been few such studies on the prehistoric peoples of Southeast Michigan. This presentation describes spatial analysis and interpretations of prehistoric artifacts and features at Site 20WN37 in Wayne County, Michigan. The findings suggest that the prehistoric occupants of Site 20WN37 arranged activities in different locations, which contributes to interpretations on social organization.

Oral session C /// Room 104 /// 1:45 p.m.

Defying Odds: The Lived Experiences of Homeless College Students

Courtney Smith

Roger Kernsmith and Gary Bell, faculty mentors

The purpose of this study is to explore the experiences and insights of college students who have self-identified as “unaccompanied homeless youth” on the FAFSA and have been classified as such by Financial Aid Administrators. This study also seeks to address how college campuses can better serve this population. The methodology used to conduct this research is in-depth interviews, surveys and a literature review.

Oral session B /// Room 320 /// 11 a.m.

First Indian Removal: Removing the Choctaw of Mississippi to Oklahoma

Christopher Sutton

Bettie McGowan, faculty mentor

The ill-fated policy of Indian removal did not begin with the Cherokee in the 1830s, it began with the Choctaw of Mississippi. The tribe was very vocal in expressing their near unanimous opposition to this removal plan. Seven of the Clanmothers of the matriarchal Choctaws voiced their discontent, as did all of the six thousand Choctaws that assembled at Dancing Rabbit Creek Treaty signing grounds. The U.S. treaty commissioners warned the U.S. would dispatch federal troops to force the tribe out of their homeland. After several days of talk the U.S. rolled out the whiskey and the “Whiskey Treaty” was signed. This began the long march of the Choctaw to Oklahoma.

Oral session D /// Room 204 /// 3:15 p.m.

An Abstract Approach to Nature Awareness

Sarah Lin Trump

Cynthia Gabriel, faculty mentor

How we understand and interact with nature is often an unconscious part of our culture. In this paper, I explore American cultural attitudes and feelings about the natural world. Grounded in ethnographic research that highlights the cultural dimension of nature stewardship and the psychological and biological benefits of certain cultural practices over others, I create the “Who is This Tree?” project. Its aim is to provoke thoughtful, playful, reflective awareness of previously unconscious cultural patterns in an attempt to change Americans’ often unhealthy relationship with the natural world. I find that engaging the community is more effective than classroom passivity.

Oral session A /// Kiva /// 9:30 a.m.

Cherokee and Choctaw Kinship: Traditional and Contemporary Practices

Luke Wanty

Bradley Ensor, faculty mentor

Severe demographic and economic changes are known to change kinship practices. In the case of Native Americans, impacts from Euro-Americans set in motion a long period of kinship change from the collective (clans) to the private (nuclear families). Anthropological ethnographies comparing past and present Cherokee and Choctaw kinship and social organization are described. Cherokee and Choctaw traditional kinship was based on matrilineal clans but changed toward a greater emphasis on patriarchal nuclear families, followed by a comeback in more traditional values in the recent past.

Oral session B /// Room 104 /// 10:45 a.m.

Testing Historical Site Interpretations

Alicia Williams

Bradley Ensor, faculty mentor

Interpreting landscapes is a major topic in historical archaeology. The EMU Archaeology Field School makes three assumptions when interpreting 19th century rural landscapes in Southeast Michigan: high density trash deposits with diverse and large artifact sizes indicate domestic residential areas, low density trash scatters with small artifact sizes indicate fields, and small, high-density trash deposits indicate roadside dumping. These assumptions are tested using archaeological survey data from a recently abandoned farmstead. The results are significant for guiding archaeological interpretations on rural historical landscapes.

Oral session C /// Room 104 /// 2 p.m.

DEPARTMENT OF WOMEN'S AND GENDER STUDIES

Sylvia Plath's Revisionary Mythology

Cosette Elizabeth Girardot

Elisabeth Daumer, faculty mentor

Sylvia Plath is often considered a confessional poet who used common fairy tales, myths, and archetypes in her poetry for personal, expressive purposes. Plath would twist the characters and speakers within the mythical tales by projecting characteristics of herself defined by the gender binaries that shaped her roles as wife, mother, daughter, and writer. While her suicide and depression typically suggest that the tools Plath employed were meant to expose her inner struggle with opposing gender binaries, there is evidence that Plath purposefully used these twisted tales and confessions to force readers to consider a feminist perspective and embody the debate of gender roles for themselves.

Oral session B /// Student Art Gallery /// 10 a.m.

Becoming the *Other*: The Self Annihilation of Sylvia Plath and Ted Hughes

Barbara Hubbard

Elisabeth Daumer, faculty mentor

Through their linguistic alchemy, Sylvia Plath and Ted Hughes destroyed themselves to become the *other*. Both poets' dedication to the symbolic annihilation of self through the derailment of language was an all encompassing burden that plagued their mental health, their individual pieces of writing, and ultimately their family life. Through their creative discipline and manipulation of language Plath and Hughes sought to transcend into *otherness*. They succeeded by using mythological references, the personification and domestication of animals, and unusual poetic imagery. And yet, they annihilated themselves in the process.

Oral session B /// Student Art Gallery /// 10:15 a.m.

The Mystery of Sylvia Plath's "Detective"

Ashley Powers

Elisabeth Daumer, faculty mentor

Many of Sylvia Plath's poems offer mysteries that challenge readers' interpretive skills. Her ambiguous poem "The Detective" has led critics to many different interpretations. While some critics have argued that the poem explores Plath's views on marriage, patriarchal oppression, intrigue, or feminist point of view, I read the poem as Plath's encrypted presentation of the connection between motherhood and death. Plath uses connotative language and macabre imagery to convey her unconventional messages about motherhood to the reader.

Oral session B /// Student Art Gallery /// 10:30 a.m.

"St. Roach": A Failed Attempt at Rewriting the Racist Script

Molli Shomer

Elisabeth Daumer, faculty mentor

Muriel Rukeyser, an American poet and vocal human rights activist, often wrote of social inequality and racial injustices. The speaker of her poem "St. Roach," first published in 1976, relates a story of her prejudiced upbringing, her struggle to eradicate her own biases and an attempt at bridging the schism between herself and the object of her discrimination, a roach. A figurative and contextual reading of the poem suggests the roach acts as a metaphor for African Americans. This metaphoric reading is further complicated at the poem's conclusion, as the speaker fails to extricate herself from her racist upbringing, inadvertently perpetuating the racist sentiments of her past.

Oral session C /// Kiva /// 1:45 p.m.

DEPARTMENT OF WORLD LANGUAGES

Benefits of Using TED Talks in Teaching English as a Second Language

Julia Czyborra, Kristin Tenney and LeAnne LaFratta

Zuzana Tomas, faculty mentor

Computer assisted language learning (CALL) is becoming increasingly common in teaching second language (L2) learners. L2 learners respond positively to CALL activities (O'Brian & Hegelheimer, 2007). One specific CALL activity with great potential in L2 teaching is based on Technology, Entertainment, Design (TED) talks. These online talks range from informal, high-interest stories to academic, lecture-like presentations. Because of the various topics and high interest content, TED talks have been reported to motivate L2 learners (DaVia Rubenstein, 2012). This presentation examines the value of TED talks and provides specific instructional activities that can be used to teach L2 learners.

Oral session A /// Room 320 /// 9:15 a.m.

Children of the Disappeared in Argentine Film and Testimonies

Melissa Ann Dreffs

Deanna Mihaly, faculty mentor

During the Dirty War in Argentina, approximately 30,000 people disappeared, including nearly 1,000 women that bore children during their incarceration. This study examines the representation of the "children of the disappeared" in various media outlets such as film and testimonial writing. With birth being the ultimate expression of life, the military regime used torture and cruel birthing practices to further the dehumanization of women prisoners. In films, giving birth is equated with punishment and secrecy. In literature, the use of a poetic voice is used to diminish the cruelty of the experience while enhancing the moment for the reader.

Oral session D /// Room 330 /// 3:15 p.m.

Under the Shadow of Francisco Franco: The Influence of Literary Censorship on Post Civil War Spain

Carly Danae Evich

Alfonso Illingworth-Rico, faculty mentor

Following the Spanish Civil War, the dictatorship of Francisco Franco exercised an extreme control over Spain. In efforts to strengthen his power and inflict a national identity upon his people, Francisco Franco implemented strict, literary censorship of Spanish, postwar literature. Consequently, three literary divisions were manifested that ultimately reflected the visions of a dismembered nation, draped under a new blanket of silence. Through an analysis of the aforementioned literature, this presentation intends to lift this historical blanket of silence by discussing what was never before able to be published in Spanish, postwar literature: the memory of the past.

Oral session D /// Room 330 /// 3 p.m.

Volkswagen: Two Cultures, One Car

Theodore Henry Hauke

Margrit Zinggeler, faculty mentor

The history and development of marketing strategies of German and American automobile manufacturers in the 20th century had a great impact on corporate identities. This presentation focuses on the similarities and culturally different ways of advertising cars in the post-World War II era when the automobile industry and culture in both countries were intricately connected. This presentation aims to shed light on our understanding of intercultural marketing and advertising on a global scale.

Oral session B /// Room 304 /// 10:45 a.m.

Parlez-vous Français? Should Students in International Fields be Required to Take French?

Anjali T. Martin

Genevieve Peden, faculty mentor

French, one of the two working languages of the United Nations, is spoken by over 200 million people, yet it is not required for students going into international fields at Eastern Michigan University. This presentation examines why students going into International Affairs and/or International Business select French to study, or why they do not. Through the use and statistical analysis of survey responses, this presentation attempts to explain why students place value on certain languages over others, in addition to examining an overall research question of whether or not French should be the foreign language requirement for International Affairs and International Business students.

Oral session A /// Room 320 /// 9:30 a.m.

Rebuilding “the Place in the Sun”: How German Women and Guest Workers Made It Possible

Thomas Patterson

Margrit Zinggeler, faculty mentor

In 1911, Kaiser Wilhelm II declared that Germany had achieved “its place in the sun” with the strongest military and economy in Europe. After two world wars and two devastating depressions, Germany was in its darkest hour. While the *Wirtschaftswunder* (economic miracle) and the Marshall Plan contributed significantly to the rebuilding process, the work of *Truemmerfrauen* (women of the rubble) and *Gastarbeiter* (guest workers) was essential in revitalizing the economy and the morale of the nation after the fall of the Third Reich. This presentation highlights the contributions of the *Truemmerfrauen* and *Gastarbeiter*, who have long been ignored.

Oral session B /// Room 304 /// 11 a.m.

COLLEGE OF BUSINESS



DEPARTMENT OF ACCOUNTING AND FINANCE

Unemployment by Educational Attainment in the United States

Isiah Beauchamp

Khairul Islam, faculty mentor

As of November 2013, the employment rate reached its lowest level in five years at 7%, with 203,000 jobs added in November alone. This shows a growth in the U.S. economy after the onset 2008 financial crisis. This presentation reviews existing forms of employment in the U.S., investigates socio-economic and health consequences resulting from unemployment, and evaluates if there is any significant difference in unemployment rates for people aged 25 years and older by educational attainment and gender using appropriate statistical tests.

Oral session C /// Student Art Gallery /// 1:15 p.m.

The Best Travel Case

Brian Scott Fischer

Barbara Ross, faculty mentor

“The Best Travel Case” is a comprehensive case that tests graduate accounting students’ knowledge of several aspects of a relational database through hands-on experience utilizing the pre-designed system used by a small vacation merchandiser. This case has been developed to highlight the important differences between general ledger methods versus relational database methods. This case covers REA and record layout diagrams, transactions, and relational queries to create financial statements. The tasks contained within this case demonstrate a large number of common job responsibilities of a public accounting employee and prepares students for their future careers.

Oral session B /// Room 350 /// 10:30 a.m.

The Role of American Culture in the Convergence Process of International and United States Financial Accounting Principles

Umarbek Ulug'bekovich Rabbimov
Elizabeth Devos, faculty mentor

Economic integration around the world has triggered the need for a common accounting standard. The International Accounting Standards Board (the standard setting body for International Financial Reporting Standards, IFRS) and the Financial Accounting Standards Board (the standard setting body for U.S. Generally Accepted Accounting Principles, GAAP) have been working to converge their two respective accounting standards since 2002. This study analyzes the role of American culture in the process of this still unfinished convergence. The study involves theories of cultural influence on the development of accounting systems by examining their relevance to the ongoing convergence process.

Oral session B /// Room 350 /// 10:15 a.m.

Import-Export Discrepancies in the United States

Gezim Rreshpja
Khairul Islam, faculty mentor

This research investigates the import-export discrepancies in the United States over time. The United States continues to import more and export less each year. What are the causes of the import-export discrepancies? What models can explain the import-export trends? Can we make a prediction of imports using the export history data? We seek to answer these questions and more using historical data on overall import-export and related phenomena. Also, we intend to determine if the import-export discrepancies over time are statistically significant using appropriate tests.

Oral session B /// Room 350 /// 10 a.m.

An Assessment of Trends of Labor Force Participation Rate in the United States

Rongyan Xu
Khairul Islam, faculty mentor

The labor force participation rate (LFPR) measures the percentage of those individuals who are able to work and demonstrate a willingness to work. In recent years, the LFPR in the United States is decreasing and is at the lowest level since 1987. In our study, we investigate the causes of decreasing LFPR, explore the trends in the LFPR over time and evaluate if there is any significant difference in LFPR with respect to age group and gender. This research employs statistical tests such as ANOVA and T-test to assess the differences in the LFPR.

Oral session C /// Student Art Gallery /// 1:30 p.m.

Reverse Merger: A Shortcut for Private Company Going Public

Rongyan Xu

Yu Zhang, faculty mentor

Reverse Merger (RM) is a common, convenient way for a private company to be publicly listed in the U.S. stock market by acquiring the shell company. Compared to Initial Public Offering (IPO), an alternative method to go public, RM is faster, less costly, and subject to less stringent listing requirements. Thus, RM has gained its popularity in small and medium firms, particularly Chinese firms that consist of 85% of all foreign RMs. This study compares the differences between RM and IPO. By collecting a small sample of Chinese firms that have gone public in the U.S., we also analyze Chinese firm characteristics in determining their choice of RM or IPO to the U.S. market.

Oral session D /// Room 301 /// 3 p.m.

DEPARTMENT OF COMPUTER INFORMATION SYSTEMS

Social Media and TV Ads: The Case of Super Bowl Tweets

Soliman Saleh Almahmoud

Chong Oh and Sheila Sasser, faculty mentors

The 2014 Super Bowl ads are priced at \$4 million every 30 seconds. Such a high price worries businesses that are always seeking better monitoring of their return on investment (ROI). Social media (e.g. Twitter and Facebook) presents a nascent channel of communication that is real-time, high volume and interactive that may provide a more timely feedback on ad performance. This study seeks to understand how Twitter hype surrounding Super Bowl ads relate to the outcomes in Super Bowl ad ratings. Understanding these relationships may help businesses successfully monitor their investments as well as researchers to expand on future social media inquiries.

Oral session A /// Room 301 /// 9:15 a.m.

Stocktwits Analysis

Dakoda Johnson, Marc Hamady, Javad Kouchakzadeh and Joshua Eastman

Chong Oh, faculty mentor

Stocktwits is a social media channel aimed at providing investors with up-to-date microblogging style information about various stock investing information. Our research analyzes Stocktwit posts and their correlation to stock movements in the marketplace. We discovered correlations between both the count as well as the sentiment of microblogs for various stock tickets with stock performance outcomes such as volatility, volume, and returns. This study demonstrates that social media may provide additional information in aiding investor decision making.

Oral session A /// Room 301 /// 9 a.m.

Ann Arbor Hands on Museum's Social Media Efforts

Sangeun Lee

Bud Gibson, faculty mentor

Social media increasingly continues to influence search marketing campaigns. Non-profit organizations these days own social media accounts to promote search marketing campaigns vigorously. Last year, I worked with Ann Arbor Hands on Museum (AAHOM). I was in charge of managing Google AdWords and Analytics accounts. It helped me to understand Analytics better and now I want to focus on its social media efforts. This study discovers social media efforts that AAHOM have in use, and then makes suggestions based on their current social media strategies.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

DEPARTMENT OF MANAGEMENT

The Role Non-Cognitive Abilities Play in Predicting Students' Academic Success in College

Timothy Harrison

Crissie Frye, faculty mentor

It is widely known that cognitive ability tests serve as indicators (predictors) of students' academic success in college, but what if there are other indicators just as important? Numerous studies report strong, positive correlations between cognitive ability, as measured by cognitive ability tests, and one's academic success in college; however, there are few studies that examine the relationship between academic success and non-cognitive characteristics such as emotional intelligence, personality traits, and motivational tendencies. This research examines the extent to which non-cognitive abilities correlate with the academic success of college students above and beyond cognitive ability.

Oral session C /// Room 301 /// 1:15 p.m.

R&D Performance Business Plan

Daniel Wiacek

Elizabeth Sikkenga, faculty mentor

As a management major, opening my own business is the best way to utilize everything I have learned through the management degree program. I am creating a business plan for a company that I am interested in opening after my graduation in the spring. This presentation presents a very detailed and in-depth business plan for my company.

Oral session C /// Room 320 /// 2:15 p.m.

“This Is It”: A Guide to Developing a Successful Event

Bader Yousef

Christine Day, faculty mentor

“This Is It” is a talent show that features dancers, singers, poets, and musicians that will take place on April 2, 2014 in the auditorium of the EMU Student Center. This presentation covers ways to put on a professional student organization event with limited resources by explaining how to plan and fund the event, find on-campus/corporate sponsors, recruit performers or volunteers, and promote the event. In addition, this presentation also discusses an actual analysis on the progress of the show “This Is It,” including achievements, challenges, and tips to avoid drawbacks that have been encountered.

Oral session D /// Kiva /// 3 p.m.

DEPARTMENT OF MARKETING

Detroit is a Creative Corridor: Why Millennials are Reclaiming and Reinventing Detroit

Erica Coran, Michael Siemasz and Tyler Murch

Non-presenting, co-authors: Adam Franceschi, Alison Kangas,

Evan Maguire, Gregory Gossard and Michael Kruzman

Sheila Sasser, faculty mentor

A team of EMU advertising students develop an integrated marketing communications plan for Detroit using media research, in-depth interviews, participant observation, broadcast programming events, and involvement in the Detroit 20/20 Project to explore how Detroit is being redeveloped and attracting new Millennial generation residents as an urban lifestyle choice. The group collaborated with Adcraft, agencies at a Detroit 20/20 luncheon, and D Show to shoot video, interviews, attend discussion panels, and interview some of the Millennial Newcomers of Detroit. Research will result in new messaging, media planning, and brand positioning of Detroit as a city that adapts to address needs.

Oral session D /// Auditorium /// 3:15 p.m.

Strategies for a Chinese Company to Enter the Latin American Auto Market

Brock Foster

David Victor, faculty mentor

This research examines various entry strategies for international companies looking to enter the Latin American Market. Included are examples of research from my experience as a market research intern for a multinational Chinese-based company. Analyzed are processes such as direct export, foreign direct investment, and partial manufacturing abroad. Advantages and disadvantages of these processes are identified and methodology is given on how to facilitate the selection process. Based on these findings, a destination can be selected to conclude the analysis.

Oral session D /// Room 301 /// 2:45 p.m.

The Experience of the United States Economic Foreign Policy in Kosovo

Trevis Quincy Harrold

David Victor, faculty mentor

Working overseas in the economic section of the U.S. Embassy in Kosovo was very challenging. I had to understand the Kosovo Parliament government system and the economic structure of the country. The economic section allowed me to see businesses invest in Kosovo and how the Kosovo government promotes these investments. The economy is continuously affected by the actions of the government. In international business, the understanding of cultures is very important. One example of a cultural difference is the possibility of a language barrier. This oral presentation is a reflection of lessons learned while overseas and how international business is an essential aspect of U.S. foreign policy.

Oral session B /// Room 350 /// 10:45 a.m.

How Internship Experience Can Help You Grow

Anna Lazarenko

David Victor, faculty mentor

This presentation focuses on the importance of having an internship in your field to prepare for success in the future. I am working as an intern at Tata Technologies, which is an international company. Throughout my time working there I have gained an insight into the corporate world, worked hand-in-hand with business executives and presented some innovative ideas that benefited the company. My presentation focuses on what I learned from the experience, some helpful tips on how to apply for internships, and an overview of the projects that I worked on.

Oral session B /// Room 350 /// 11 a.m.

Hershey's Take 5 Relaunch

Kart Ojasaar

David Marold, faculty mentor

Last year an article appeared in "Forbes" magazine saying that Hershey's Take 5 candy bar was the "most undervalued brand in the world," and customers agreed. Even though the Take 5 is very popular with people who have tried it, its sales decreased three years after the product launched under the Hershey's company. The objective for this case research is to relaunch the candy bar. This research includes a SWOT (strengths, weaknesses, opportunities, and threats) analysis, target market, marketing mix, and budget for the brand.

Oral session D /// Kiva /// 3:15 p.m.

COLLEGE OF EDUCATION

Let's Play
Board Games



DEPARTMENT OF SPECIAL EDUCATION

Educators' Perspectives of Students with Emotional Impairments and Their Same-Sex Behaviors

Stefanie Arrieta

John Palladino, faculty mentor

Gay/lesbian (GL) youth are at higher risk for in-school harassment, a variety of adjustment-related disorders, substance abuse, self-destructive behaviors, truancy, and dropping out. Although some studies have been conducted in regard to GL youth, the need remains for investigations specifically focusing on GL youth with emotional impairments. With school being a significant social influence for all students, it is essential for research to include both GL students and the educational institution. This in-depth qualitative study, sponsored by EMU's Center for the Study of Equality and Human Rights, describes K-12 teachers' perspectives of this very important topic.

Oral session D /// Room 304 /// 3 p.m.

Winning Words: The Impact of Curriculum-Based Board Games on Sight Word Recognition

Kaytie Corlew

Jennifer Desiderio, faculty mentor

A review of the professional literature has shown the positive impact that curriculum-based board games have on students' attitudes toward learning. However, few studies have been conducted regarding the overall effectiveness of curriculum-based board games in helping students reach their academic goals. The research discussed in this presentation specifically examined noncommercial curriculum-based board games and their ability to facilitate the acquisition and retention of common sight vocabulary for students with mild or moderate cognitive impairments.

Oral session C /// Room 301 /// 1:30 p.m.

The Co-Constructed Student Experience: An Ethnographic Study

Jason Michael DeCamillis

Alicia Li, faculty mentor

Through careful, reflexive, qualitative inquiry, this study uncovered complex student experiences while exploring the co-constructed institution that is special education. This research focused on students who are blind or visually impaired, a historically marginalized and misrepresented sub-population in K-12 special education settings. By delving into these rich individual experiences, educators can better coordinate appropriate interventions and enhance the day-to-day reality of students with low-incidence disabilities in special education.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Special Education Teachers' Perspectives on Transitional Planning

Leeann E. Jones

John Palladino, faculty mentor

The transition from high school to adult life can prove difficult for any student. For students receiving special education (SE) services, however, the transition can be even more challenging. To address the challenges, SE teachers and students work together to develop a transition plan as part of the student's Individualized Education Program. SE teachers strive for positive post-secondary outcomes, but everyday realities often pose barriers. This presentation describes the results of a qualitative study in which special education teachers shared their insights into identifying and bridging gaps between best practices and the realities of transitional planning.

Oral session D /// Room 304 /// 2:45 p.m.

The Benefits of Peer Interaction for Special Education and General Education Students

Kassy Lodge

Jennifer Desiderio, faculty mentor

The attitudes and behavior of students without disabilities toward their peers with special needs seem to be critical factors in the success or failure of inclusion. Often, general education students are unprepared to interact with the different abilities and communication styles of their classmates. This poster illustrates the benefits of organizing peer interaction into the daily routine of the school day, for both general education and special education students, through a review of current research. The effects of varying levels of adult support in guiding peer interactions are also examined.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

People Are People: Benefits of Inclusive Service

Sarah Mueller

Jacquelyn McGinnis, faculty mentor

College institutions often emphasize the importance of volunteerism for their students. When research revealed a lack of volunteer opportunities for college-aged individuals with disabilities at EMU, a pilot program was developed for inclusive service. After a diverse group of students engaged in a week-long service trip tackling the issues of hunger and homelessness, benefits were discussed and evaluated. Rewards included pride, positive attitude change, skill development and generalization, empowerment, improved social interaction, and attainment of knowledge about social justice issues.

Oral session D /// Room 304 /// 3:15 p.m.

Inclusive Higher Education: Transition Programs at Post-Secondary Institutions

Kristina Oberly

Derrick Fries, faculty mentor

Transition services facilitate the shift from high school to post-secondary activities for students with disabilities. Although educators and policy-makers continue to strive for inclusion in K-12 education, students with intellectual disabilities are being left behind after high school. College campuses provide access to educational opportunities, employment, and community resources. However, while some transition programs for students with disabilities exist on college campuses, most are still located in high school settings. This presentation discusses barriers to transition programs being included on college campuses from an administrative perspective.

Oral session B /// Room 320 /// 10 a.m.

The Five Finger Discount: A Cost Effective and Successful Tier II Intervention

Sarah Orr

Linda Polter, faculty mentor

In the Response-to-Intervention service delivery model, Tier II interventions target small groups of students who need more focused instruction to reduce the academic and/or behavioral issues that interfere with their success in school. Check In Check Out (CICO) is a cost effective, minimal time and resource commitment Tier II method that has been shown to positively impact a student's behavioral challenges while also improving his/her academic goals and achievement. The project on which this poster is based examined the protocols of several schools to ascertain whether or not, and to what extent, this Tier II technique is being utilized.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Using iPad Applications to Meet Pediatric Patients' Psychosocial Needs

Molly Peabody

Ann Orr, faculty mentor

Prolonged hospitalization presents great challenges for ill children. Beyond the obvious biological/medical needs, hospital personnel must consider the psychological (mental and emotional) and social (environmental) implications of being sick or injured. Medical procedures and pharmaceuticals treat the body, but what about the mind? This researcher, in partnership with the University of Michigan Mott Children's Hospital, investigated how specific iPad applications can help children manage pain and anxiety while improving their coping and goal setting skills.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Speech-Language Services for Bilingual Students: Relevant Issues and Concerns

Mary Kathleen Scott

Jennifer Desiderio, faculty mentor

Speech-language pathologists (SLPs) are ethically responsible for providing the best possible therapy to their clients. As the number of non-English-speaking homes is increasing in the United States, so is the need for SLPs with a thorough understanding of how to appropriately service multilingual clients. This presentation describes differences in monolingual and bilingual language acquisition and development, assessments used to differentiate between a language difference and a language disorder, and cultural factors that should be considered when providing speech-language services.

Oral session A /// Room 320 /// 8:45 a.m.

DEPARTMENT OF TEACHER EDUCATION

Disproportionally Diverse Schools: Danger Ahead!

Logan Ovella Beatty

Jacqueline LaRose, faculty mentor

Elementary schools in the United States have an ever-diversifying population. While the proficiency of the education system dominates headlines, we often overlook an imperative component related to student success, the disproportionality of diversity among students and educators at the elementary level. This disparity affects all aspects of education from policy creation, research production, to in-class instruction. This investigation delves into that disproportionality, how it perpetuates low levels of cultural competency in a time when we are preparing students as global citizens, and what we are doing to offset negative effects of the lack of diversity among educators.

Oral session A /// Room 320 /// 8:30 a.m.

African American Male Inclusion, Involvement, Perception, and Achievement at Predominantly White Institutions

Brandon Britt

Toni Stokes-Jones, faculty mentor

African American male achievement in higher education is an ongoing problem in the United States. Black males are less prepared for rigorous college-level work compared to peers from other racial groups causing low graduation and retention rates in higher education institutions (Bonner & Bailey, 2006; Palmer, Davis, & Hilton, 2009). This presentation discusses how involvement, inclusion, and perception of the institution they attend contribute to African American males matriculating successfully through college at predominantly white institutions (PWIs), as well as, what strategies PWIs are using to promote achievement and success for African American males.

Oral session C /// Kiva /// 2:15 p.m.

The Teacher as a Researcher: A Student Learning Analysis on Fractions

Ashley Chiado

Martha Baiyee, faculty mentor

In an era of evidence-based learning, teachers are charged with the responsibility to demonstrate their teaching effectiveness through demonstrated learning by their students. Therefore, the focus of this poster presentation is to share the purposeful analysis of results from a 4th grade math test. The display includes a description of the test, a discussion and display of results according to the distribution pattern of scores, group comparison such as gender, ability, ethnicity, age, etc. It concludes with a discussion of how systematic data analysis is paramount to effective teaching and learning.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Properties of Matter

Nick Greene

Patricia Williams-Boyd, faculty mentor

The focus of this presentation is on a 10-lesson unit to help students discover how matter transforms between three states: solid, liquid, and gas. The unit differentiates for students of all interests, readiness levels and learning profiles, and is learner-centered, as well as actively engaging.

Oral session D /// Room 304 /// 3:30 p.m.

A Descriptive Study: Presenting Children with a Model Prior to a Visual Art Activity

Emma Hagan

Martha Baiyee, faculty mentor

Avoiding teacher models in art activities has become a widely accepted strategy for effective teaching in early childhood settings. But there is limited empirical data readily available to support this practice. Therefore, this research examines children art representations after being presented with a model. The children are from a variety of age groups (i.e., infants and toddlers, prekindergarten, and early 5s) and attend the same early childhood program in the southeast region of Michigan. Implications of the findings in relation to research-based strategies that optimize development and learning of young children are shared.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Promoting Sustainability Literacy Across Elementary Grades Through Performance Assessments

Reshmie Liz Kottoor and Kristen Kus

Martha Baiyee, faculty mentor

The importance of promoting literacy is a fundamental guarantee that information leads to effective academic knowledge. The goal of this project is to demonstrate the comprehension of literacy through physical performance with the primary focus on word study and communication. Foundational skills, phonics, and vocabulary are all inclusive to this unit's success. This presentation shares a specific study of a third grade classroom where the students demonstrated their mastery of skills in communication by performing a creative and comprehensive skit using word study inquiry.

Oral session B /// Room 330 /// 10:45 a.m.

Through the Looking Glass: Using Natural Play Context as a Medium for Assessment

Krystal McCloud

Martha Baiyee, faculty mentor

Many early childhood professionals believe the best way to assess young children is through observation of the child in their natural state. As teachers conduct observations, they learn information about different aspects of a child's development in the areas of social, emotional, cognitive, and physical. This poster presentation showcases the importance of observations and how to utilize it as an assessment tool to understand a child's developmental status.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

The Overrepresentation of African Americans in Special Education

Marcia Molett

Sylvia Jones, faculty mentor

Almost 40% of African American students are in special education programs, though they constitute only 17% of the general education population (Kunjufu, 2005). A conclusive explanation has yet to be reached as to why this disproportion exists, but multiple suggestions have been made. The ideas presented in this literature review focus on factors such as race, teacher perception and preparation, cultural differences, biases in norm-referenced testing, and culturally unresponsive curricula. The purpose of this research review is to gain an understanding of why these issues continue to occur, and what professionals can do to rectify this phenomenon.

Oral session C /// Kiva /// 2 p.m.

Earth: Space and Time—A Curricular Unit Challenging Students to Shoot for the Moon

Justina Spinale

Mary Margaret Sweeten, faculty mentor

Earth: Space and Time, was written to two sets of standards: Michigan High School Content Expectations, and personal standards created by the knowledge obtained throughout my university career. This presentation delves into the academic objectives regarding motions of celestial bodies and their effects, distance, and the cause of the seasons. Additional emphasis is on personal objectives specific to promoting creativity and using it to reach every student, repairing parent/guardian and community involvement, and celebrating the inclusion of every student regardless of ethnic background, gender, or exceptionality.

Oral session D /// Room 304 /// 3:45 p.m.

A Blueprint For Successful Assessment

Michelle Sprenkel

Martha Baiyee, faculty mentor

Half the challenge of planning a unit is creating a valid and reliable assessment plan. Creating a blueprint gives an educator the chance to lay out their assessment plan in a well-structured and organized way. The purpose of this presentation is to share an original blueprint and walk the participants through the process of creating a blueprint that includes systematic integration of formative and summative assessments that align with specific standards and outcomes. The session concludes with a discussion of the role of a blueprint in teacher efficacy.

Oral session C /// Room 301 /// 1:45 p.m.

Algebraic Expressions

Sean M. Warford

Mary Margaret Sweeten, faculty mentor

It is important for students to be able to accurately locate and solve algebraic expressions as well as be able to apply them to their everyday lives. In addition, students must not only learn the mandatory concepts, but also encourages them to take algebraic expressions to the next level. Therefore, this presentation focuses on the use of direct, inductive, and cooperative teaching and learning methods that enable student to display mastery of the concepts leading to the overall goal of learning algebraic expressions.

Oral session B /// Room 301 /// 10:15 a.m.

The Renaissance in a 12th Grade French Class

Caitlin Jennifer Wojtas

Mary Margaret Sweeten, faculty mentor

Making history fun and engaging is a coveted talent. This is exceptionally true for the history of a country that is not one's own. This comprehensive unit takes a journey through time and space to bring the wonder and majesty of 16th century France into a high school classroom setting. Students explore the New World with Jacques Cartier, socialize with King François I, and solve mysteries about ancient architecture. This presentation begins with the fantastic tale of a heroine, travels the globe, and ends with the tragic fall of a dynasty.

Oral session B /// Room 301 /// 10 a.m.

COLLEGE OF HEALTH AND HUMAN SERVICES



SCHOOL OF HEALTH PROMOTION AND HUMAN PERFORMANCE

Should EMU have a Football Program or Not?: A Panel Discussion with EMU Students

Eugene Evans, David Gibson, Daniel Mark Kretchman,
Jeremy Alonzo Lewis, Erin Elizabeth Traczek and Alan Willman
Thomas Cieslak, faculty mentor

A recent debate titled “Ban College Football,” hosted by Intelligence 2, a non-profit organization, resulted in an audience in favor of eliminating college football. Pre-debate poll results indicated that 16% favored the motion while 53% opposed it and 31% were undecided. Post-debate poll results indicated significant support for the motion with 53% for, 39% against and 8% undecided. Additionally, 61% of the online audience favored the motion while 39% opposed it. This panel discussion will focus on the challenges, obstacles and opportunities associated with a football program at EMU based on our review of the literature, data collection and analysis and recommendations.

Oral session D /// Room 344 /// 2:45 p.m.

The Effects of High-Intensity Resistance Training on Pre-Diabetes and CV Risk Factors: A Case Study

Alan Fredendall
Shel Levine, faculty mentor

The purpose of this case study was to follow progress of a 27 year-old male diagnosed with impaired fasting glucose. The subject performed a modified version of the Stronglifts resistance training program three times per week. Following a four-month intervention, the subject manifested clinically relevant reductions in body mass, fat mass, hyperglycemia, resting blood pressure and LDL cholesterol; while demonstrating clinically relevant improvements in HDL cholesterol, muscle mass, and overall strength. In addition, hemoglobin A1c returned to non-diabetic levels. These results may precipitate further research in how high-intensity resistance training is used in the treatment of diabetes.

Oral session B /// Room 330 /// 10:30 a.m.

Knee Kinetics While Landing During Anticipated and Unanticipated Jump Conditions

Kayla Marie Gustitus

Anthony Moreno, faculty mentor

Anterior cruciate ligament (ACL) injuries are of serious concern among female athletes that participate in sports such as basketball and soccer. Biomechanical factors including but not limited to ground reaction force (GRF) and knee torque (KT) are often associated with ACL injury. Prevention programs often use anticipatory jump training interventions to help reduce the risk of injury, although sport is often performed with unanticipated landing conditions. The purpose of this study is to determine the role of landing condition on both GRF and KT. Landing mechanics can play a key role in determining the most appropriate training approach to prevent injury.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Quantifying Sport Avidity and Symbolic Consumption of Collegiate Athletics: An Exploratory Study

Robert Thaddeus Krajewski and Lukas Scott Fosdick

Thomas Cieslak, faculty mentor

The information era has given birth to a new breed of sport management, which applies quantitative analyses, also known as sport analytics. However, there is minimal information available to practitioners describing or quantifying sport spectators or avid fans' expenditures of money, time and effort. The objectives of this project were: 1) examine the relationship(s) between supporters' sport identity and their motives; 2) identify which factors promote and/or produce a transition between sport identities; and 3) discover what motivates supporters to directly and/or indirectly consume sport. This session will discuss the scale development, data collection and analysis and recommendations.

Oral session C /// Room 330 /// 1:15 p.m.

Aortic Dissection: Diagnosis, Treatment, and Cardiovascular Health

Meghan Marie Lucero

Shel Levine, faculty mentor

Aortic dissection is defined as a tear in the intima wall of the aorta causing blood to leak into the media wall. This lesion allows blood entering systemic circulation to take two passageways; the true lumen or the false lumen. Diagnosis of this condition involves specific signs and symptoms, ECG changes, and noninvasive imaging. Aortic dissection is treated with some type of surgical intervention followed by exercise rehabilitation. Additionally, improving and maintaining cardiovascular health has been noted to reduce the risk of many types of heart disease by increasing the integrity of the arterial walls. This may lead to a reduced risk of aortic dissection.

Oral session B/// Room 330 /// 10 a.m.

Measuring the Sport Supporter Motivation Construct: Scale Redevelopment and Rationale

Brandon Deshawn Moore and Brandon Eugene Jackson
Thomas Cieslak, faculty mentor

The objective of this project was to develop a comprehensive sport supporter motivation framework and questionnaire. This project expanded previous research by adding four factors (i.e., Community Pride, Interest in Athletes, Knowledge of Sport and Customer Service) to the established SPEED scale (i.e., Social, Performance, (Self-)Esteem, Excitement and Diversion; Beaton, Filo & Funk, 2007). In addition, to examine the construct of sport consumption, this project examined the relationship(s) between sport identity and supporter motivation. A 9-factor, 27-item Supporter Motivation Scale (SuMS) was developed with data from a panel of experts, pilot test (n=112) and final sample (n=418).

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Performance Modeling of the Fourteen Weeks Preceding the Fastest Marathon Ever Run by an American

Michael Patrick Parker
Stephen McGregor, faculty mentor

Performance of an elite runner was modeled for the 14 weeks immediately prior to completing a 2:04:58 in the 2011 Boston Marathon. Using publicly available data, we generated Intensity Factor (IF), and session Normalized Pace (NP) and calculated session Training Stress Score (TSS) using the equation, $TSS = IF^2 \times hr \times 100$. Performance was modeled using an equation, $TSB = CTL - ATL$, where TSB represents predicted performance level, CTL represents fitness acquired by accumulation of TSS doses (42 days) and ATL represents fatigue as a result of recent TSS (7 days). In the four weeks preceding the event, load was reduced 45% while intensity and frequency were maintained.

Oral session C /// Room 330 /// 1:30 p.m.

Knee Kinematics While Landing During Anticipated and Unanticipated Jump Conditions

Jacquelyn Swartz
Anthony Moreno, faculty mentor

Anterior cruciate ligament (ACL) injuries are of serious concern among female athletes that participate in sports such as basketball and soccer. Biomechanical factors including but not limited to knee joint flexion (KJF) and time to peak knee flexion (TPKF) are often associated with ACL injury. Prevention programs often use anticipatory jump training programs to help reduce the risk of injury, although sport is often performed with unanticipated landing conditions. The purpose of this study is to determine the role of landing condition on both KJF and TPKF. Knowledge of landing mechanics can play a key role in determining the most appropriate training to prevent injury.

Oral session C /// Room 330 /// 1:45 p.m.

SCHOOL OF HEALTH SCIENCES

Feeling Good: The Relationship Between Health and Happiness

Chelsea Patricia Devitt
Minnie Bluhm, faculty mentor

Do happy people live longer? Could looking on the bright side mean less flu and a healthier heart? Does hopefulness protect against diabetes and hypertension? These kinds of questions are now being explored in a new area of public health that attempts to document connections between health and emotion (H&E). This project aims to 1) identify and summarize current thinking on H&E in areas such as stress, mood, optimism and social support; and 2) develop evidence-based educational resources for undergraduates to increase awareness and knowledge of H&E links. This work is highly relevant, given that prevention is increasingly a focus of cost savings and improving health outcomes.

Oral session D /// Room 320 /// 3:30 p.m.

Are Organic Foods More Beneficial to Our Health than Nonorganic Foods?

Karma Elchanti
Anahita Mistry, faculty mentor

Pesticides are used on crops to kill insects, weeds, and fungi in order to ensure the survival of the crops. However, traces of these chemicals may remain in our foods. Some crops may also be genetically engineered in order to improve a certain characteristic. The use of pesticides and genetic engineering may be potentially harmful to our health. Organic foods come from crops that are grown without using these methods. The aim of this study is to discuss the regulations for a food to be certified organic, the differences in the composition of organic and nonorganic foods, and the scientific evidence available to determine whether it is more beneficial to consume organic foods.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Soy in the Spotlight: Tofu Scramble Culinary Demonstration

Callie Louise Gavorek
Alice Jo Rainville, faculty mentor

Soy is a high quality protein, rich in minerals such as iron, calcium, and magnesium. This legume also contains phytic acid, trypsin inhibitors, glyceollin I, and isoflavones, all of which have preventive and positive effects on hormone-related cancers such as breast and prostate cancer. Soy comes in a variety of forms including tofu, tempeh, soy milk, and its whole form, soy beans or edamame. This culinary demonstration shows audience members how to use tofu, a bland soft cheese-like food made by coagulating hot soy milk, in a traditional breakfast dish, scrambled eggs. This easy recipe is great for athletes, vegetarians, and all who seek a protein-rich breakfast.

Oral session B /// Room 330 /// 11 a.m.

Factors Influencing Choosing EMU from an Occupational Therapy Student Applicant Perspective

Joy Schollmeier

Sharon Holt, faculty mentor

Eastern Michigan's occupational therapy program is one of seven competitive programs in Michigan. The purpose of this study was to identify and understand factors that contributed toward potential applicants choosing Eastern Michigan University's occupational therapy program. Results provide discussion on how the occupational therapy program and the University can modernize dissemination of information for the occupational therapy program, and reach and recruit the intended audience of exceptional and diverse students. Implications associated with program growth are also discussed.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Diet and Physical Performance in Postmenopausal Women

Stephanie Shaw

Heather Hutchins-Wiese, faculty mentor

Proper dietary intake and physical activity are effective lifestyle strategies used to reduce the risk of chronic health conditions and, in turn, promote healthy aging and an independent livelihood for older adults. The aim of this preliminary study was to characterize dietary intake with comparisons to national recommendations and explore associations with physical performance in postmenopausal women. Dietary assessment and evaluation was based upon self-reported mini nutritional assessments and three-day dietary intake logs. Physical performance was assessed using the following four key peak performance measures: handgrip, repeated (5x) chair raises, walking speed and balance.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Alternative Therapies: Musical Therapy Recognized as Medicine

Ellise Smith

Robbaya Green-Weir, faculty mentor

What do John Legend, Maroon 5, pain and stress relievers have in common? According to research studies conducted by peer-reviewed sources, musical therapy is a concept that has been used since the late 1700s to reduce pain and stress within patients. Musical therapist and health care providers have stated that the use of musical therapy should be recognized as a practice in medicine. Based on the research presented, supplementing medical regimens to include musical therapy has continually helped improve health outcomes. As treatment options become readily available, many people are using musical therapy as an alternative medical treatment option.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Moving Toward a Health Conscious Society

Nicholas Turicek

Sandra Pernecky, faculty mentor

Today in America statistics on both childhood and adult obesity have shown alarming growth. The problem is potentially rooted in lack of nutrition education and awareness. There are many isolated programs sponsored individually by both government and private organizations that help educate youth. However these programs are not universally supported, and options for the adult population appear to be more limited than for youth, due to lack of time and money among other factors. This research looks at a universal solution to educate and empower communities in regard to improving nutrition and health. This program may offer steps toward decreasing obesity in the community.

Oral session D /// Room 320 /// 3:15 p.m.

SCHOOL OF NURSING

Physiological and Psychological Effects in Pediatric Trauma

Steven Filimon

Angela Lukomski and Sandra Restaino, faculty mentors

The presenting physiological and psychological after-effects of pediatric trauma ultimately determine the quality of life and lasting effects experienced by pediatric patients. There are life-long outcomes based on the different types of trauma and severity. Our research focuses on the most appropriate assessments to enable nurses to deliver high quality care based on the type of trauma the pediatric patient experienced. These are crucial factors in determining the overall outcomes for pediatric patients. Additionally, we explore tools that may be utilized by health care professionals to facilitate excellence in the care of this population.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Experiences of Mentoring Students: Lessons Learned from the EMU School of Nursing Pilot Program

David Kolman

Angela Lukomski and Sherry Bumpus, faculty mentors

The benefits of peer mentoring programs in public universities are well documented across the global community. There is increased confidence and enhanced personal growth among both mentors and mentees and decreased anxiety in mentored students. Additionally, both groups demonstrate increased leadership skills, develop professionally and see improved grades. The pilot mentoring program at EMU yielded several of these benefits among participants. Interest waned in some students as they reverted to traditional clinical group support. Lessons learned and subsequent changes ensure that mentoring remains a vital part of the EMU experience that prepares them for professional practice.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Psoriasis as an Independent Risk Factor for Cardiovascular Diseases

Elena Segev

Sandra Restaino, faculty mentor

Psoriasis is an autoimmune condition affecting 2-4% of the population. Initially treated as a skin disease, psoriasis was found to have a close connection to immunology. It is a multidimensional condition that is associated with environmental factors, hereditary traits, angiogenesis, severe stress, smoking, or alcohol abuse. During the last decade psoriasis was named as an independent risk factor for cardiovascular diseases. This review presents psoriasis on a cellular level, analysis data related to innovative findings, and how this new information will affect health care practice.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Psoriasis in Chronic and Acute Patients: A Comprehensive Care Guide for Practicing Nurses

Elena Segev

Sandra Restaino, faculty mentor

Psoriasis is a common autoimmune skin condition affecting 2-4% of the worldwide population. It is common practice for nurses who do not specialize in the field of dermatology to take care of patients with psoriasis as primary or secondary condition. This psoriasis guide serves as a helpful tool for nurses. The guide provides information regarding psoriasis' physiological features, risk factors, treatment, and expected adverse effects. The psychological affects of living with psoriasis on a day-to-day basis and the affect it can have on quality of life that includes special populations. Lastly, community services and resources are listed for nurses to use.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

The Human Immunodeficiency Virus and Our Community: Awareness

Jimis Shukri

Sherry Bumpus, faculty mentor

The Human Immunodeficiency Virus (HIV) was once viewed as a death sentence and an endless hope if a person was infected. With new medical technology and health improvements, society no longer sees this virus as a major threat. However, HIV is still spreading and newly infected individuals have to deal with the life-long complications resulting from the virus. According to the Office of Population Affairs, in 2012 approximately 1.1 million people in the United States were infected with HIV. The purpose of this research is to draw awareness to this treatable, yet still serious epidemic. With proper teaching and health preventions, one can decrease their risks for contracting HIV.

Oral session D /// Room 352 /// 3 p.m.

SCHOOL OF SOCIAL WORK

Sharing the Trials and Tribulations of Focusing on Graduation in Ypsilanti

Christopher Carter
Ken Saldanha, faculty mentor

Upward Bound is a college preparation program. It mentors adolescents and directs them toward a college pathway. EMU collaborates at Ypsilanti Community High School to run this program to reduce drop-out rates and to potentially lower society issues such as unemployment, crime, and dependence on social assistance. This project observes the influence that Upward Bound has on the future of two participants by assisting them in the preparation of their educational story. My presentation presents the challenges they face daily and how pursuing a post high school education can change the outcomes of their life.

Oral session B /// Room 320 /// 10:15 a.m.

Bisexual Stigma in Heterosexual and Homosexual Communities

Charae London-Terry
Jeanne Thomas and Yvette Colon, faculty mentors

Images of bisexuality often include stereotypes of bisexuals being “fence sitters” who fear revealing their sexual identity or are incapable of monogamy. This presentation explores bisexual stigma expressed in heterosexual and homosexual communities, and how stigmas reinforce invisibility and erasure of bisexuality/ bisexual persons. These stigmas were measured using a survey distributed to Eastern Michigan University undergraduates. Discussion focuses on counseling techniques for social workers and other helping professionals to use when counseling a bisexual person optimizing the effectiveness of professionals when providing services to bisexual people.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

The Effects of Media on Gender Development and Socialization

Rosaly Maldonado
Yvette Colon, faculty mentor

This study was conducted to review the effects of media on female adolescent development. We examine other ways that females can be socialized outside of media, but maintain a focus specifically on media and its effects. Content analysis of different forms of media has consistently found that media have a tremendous effect on how females perceive their bodies and view themselves as they grow up. Females are not the only ones affected by media, as research has indicated that males also are influenced through the media by being depicted as more powerful and superior to females. The personas shown within media put an extensive amount of pressure on both male and female adolescent development.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Poverty: A Disease

Melissa Meyer

Jennifer Kellman Fritz, faculty mentor

Poverty is a disease. We have all heard stories about or experienced aspects of poverty such as not being able to afford insurance, food, utilities, or rent. Poverty could be viewed as a disease like alcoholism. That is not to discount or belittle alcoholism, but to stress the severity of poverty. Poverty is often hereditary, and can be traced back several generations. My research entails evaluating poverty as a disease, the evidence of it, and the ramifications of what it means.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Mentoring: The Impact It has on Non-Traditional Students Toward the Completion of a College Degree

Ebony L. Walls

Professor Yvette Colon, faculty mentor

Mentoring has been shown through previous research to have a lasting and positive effect on one's academic, personal, and professional careers. Many programs provide at-risk youth mentoring, but what about those individuals who were once classified as at-risk, but are no longer youth? Those seeking higher education, but are unsure how to proceed are referred to as non-traditional college students. This presentation examines the disparity of mentoring resources available to non-traditional college students and at-risk youth. It evaluates different mentoring programs in higher education geared toward those students and provides feedback on service effectiveness from student perspectives.

Oral session B /// Room 320 /// 10:30 a.m.

COLLEGE OF TECHNOLOGY



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The Corner Stone Center

Belges Alemad and Titus Durrel Johnson
Shinming Shyu, faculty mentor

Outside vs. inside inspires the concept for this multi-purpose center, the University of Michigan Lane Hall, by creating a balance between the beautiful scenery outside and integrating it with the interior space. With a contemporary modern look, the space is energetic with geometric shapes and natural lighting allowing people to feel invited while paying respect to sustainability and green design.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

In-Class Smartphone Use and Its Effect on Student Learning

Ilkhomjon Amanov
Mohammadjafar Esmaeili, faculty mentor

With the advent of new devices, questions are raised about the use of technology, such as laptops, PDAs, and smartphones in the classroom, and the effect on student learning. One technology that is available for today's students and dominates the classroom is the smartphone. Smartphones allow the users to connect to the Internet, check email, and connect to social media. This study attempts to examine the relationship between using smartphones and college student learning in the classroom environment.

Oral session A /// Room 301 /// 8:45 a.m.

Design, Manage, Build: The Hicone Project

James Britton and Andrew Wolterman
Jim Stein, faculty mentor

Construction Management students at EMU worked with the Ann Arbor Housing Commission to help with facility improvements. These students, in a new special topics course called Design, Manage, Build, recently completed a community gazebo at the Hicone Site for low-income families on Packard Road. Students were challenged with designing the gazebo that blended in with the existing buildings on site and to take advantage of an overlook to Brown Park. Once the design was approved, the students actually built the gazebo and managed the construction process that included estimating, scheduling, project management, and safety management.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

MIOSHA Health and Safety Compliance Senior Capstone Project

Emily Campbell, Chelsea Skorupa, Jesse Adams and Kartik Patel
Harvey Lyons and Mary Brake, faculty mentors

This project is focused on bringing the dynamometer chamber at Bosal up to code. A vehicle can be driven into this chamber, where it is secured above the dynamometer. In basic terms, the “dyno” consists of four large drums in a pit beneath the floor, which allows the vehicle to be driven in place while the noise levels of the exhaust system are tested. The pit can be accessed for maintenance, but currently, it does not meet OSHA requirements. Our goals are to research OSHA standards and implement the needed changes in the dyno pit space and surrounding area, prevent Bosal from receiving OSHA noncompliance fines, with employees working in a safe and healthy environment.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Resources Unlimited: Edge Deletion Table Modifications

Alysha Clark, Jacob Parker, Kevin Pittel, Leon Murray and Matt Adams
Harvey Lyons and Mary Brake, faculty mentors

Resources Unlimited Company makes a variety of products for use by glass manufacturing companies. Among these products is their Edge Deletion Table. This table is designed to delete sputter coated edges of glass which then enables appropriate adhesion of sealants to the glass surfaces. Alternating directional ball casters are mounted along the table and allow for smooth easy movement of glass across the table. An edge deletion motor is mounted to a hinged mounting plate, which is mounted on the edge of the table, and swivels on a fixed axle in order to set/grind different widths of glass. The owners of Resources Unlimited are seeking more efficient maneuvers for the table.

Poster group 1 /// Room 310 /// 9–11:10 a.m.

Code Observation Project

Katie Demain and Jordan E. Foley
Shinming Shyu, faculty mentor

As Interior Designers it is our mission to design interior environments that meet users functional needs as well as keep building occupants safe in case of an emergency. This project was the ultimate result of IDE 318-Building Codes for Interiors that conducted an evaluation of Halle Library on EMU campus to identify components that ensure safety. The study encompassed imperative fire safety elements, such as building codes, industrial fire protection standards, fire rating materials, means of egress, etc. The project was executed through measurement and verification, interviews with code officials, and on site code compliance verification.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Multigenerational Northern Michigan Cottage Design with Sustainable Features and Materials

Alyssa Rose Eisenhauer
Maria Sipos, faculty mentor

Located on the shores of Michigan's beautiful Lake Leelanau, this dwelling combines natural textures, colors and light to create an inviting cottage. Intended as a summer, vacation home, and later as a permanent residence for the Smith Family, the house is designed to accommodate a multi-generational family. Using Universal Design and ADA compliant features, the house creates a safe atmosphere for all ages. Sustainable features and materials, including double glazed windows, energy efficient appliances, recycled flooring and low VOC paints, respect both the environment and the users.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

BioSand Water Filtration Device: Wood Mold Design and Construction

Aaron Thomas Howard
Jim Stein, faculty mentor

The OHorizons Foundation has worked closely with Engineering Technology students at Eastern Michigan University to develop and test a new wood mold design for their BioSand Water Filtration system. The filter is utilized in developing nations to provide (otherwise unavailable) safe drinking water. This is an integral part of the OHorizons Foundation mission: fighting poverty and hunger by improving the lives of at-risk children and women through locally implemented, sustainable, and scalable solutions. The project team succeeded in creating an improved wood mold design for high-yield casting. The new design is intended to be more durable than the original design already in use worldwide.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Sustainable Shelter Design

Madeline King and Britta Powers
Shinming Shyu, faculty mentor

The main principle of the sustainable shelter was to achieve a design both functional and aesthetically pleasing. The theories used in our shelter were geothermal heating and cooling and rainwater harvesting. The shelter features were ADA compliant, energy efficient, and water conscious. The features incorporated into the shelter were low gallon per flush toilet, energy star rated appliances such as dishwasher, washer, and dryer, LED Lighting, skylights, solar panels, and cross ventilation. The materials used in the interior were recycled or reclaimed, no or low VOC, and from a local renewable resource. The exterior was made up of Cedar siding and reclaimed chalkboards.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Redesigning the Fork-Hub Interface for the Hydraulic Regenerative Braking System

Jake M. Korytkowski, Chris Parker, Jon Spence and Robert Babits
Harvey Lyons and Mary Brake, faculty mentors

Since 2011 the Environmental Protection Agency has been working with Eastern Michigan University to develop a children's bike that incorporates the Hydraulic Regenerative Braking System (HRBS) in its front wheel. The HRBS conserves energy that is normally lost during braking. The kinetic energy that is used during the braking process drives hydraulic fluid into an accumulator via a pump, which in turn helps stop the bike. This stored energy is then released to accelerate the bike forward by reversing the process. This year's objective was to redesign the fork-hub interface to improve the strength and retrofit capabilities of our system while also getting our bike back in working order.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Production Ridge Locking Process for Prototype Assemblies

Sarah Theda Lichtenfelt, Johnnie Franklin, Nick Straub and Sam Emling
Harvey Lyons and Mary Brake, faculty mentors

Ridge locking is challenging to replicate during the prototype stages due to high tooling costs. To accept multiple muffler designs with minimal tooling required, alterations can be made to the production model. For flexibility of baffle hole positions, a manual operated jack should be installed below the table and T-bars to the table's surface to slide existing fixtures fore and aft. The mandrel will be specific to the tube diameter and a turnbuckle installed for different baffle spacing. A new crane will also be designed to move tooling safely. These changes allow maximum flexibility for the prototype stages while still replicating the production process.

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Lane Hall Renovation

Kaelynn Mackenzie Lohmeyer
Shinning Shyu, faculty mentor

The renovation of Lane Hall aims to transform the space into an urban environment that reflects the cultural diversity of Ann Arbor. Lane Hall includes multiple venues geared toward Ann Arbor locals, college students, and young professionals including dining facilities, retail stores, an art gallery, and much more. Modern linear forms and voluminous spaces echo the energy of the thriving downtown metropolis, while natural lighting and neutral color schemes promote stability. Sustainable construction strategies, furniture and finish selections further support Ann Arbor's efforts to become a "green" city.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Anti-Phase, Active Noise Control of Muffler Sound

Nathan Micks, Brandon Stewart, Erik Poyhonen and Garrett Shaw
Harvey Lyons and Mary Brake, faculty mentors

Companies, like our sponsor Bosal North America, spend millions of dollars researching methods to more effectively tune automotive exhaust systems to reduce sound levels and produce a desired noise. They are having more difficulty tuning exhausts due to reduced space under a vehicle and the prevalence of more difficult to tune four cylinder engines. Thus, to produce an effective exhaust system, it is becoming more time consuming and costly. What our project aims to accomplish is to prove the concept that exhaust noise can be reduced effectively through a system that samples the noise and injects an active sound wave that cancels out undesirable noise levels and frequencies.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Meditation Training Device

Mahesh Kosala Nugaliyadde-Gedara
Mohammadjafar Esmaeli, faculty mentor

In this project, brain waves during meditation were analyzed. A device was then designed that monitors brain waves and helps individuals keep their minds in the meditation mood. This device uses the MindFlex game brain sensor headset to capture the brain waves and the Arduino board to process and control the device. Since the purpose of meditation is to keep the human brain focused on one thing, when a person uses this device during meditation and becomes distracted, it is indicated by a small vibration.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Active Noise Control in Mufflers: Pressure Relief

Ahmad Sabah, Hamzah Almashama and Mohammed Alaswad
Harvey Lyons and Mary Brake, faculty mentors

Project is to develop a pressure-relief system for mufflers. They have always worked based on passive noise control, but it is becoming increasingly difficult to do so. Active noise control has never been used in a car muffler and our project is to use a method of active noise control and see if it can be used in an exhaust. The method we use is pressure relief. Sound is made by compressed air waves, and releasing the pressure allows the compression to be spread more evenly. This in turn causes less sound to be released. The challenge of this project is that this method has never been tested for active noise control, let alone in a hot exhaust system with exhaust fumes going through it.

Poster group 1 /// Room 310 /// 9-11:10 a.m.

Sustainable Shelter Design

Dale Sadewasser and Dayna Beaudrie

Shinming Shyu, faculty mentor

Disasters occur around the world frequently and displace people from their homes and their way of living. The sustainable shelter provides temporary relief for those suffering from such disasters. The sustainable shelter utilizes reclaimed materials (such as wood, metal and other reusable materials) along with energy-generating, and energy-saving technologies. The design provides an accessible, self-sufficient, and portable living space.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Treehouse at Lane Hall

Catherine Marie Sperling and Brittany Nicole Nugent

Shinming Shyu, faculty mentor

Inspired by Lane Hall, a historical building located in downtown Ann Arbor, this project presents renovations that turn this building into a multipurpose center. It is designed to bring in young consumers from around campus by using the essence of local community, high-end technology, and organic elements. In essence, the design project integrates creativity and technology with the dynamic urban fabric.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Sustainable Shelter Design

Josette Leanne Stiltner and Alyssa Rose Eisenhauer

Shinming Shyu, faculty mentor

This sustainable shelter was designed to provide a safe and comfortable living environment for people affected by any natural disaster and in need of a place to live. This one bedroom home, along with deck, ramp, solar panels, and green roof, is designed to fit in a standard shipping dimension meeting U.S. highway transportation requirements and is easily transported by semi-truck. With energy efficient appliances and ADA codes in mind, this shelter was designed to combine sustainable materials with a comfortable atmosphere. It provides a temporary home that is healthy for the users as well as the environment.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Sustainable Shelter Design

Amber Unema

Shinming Shyu, faculty mentor

This sustainable shelter design uses as many natural resources possible, along with many products and appliances supporting green design. The layout of the shelter is an open concept, with the exception of the bedroom. The roof is designed to hold a small terrace garden, along with skylights, and solar panels to support the energy needs of the shelter. One side of the roof is pitched so it can withstand weather conditions. A tankless water heater, energy efficient appliances, low GPF toilets, cross ventilation windows, and low VOC paint are all applied to the design of the sustainable shelter.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

SCHOOL OF TECHNOLOGY STUDIES

Influence of Cockpit Automation on Pilot Perception and Decision-Making in Severe Weather Conditions

Kryn Marie Ambts

Philip Tartalone, faculty mentor

As advanced cockpit technology develops, pilots are more reliant on and trust the capacity of this technology to accomplish cognitive tasks. More specifically, weather radar systems within the cockpit allow pilots to receive forecasts and identify severe weather conditions. Through collaboration with automation development corporations and pilot surveys, this research examines the reliance on these technologies, and whether these technologies improve or hinder pilot decision-making performance. Does the presence of advanced technologies within the cockpit influence precarious decision-making and standard performance?

Poster group 2 /// Room 310 /// 1:30-3:40 p.m.

Augmented Reality: Bringing Education to Life Using Smart Devices

Mark Binkowski, Edmund Bleeda-Vineyard and Mark Kenworthy

Pamela Speelman, faculty mentor

Augmented Reality (AR) is a technology that was once viewed as “sci-fi” or “futuristic.” With the advent of smartphones and tablets, AR is now being implemented into daily life in the form of entertainment and education. Our goal is to show how AR is already being used and the possibilities of AR in the future, especially focusing on education and the effectiveness of using AR in a classroom setting.

Oral session A /// Room 350 /// 9:30 a.m.

TLO in the Age of Cell Phones

Scott Brown

Konnie Kustron, faculty mentor

In 1985 the United States Supreme Court ruled that public school officials do not need a warrant to conduct searches of students as long as the search itself is reasonably justified and reasonably conducted. *New Jersey v TLO*, 469 US 325, 341-342; 105 S Ct 733; 83 L Ed 2d 720 (1985). The case began when a school principal discovered an index card in a student’s purse that contained evidence of narcotics distribution. Today, public school officials are regularly confronted with violations of the law or the school rules in ways that weren’t cognizable 30 years ago. This examination reviews court opinions of modern issues that are based on the standard authored in *TLO*.

Oral session C /// Room 301 /// 2 p.m.

Cosplay a Start-Up: A Business Proposal

Lilly DeRamos

Holly Mosher and Julie Becker, faculty mentors

Cosplay is a subculture focused on popular media such as comics, shows, and video games. It is a phenomenon that is steadily growing each year with a strong following. Cosplay derives from costume-play. It consists of dressing up as certain character(s) and adopting their mannerisms. The purpose of this presentation is to present a start-up business proposal. The business is a costume business that is more focused for a target market within the area of anime/ comic/ fandom conventions. The foundation of this business is that the items sold for Cosplayers are only sold online, at seasonal expositions, and conventions. It invites newfound opportunity and a potential for exponential growth.

Oral session C /// Room 320 /// 2 p.m.

Apparel Construction Using Environmentally Friendly Ultrasonic Sealing Technique

Jennifer Flanagan

Subhas Ghosh, faculty mentor

This research intends to develop a technique for garment construction by using an advanced ultrasonic sewing method to reduce the waste created by needle and thread. Often, the threads used in garment construction are made from different fibers than the fabric is made of, which is an impediment to recycling. This research optimizes the ultrasonic sealing conditions of ultrasonic frequency, time required for exposure to sonic vibration, compaction of the fabric to achieve required seam strength, undue puckering, and minimum melting of the thermoplastic content in the fabric. A scientific study is also included to understand the mechanism of bond formation between the fabric layers.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

***Sonya and the Familiars* Animation Trailer**

Bethany Charlene Hoff

Linda Kinczkowski, faculty mentor

I am presenting a trailer for my upcoming animated series, *Sonya and the Familiars*. This 2D animated adventure tells the story of a girl and her cat, Hero. After Hero meets a tragic end, he pleads with the Goddess of Paradise to let him return to his human friend, back on the material plane, as her guardian familiar. This makes Sonya the first light witch. The Goddess agrees, but in return, both Hero and Sonya must complete a task: liberate all the dark witches and their familiars from their plight of being possessed by avatars of Dystopia. If they succeed, Hero may continue to reside on earth with Sonya until the end of her days.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Combating Runway Incursions: Improving Airport Movement Area Safety

Andrew Poure

Philip Tartalone, faculty mentor

The aviation industry is arguably the most safety-oriented industry in the world. Among the most pressing issues in aviation safety are runway incursions and accompanying safety issues within the airport environment. The ever-present potential for conflict and possible accidents presents a unique challenge. All aspects of the industry are currently involved in efforts to improve runway airport safety, from airlines and their aircrews, air traffic controllers, to ground personnel and airport operators and designers. The aim of this research is to examine the issue of airport safety and the array of solutions and preventative approaches across the industry, both in service and in development.

Oral session A /// Room 304 /// 9:30 a.m.

Space Alien Hula Bunny Chronicles

Jason Michael Rushlow

Linda Kinczkowski, faculty mentor

“Space Alien Hula Bunny Chronicles” is an animated short film. It is the story of a space alien who is hired by his annoying boss to blow up a Hula Bunny. The film was made using a variety of styles and techniques. The art style is construction paper backgrounds with 2D and 3D models made with various computer programs. The story is similar to the Warner Brothers shorts with techniques used from 1960s TV cartoons. This short film is on display and discusses the storytelling process, the character design process, the SAG program, and other related topics.

Design Expo exhibit /// Room 300 /// 9 a.m.-4 p.m.

Pandora’s Box: The Rise of Malware and How to Study It Without Creating Chaos

Robert Keith Woolson, Daniel Whitlock and Kelly Douglas

Samir Tout, faculty mentor

The Internet is a ubiquitous ecosystem, connecting people with computers, smartphones, even watches, cars, and refrigerators. Having such capability at our fingertips is great but we also need to be aware of the dangers looming, such as malware, or malicious software. Lately, we have witnessed a surge in hacking incidents, most of which deposit malware on a machine to compromise it. Hence, it is essential to study and analyze malware to understand its capabilities and establish proper defenses against it. This must be done methodically and in a well-contained environment. We discuss key aspects of malware and best practices in studying it.

Oral session A /// Room 350 /// 9:15 a.m.

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THANK YOU

Our appreciation is extended to the following Eastern Michigan University offices and individuals who contribute annually to the success of the event:

Alison Figliomeni and Andrew Gariepy, graphic design students, and Ryan Molloy, Art

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Steve Dotson, D.C. Rouseau and technology support staff from across campus

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John Feldkamp and students of the Honors College

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We extend a special thank you to Steinway Piano Gallery of Detroit for their support to provide a Steinway piano for student performances.

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Aitson, Dakota	Oral Session D /// Room 204 /// 3:45 p.m.	124
Alaswad, Mohammed	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	165
Alemad, Belqes	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	161
Alfaro-Bordon, Silvana	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	117
Ali, Deena	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	46
Allen, Danuta	Oral Session D /// Room 350 /// 3:30 p.m.	76
Allen II, Robert	Oral Session D /// Room 350 /// 3:45 p.m.	77
Almahmoud, Soliman Saleh	Oral Session A /// Room 301 /// 9:15 a.m.	137
Almashama, Hamzah	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	165
Alvarez, Theodore Nicholas	Oral Session B /// Room 204 /// 10:15 a.m.	107
Amanov, Ilkhomjon	Oral Session A /// Room 301 /// 8:45 a.m.	161
Ambbs, Kryn Marie	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	167
Amross, Thomas Geoffrey	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	40
Amross, Thomas Geoffrey	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	46
Anderson, Jacob	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	117
Anderson, Katherine	Oral Session B /// Room 204 /// 10:30 a.m.	107
Anschuetz, Natalie Elizabeth	Oral Session C /// Room 350 /// 2:15 p.m.	87
Anthony, Megan	Oral Session C /// Kiva /// 1:15 p.m.	77
Archibald, Rebecca Lorene	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	68
Arrieta, Stefanie	Oral Session D /// Room 304 /// 3 p.m.	143
Babits, Robert	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Bagoumian, Karine	Oral Session B /// Kiva /// 10 a.m.	69
Bakare, Adefolake Adesewa	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	57
Baldwin, Samantha	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	69
Barrie, Rowan V.	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	69
Barringer, Jasmyn	Oral Session A /// Student Art Gallery /// 8:30 a.m.	77
Barry, Robert Levi	Oral Session A /// Room 350 /// 9 a.m.	73
Bastie, Marla Beretta	Oral Session B /// Room 301 /// 11 a.m.	75
Baumer, Caitlin	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	62
Beaton, Nicholas	Oral Session A /// Room 204 /// 9:30 a.m.	107
Beatty, Logan Ovella	Oral Session A /// Room 320 /// 8:30 a.m.	146
Beauchamp, Isiah	Oral Session C /// Student Art Gallery /// 1:15 p.m.	135
Beaudrie, Dayna	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	166
Beaumont, James	Oral Session C /// Room 104 /// 1:15 p.m.	124

Benn, Jacob Martin	Oral Session B /// Room 352 /// 10:30 a.m.	87
Berger, Brittany	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	57
Berman, Daniel Saul	Oral Session C /// Room 204 /// 1:45 p.m.	87
Binkowski, Mark	Oral Session A /// Room 350 /// 9:30 a.m.	167
Binning, Kara Lynne	Oral Session A /// Room 344 /// 8:45 a.m.	75
Binning, Kara Lynne	Oral Session A /// Room 344 /// 9 a.m.	75
Birchler, Zane	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	40
Birchler, Zane	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Blackburn, Sean Joseph	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	64
Blackstone, Melissa	Oral Session C /// Room 304 /// 1:45 p.m.	117
Bleeda-Vineyard, Edmund	Oral Session A /// Room 350 /// 9:30 a.m.	167
Block, Michael	Oral Session A /// Auditorium /// 8:45 a.m.	98
Bloom, Adam	Oral Session A /// Room 104 /// 8:30 a.m.	102
Bolhuis, Greta	Oral Session D /// Room 320 /// 3:45 p.m.	85
Boudrie, Christopher	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Boussi, Khalil	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	119
Bower, Ben	Oral Session C /// Auditorium /// 1:45 p.m.	70
Britt, Brandon	Oral Session C /// Kiva /// 2:15 p.m.	146
Britton, James	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	161
Brown, Holly	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	47
Brown, Kaylee Dawn	Oral Session C /// Room 344 /// 1:30 p.m.	78
Brown, Scott	Oral Session C /// Room 301 /// 2 p.m.	167
Browne, Kaitlin Lorraine	Oral Session B /// Kiva /// 11 a.m.	78
Browne, Tiffany Nicole	Oral Session C /// Room 344 /// 2:15 p.m.	78
Bruen, Devin	Oral Session A /// Room 301 /// 9:30 a.m.	108
Bussell, Jessica	Oral Session A /// Room 204 /// 9 a.m.	108
Callewaert, Morgan Leigh	Oral Session D /// Room 350 /// 2:45 p.m.	47
Campbell, Amanda	Oral Session A /// Room 304 /// 8:45 a.m.	108
Campbell, Emily	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	162
Canell, Rebecca E.	Oral Session B /// Room 352 /// 10:45 a.m.	88
Carr, Drake	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	79
Carter, Christopher	Oral Session B /// Room 320 /// 10:15 a.m.	158
Carter, Michelle Nicole	Oral Session D /// Student Art Gallery /// 3 p.m.	79
Carter, Samantha	Oral Session D /// Auditorium /// 3 p.m.	93
Cheedie, David	Oral Session D /// Room 104 /// 3:45 p.m.	96
Chiado, Ashley	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	147
Chionis, Antonios M.N.	Oral Session A /// Room 352 /// 9:15 a.m.	57
Chirosca, Cristian Virgil	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	58
Christian, Eric Edward	Oral Session A /// Room 304 /// 9:15 a.m.	88
Christopher, Todd L.	Oral Session B /// Room 304 /// 10:30 a.m.	88

Cichon, Katelyn Ann	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	66
Clark, Alysha	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	162
Coates, Thomas	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	47
Colletti, Emily	Oral Session C /// Room 344 /// 1:15 p.m.	79
Colletti, Natalie Paige	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	48
Coran, Erica	Oral Session D /// Auditorium /// 3:15 p.m.	139
Corlew, Kaytie	Oral Session C /// Room 301 /// 1:30 p.m.	143
Corsi, Paul Angelo	Oral Session D /// Auditorium /// 3:45 p.m.	70
Costello, Gabrielle M.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	48
Cox, Michelle Elise	Oral Session D /// Room 204 /// 3 p.m.	89
Cox, Michelle Elise	Oral Session B /// Room 104 /// 10 a.m.	124
Crummey, Kayleigh	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	98
Cryderman, Abigail J.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	98
Cummings, Samuel Sterlin	Oral Session C /// Room 352 /// 1:15 p.m.	109
Cymes, Brittany	Oral Session A /// Room 352 /// 8:45 a.m.	85
Czyborra, Julia	Oral Session A /// Room 320 /// 9:15 a.m.	132
Dailey, Jacob	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	58
Darlington, Dixon	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	58
Day, Calvin John	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	58
DeCamillis, Jason Michael	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	143
Demain, Katie	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	162
DeRamos, Lilly	Oral Session C /// Room 320 /// 2 p.m.	168
Deskins, Troy G.	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	118
Devitt, Chelsea Patricia	Oral Session D /// Room 320 /// 3:30 p.m.	154
Dewyer, Amanda	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	59
Dewyer, Amanda	Oral Session A /// Room 352 /// 9 a.m.	59
Dickerson, Jermaine	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	40
Dickerson, Jermaine	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Digwe, Kent C.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	59
Diorio, John	Oral Session D /// Room 104 /// 3:30 p.m.	97
Dolson, Mikhayla	Oral Session B /// Auditorium /// 11 a.m.	102
Douglas, Kelly	Oral Session A /// Room 350 /// 9:15 a.m.	169
Downer, Nicole	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	74
Dreffi, Melissa Ann	Oral Session D /// Room 330 /// 3:15 p.m.	132
Dudzic, Sara	Oral Session D /// Room 320 /// 3 p.m.	70
Dugas, Kaitlyn	Oral Session A /// Room 204 /// 8:45 a.m.	109
Dudek, Hannah	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Dunn, Mikael Keith	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	48
Dupuis, Bronte	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Durden, Andrew	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	60

Eastman, Joshua	Oral Session A /// Room 301 /// 9 a.m.	137
Eisenhauer, Alyssa Rose	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	163
Eisenhauer, Alyssa Rose	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	166
Elchanti, Karma	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	154
Emling, Sam	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Evans, Eugene	Oral Session D /// Room 344 /// 2:45 p.m.	151
Evich, Carly Danae	Oral Session D /// Room 330 /// 3 p.m.	132
Ewing, Philip David	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	60
Felder, Andrew	Oral Session A /// Room 344 /// 9 a.m.	75
Felder, Andrew	Oral Session C /// Room 352 /// 1:15 p.m.	109
Feys, Jason Robert	Oral Session A /// Room 104 /// 8:45 a.m.	103
Fiallos, Katie	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	49
Figliomeni, Alison	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	40
Figliomeni, Alison	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Filimon, Steven	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	156
Fine, Eric	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Fine, Eric	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Fine, Eric	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Fischer, Brian Scott	Oral Session B /// Room 350 /// 10:30 a.m.	135
Fitzhugh, Emma	Oral Session D /// Student Art Gallery /// 3:30 p.m.	109
Fitzhugh, Emma	Oral Session B /// Room 352 /// 11 a.m.	89
Flanagan, Jennifer	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	168
Flegal, Jeffrey Lee	Oral Session D /// Room 104 /// 3:15 p.m.	103
Foley, Jordan E.	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	162
Forsyth, Lexi	Oral Session D /// Kiva /// 3:30 p.m.	118
Fosdick, Lukas Scott	Oral Session C /// Room 330 /// 1:15 p.m.	152
Foster, Brock	Oral Session D /// Room 301 /// 2:45 p.m.	140
Franklin, Johnnie	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Frendendall, Alan	Oral Session B /// Room 330 /// 10:30 a.m.	151
Friebe, Christopher Lloyd	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	60
Gainer, Elise	Oral Session D /// Room 301 /// 3:45 p.m.	89
Garcia, David	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	118
Gardiner, Raven	Oral Session D /// Kiva /// 2:45 p.m.	80
Gariepy, Andrew	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	40
Gavorek, Callie Louise	Oral Session B /// Room 330 /// 11 a.m.	154
Ghadieh, Ihsan	Oral Session B /// Room 344 /// 10 a.m.	114
Ghadieh, Ihsan	Oral Session D /// Room 330 /// 3:30 p.m.	110
Gibson, David	Oral Session D /// Room 344 /// 2:45 p.m.	151
Giles, Sarah Elizabeth	Oral Session B /// Room 304 /// 10 a.m.	90
Girardot, Cosette Elizabeth	Oral Session B /// Student Art Gallery /// 10 a.m.	130

Goodcase, Ryan	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	119
Goodcase, Ryan	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	119
Goodcase, Ryan	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	123
Goodyear, David	Oral Session C /// Room 350 /// 1:15 p.m.	90
Goulet, Amanda	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	90
Greene, Nick	Oral Session D /// Room 304 /// 3:30 p.m.	147
Greiner, Andrew	Oral Session C /// Student Art Gallery /// 1:45 p.m.	73
Guenther, Joseph	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Guidot, Benjamin	Oral Session D /// Room 330 /// 3:45 p.m.	125
Guidot, Benjamin	Oral Session A /// Student Art Gallery /// 9:15 a.m.	91
Gurnee, Edward Philip	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	74
Gustitus, Kayla Marie	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	152
Gutierrez, Celisa	Oral Session C /// Auditorium /// 1:30 p.m.	99
Gutman, Emily Therese	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	119
Ha, Sr. Mary Perpetua	Oral Session B /// Room 301 /// 10:45 a.m.	71
Habbas-Nimer, Nadeen Majdi	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	49
Hagan, Emma	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	147
Hall, Asia R.S.	Oral Session C /// Room 320 /// 1:30 p.m.	49
Hallenbeck, Shelby	Oral Session B /// Kiva /// 10:45 a.m.	80
Hamady, Marc	Oral Session A /// Room 301 /// 9 a.m.	137
Hamburger, Guy	Oral Session A /// Room 104 /// 8:45 a.m.	103
Hardaker, Sarah Elizabeth	Oral Session B /// Auditorium /// 10:30 a.m.	99
Harrison, Linda M.	Oral Session C /// Room 352 /// 2 p.m.	125
Harrison, Timothy	Oral Session C /// Room 301 /// 1:15 p.m.	138
Harrold, Trevis Quincy	Oral Session A /// Room 204 /// 9:15 a.m.	110
Harrold, Trevis Quincy	Oral Session B /// Room 350 /// 10:45 a.m.	140
Hart, Christine	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	61
Haskin, Chris J.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	61
Hassanien, Sherif	Oral Session A /// Room 352 /// 9:30 a.m.	61
Hatchett, Elizabeth	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Hauke, Theodore Henry	Oral Session B /// Room 304 /// 10:45 a.m.	133
Henderson, Carrie	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	84
Henley, Daniel J.	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	120
Hensley, Tyler	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	97
Hernandez, Maxime	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	86
Hester, Keith Brian	Oral Session A /// Kiva /// 9:15 a.m.	120
Hilbert, Hannah Catherine	Oral Session C /// Room 104 /// 1:30 p.m.	125
Hilbert, Hannah Catherine	Oral Session B /// Student Art Gallery /// 10:45 a.m.	126
Hiler, Max	Oral Session A /// Auditorium /// 9:15 a.m.	99
Hill, Kaitlyn Elizabeth	Oral Session B /// Room 344 /// 10 a.m.	114

Hill, Kaitlyn Elizabeth	Oral Session C /// Student Art Gallery /// 2 p.m.	110
Hobdy, Dexter	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	50
Hodish, Anat	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	42
Hoff, Bethany Charlene	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	168
Hoffman, Tyler Charles	Oral Session A /// Room 350 /// 8:30 a.m.	74
Hofmann, Alexandra	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	50
Howard, Aaron Thomas	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	163
Hubbard, Barbara	Oral Session B /// Student Art Gallery /// 10:15 a.m.	131
Huckestein, Hailey	Oral Session D /// Student Art Gallery /// 3:45 p.m.	111
Hudson, Dinah	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	118
Hulvey, Danielle	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	50
Isobe, Shohei	Oral Session A /// Student Art Gallery /// 9:30 a.m.	91
Isselbacher, Samantha Alice	Oral Session C /// Room 320 /// 1:15 p.m.	51
Jackson, Brandon Eugene	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	153
Jackson, Jewel Belle	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	58
Jewell, Brittany	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	62
Johnsen, Jessica Anne	Oral Session C /// Room 344 /// 1:45 p.m.	80
Johnson, Dakoda	Oral Session A /// Room 301 /// 9 a.m.	137
Johnson, Miryam	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	100
Johnson, Titus Durrel	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	161
Jones, Leeann E.	Oral Session D /// Room 304 /// 2:45 p.m.	144
Jones, Xavier	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	40
Judd, Melissa	Oral Session C /// Auditorium /// 2:15 p.m.	42
Juenemann, David	Oral Session A /// Room 104 /// 9:15 a.m.	105
Kaminski, Catherine	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	51
Kangas, Dillon	Oral Session A /// Student Art Gallery /// 9 a.m.	96
Karimova, Maria	Oral Session A /// Room 352 /// 8:30 a.m.	120
Karn, Frederick Scott	Oral Session D /// Auditorium /// 2:45 p.m.	39
Kenworthy, Mark	Oral Session A /// Room 350 /// 9:30 a.m.	167
Kerby, Ashley B.	Oral Session B /// Kiva /// 10 a.m.	69
Kerby, Ashley B.	Oral Session D /// Kiva /// 3:45 p.m.	71
Khan, Sayem	Oral Session B /// Room 344 /// 10 a.m.	114
Kiefer, Chelsey	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	61
Kilian, Nathan Clark	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	51
King, Madeline	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	163
Kippola, Christopher David	Oral Session A /// Room 204 /// 8:30 a.m.	111
Kirchoff, Taylor B.L.	Oral Session B /// Student Art Gallery /// 11 a.m.	126
Kocis, Andrew S.	Oral Session B /// Room 204 /// 10:45 a.m.	111
Koehler, Matthew	Oral Session A /// Room 104 /// 9 a.m.	103
Koehler, Matthew	Oral Session C /// Room 330 /// 2 p.m.	104

Koehler, Matthew	Oral Session C /// Room 330 /// 2:15 p.m.	105
Kolman, David	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	156
Koltunchik, David Jack	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	71
Korourian, Arezo	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	42
Korourian, Arezo	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	42
Korourian, Arezo	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	43
Korytkowski, Geneva	Oral Session B /// Kiva /// 10:15 a.m.	81
Korytkowski, Jake M.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Kottoor, Reshmie Liz	Oral Session B /// Room 330 /// 10:45 a.m.	148
Kouchakzadeh, Javad	Oral Session A /// Room 301 /// 9 a.m.	137
Kowtko, Kassandra	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Krajewski, Robert Thaddeus	Oral Session C /// Room 330 /// 1:15 p.m.	152
Kretchman, Daniel Mark	Oral Session D /// Room 344 /// 2:45 p.m.	151
Kruzel, Caleb D.	Oral Session B /// Room 320 /// 10:45 a.m.	126
Kubitskey, Cameron M.	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	104
Kus, Kristen	Oral Session B /// Room 330 /// 10:45 a.m.	148
LaFratta, LeAnne	Oral Session A /// Room 320 /// 9:15 a.m.	132
Lancon, Justin Michael	Oral Session B /// Room 104 /// 10:15 a.m.	127
Lawrence, Heather Rose	Oral Session C /// Auditorium /// 2 p.m.	81
Lawson, Amber	Oral Session B /// Auditorium /// 10:45 a.m.	100
Laycock, Brandon Ryan	Oral Session D /// Room 104 /// 2:45 p.m.	104
Layer, Alicia	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	51
Lazarenko, Anna	Oral Session B /// Room 350 /// 11 a.m.	141
LeBlanc, Gannon	Oral Session A /// Room 344 /// 9 a.m.	75
Lederman, Jennifer	Oral Session D /// Room 320 /// 2:45 p.m.	121
Lee, Sangeun	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	138
Lekson, Alexandra Amelia	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	52
LeRoy, Matthew	Oral Session C /// Room 320 /// 1:45 p.m.	85
Lewis, Jeremy Alonzo	Oral Session D /// Room 344 /// 2:45 p.m.	151
Lichtenfelt, Sarah Theda	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Lietz, Michelle	Oral Session A /// Kiva /// 8:30 a.m.	81
Lietz, Michelle	Oral Session B /// Room 301 /// 10:30 a.m.	127
Lietz, Michelle	Oral Session D /// Room 204 /// 2:45 p.m.	82
Limmer, Robert Thomas	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	62
Lobbestael, Jared	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	52
Lodge, Kassy	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	144
Lohmeyer, Kaelynn Mackenzie	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	164
London-Terry, Charae	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	158
Long, Daniel W.	Oral Session C /// Kiva /// 1:30 p.m.	82
Lubas, Julia Alice	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	43

Lubas, Julia Alice	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	43
Lucero, Meghan Marie	Oral Session B /// Room 330 /// 10 a.m.	152
Lyon, Josh	Oral Session A /// Kiva /// 9 a.m.	91
Lyon, Josh	Oral Session D /// Room 301 /// 3:30 p.m.	92
Maczala, Brittney Danielle	Oral Session D /// Auditorium /// 3 p.m.	93
Maldonado, Rosaly	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	158
Malinowski, Adam	Oral Session C /// Room 350 /// 2 p.m.	92
Manderfield, Jake	Oral Session B /// Room 104 /// 10:30 a.m.	127
Marconnay, Halley D.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	52
Martin, Anjali T.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	112
Martin, Anjali T.	Oral Session A /// Room 320 /// 9:30 a.m.	133
Martinez, Alyssa	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	84
Massey, Justin	Oral Session B /// Room 204 /// 11 a.m.	112
Maul, Bryan Andrew	Oral Session B /// Room 304 /// 10:15 a.m.	92
Mayleben, Rebecca	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
McBride, Kelly	Oral Session A /// Auditorium /// 9:30 a.m.	100
McCarthy, Michael Brendan	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	43
McCloud, Krystal	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	148
McCrae, Patrick	Oral Session B /// Auditorium /// 10:45 a.m.	100
McCrae, Patrick	Oral Session B /// Auditorium /// 11 a.m.	102
McDonald, Kelly	Oral Session C /// Room 352 /// 2:15 p.m.	72
McDonald, William Douglas	Oral Session B /// Room 204 /// 10 a.m.	112
McFarlane, Kaitlyn	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	119
McFarlane, Kaitlyn	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	123
Mclvor, Jacob Keen	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	74
McKay, Tanjare	Oral Session A /// Room 330 /// 9 a.m.	121
Medeiros, Kaelen	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	47
Meyer, Melissa	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	159
Miazgowicz, Mary	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Micks, Nathan	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	165
Mikulic, Steven	Oral Session D /// Student Art Gallery /// 3:45 p.m.	111
Miller, Alissa	Oral Session D /// Auditorium /// 3:30 p.m.	72
Miller, Andrew David	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	105
Miller, Jason Matthew	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	62
Miller, Shaylynn Delaney	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	53
Mitts, Adam	Oral Session C /// Room 304 /// 1:30 p.m.	82
Moe, Briana	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	63
Molett, Marcia	Oral Session C /// Kiva /// 2 p.m.	148
Moll, Tyler	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	44
Monahan, Max	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	118

Monea, Nino	Oral Session A /// Room 344 /// 9 a.m.	75
Monea, Nino	Oral Session C /// Room 352 /// 1:30 p.m.	113
Monea, Nino	Oral Session D /// Room 352 /// 3:45 p.m.	113
Moody, Adam	Oral Session C /// Room 304 /// 2 p.m.	128
Mooney, Erica Colleen	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	86
Moore, Brandon Deshawn	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	153
Mora, Carlos	Oral Session A /// Room 350 /// 8:45 a.m.	74
Moriarty, Christopher	Oral Session C /// Room 304 /// 1:15 p.m.	82
Morrow, Courtney	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	44
Morrow, Courtney	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	44
Morrow, Courtney	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	44
Morrow, Courtney	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Morrow, Drew T.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	63
Morseau, Amber Ann-Rose	Oral Session D /// Room 204 /// 3:30 p.m.	128
Mueller, Sarah	Oral Session D /// Room 304 /// 3:15 p.m.	144
Murch, Tyler	Oral Session D /// Auditorium /// 3:15 p.m.	139
Murray, Leon	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	162
Musick, Kerri	Oral Session D /// Student Art Gallery /// 3:15 p.m.	113
Nelson, Karen Elizabeth	Oral Session A /// Room 304 /// 9 a.m.	76
Nienow, Matthew	Oral Session B /// Auditorium /// 10 a.m.	101
Nodi, Carla	Oral Session A /// Room 330 /// 9:15 a.m.	121
Northrup, Jessica M.	Oral Session B /// Room 344 /// 10 a.m.	114
Novak, Andrew Scott	Oral Session A /// Auditorium /// 9 a.m.	101
Nugaliyadde-Gedara, M.K.	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	165
Nugent, Brittany Nicole	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	166
Oberly, Kristina	Oral Session B /// Room 320 /// 10 a.m.	145
Ojasaar, Kart	Oral Session D /// Kiva /// 3:15 p.m.	141
Orr, Sarah	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	145
Oyelade, Olufunke Grace	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	63
Park, Yeji Abigail	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	64
Parker, Chris	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Parker, Jacob	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	162
Parker, Michael Patrick	Oral Session C /// Room 330 /// 1:30 p.m.	153
Patel, Kartik	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	162
Patterson, Thomas	Oral Session B /// Room 304 /// 11 a.m.	133
Peabody, Molly	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	145
Pepper, Dustin	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	105
Perrotta, Mary Kathleen	Oral Session C /// Room 204 /// 1:30 p.m.	93
Pete, Adam	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Peters, Bradley Scott	Oral Session B /// Room 352 /// 10 a.m.	114

Pickell, Isaac	Oral Session A /// Kiva /// 8:45 a.m.	83
Pittel, Kevin	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	162
Polich, Nathan William	Oral Session D /// Auditorium /// 3 p.m.	93
Poure, Andrew	Oral Session A /// Room 304 /// 9:30 a.m.	169
Powers, Ashley	Oral Session B /// Student Art Gallery /// 10:30 a.m.	131
Powers, Britta	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	163
Poyhonen, Erik	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	165
Price, Mark	Oral Session A /// Room 104 /// 8:30 a.m.	102
Rabbimov, Umarbek U.	Oral Session B /// Room 350 /// 10:15 a.m.	136
Randall, Michael	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Randall, Michael	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	44
Reder, Jamie Marie	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	64
Reiss, Jacob	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	63
Rhodes, Iain Marshall	Oral Session A /// Room 104 /// 9:15 a.m.	105
Rich, Jacob	Oral Session D /// Room 352 /// 3:30 p.m.	97
Richards, Jacquelyn Marie	Oral Session A /// Room 304 /// 8:30 a.m.	114
Richardson, Michael David	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	115
Rigan, Diana M.	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	53
Rivas-Rocha, Mayra	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	122
Robey, Katherine	Oral Session C /// Room 304 /// 2:15 p.m.	72
Rodgers, Jazmin J.	Oral Session A /// Room 330 /// 9:30 a.m.	122
Roe, Carolyn	Oral Session D /// Auditorium /// 3 p.m.	93
Rogers, Marc	Oral Session C /// Room 104 /// 1:45 p.m.	128
Ross, Yuan	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	64
Rreshpja, Gezim	Oral Session B /// Room 350 /// 10 a.m.	136
Rubio, Jesica	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	53
Ruona, Sean	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	84
Rushlow, Jason Michael	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	169
Saadeh, Jumanah	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	54
Sabah, Ahmad	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	165
Sadewasser, Dale	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	166
Sadowsky, Mordechai	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	62
Sargent, Ian M.	Oral Session B /// Kiva /// 10:30 a.m.	83
Schersten, Michael S.	Oral Session C /// Room 350 /// 1:45 p.m.	93
Schleuder, Steve	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Schleuder, Steve	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Schollmeier, Joy	Poster Group 1 /// Room 310 /// 9-11:20 a.m.	155
Schwab, Gregory	Oral Session C /// Room 204 /// 2 p.m.	94
Schwarz, Carter	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Scott, Mary Kathleen	Oral Session A /// Room 320 /// 8:45 a.m.	146

Sears, Sheila Lynn	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	122
Segev, Elena	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	157
Segev, Elena	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	157
Shann, David	Oral Session A /// Auditorium /// 8:30 a.m.	101
Shaw, Garrett	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	165
Shaw, Stephanie	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	155
Shay, Catherine	Oral Session C /// Room 350 /// 1:30 p.m.	94
Shay, Catherine	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	83
Shomer, Molli	Oral Session C /// Kiva /// 1:45 p.m.	131
Shukri, Jimis	Oral Session D /// Room 352 /// 3 p.m.	157
Siddiqui, Maha	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	54
Siemasz, Michael	Oral Session D /// Auditorium /// 3:15 p.m.	139
Sippert, Eric	Oral Session D /// Room 330 /// 2:45 p.m.	115
Skorupa, Chelsea	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	162
Smith, Ashlee	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	54
Smith, Courtney	Oral Session B /// Room 320 /// 11 a.m.	129
Smith, Ellise	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	155
Smith, TyRonda Devon	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	119
Smith, TyRonda Devon	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	123
Solano, Martin	Oral Session B /// Room 330 /// 10:15 a.m.	65
Spence, Jon	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Sperlich, Cade W.	Oral Session A /// Room 350 /// 8:30 a.m.	74
Sperling, Catherine Marie	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	166
Spinale, Justina	Oral Session D /// Room 304 /// 3:45 p.m.	149
Sponyoe, Valerie	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	55
Sprenkel, Michelle	Oral Session C /// Room 301 /// 1:45 p.m.	149
Stecker, Amelia Harlan	Oral Session C /// Room 344 /// 2 p.m.	83
Sterling-Meeuwen, Aynsley	Oral Session D /// Room 301 /// 3:15 p.m.	94
Stewart, Brandon	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	165
Stewart, Taylor	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Stiltner, Josette Leanne	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	166
Stockwell, Thomas	Oral Session A /// Room 344 /// 9 a.m.	75
Stockwell, Thomas	Oral Session A /// Room 344 /// 8:30 a.m.	76
Stoyhoff, Natalie Michelle	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	55
Stralnic, Garrett	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	84
Straub, Nick	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	164
Styes, Taylor	Oral Session A /// Student Art Gallery /// 8:45 a.m.	95
Sudekum, Stephen	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	65
Sutton, Christopher	Oral Session D /// Room 204 /// 3:15 p.m.	129
Swan, David William	Oral Session C /// Room 204 /// 2:15 p.m.	95

Swanson, Chelsea Marie	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	65
Swartz, Jacquelyn	Oral Session C /// Room 330 /// 1:45 p.m.	153
Tatum, James	Oral Session B /// Room 352 /// 10:15 a.m.	115
Tatum, James	Oral Session C /// Room 352 /// 1:30 p.m.	113
Taylor, Chelsey Wakefield	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	66
Tenney, Kristin	Oral Session A /// Room 320 /// 9:15 a.m.	132
Thelen, Lauren	Oral Session A /// Room 104 /// 9 a.m.	103
Thelen, Lauren	Oral Session C /// Room 330 /// 2 p.m.	104
Thelen, Lauren	Oral Session C /// Room 330 /// 2:15 p.m.	105
Thomas, Rebecca N.	Oral Session B /// Room 344 /// 10 a.m.	114
Timpf, Megan Rose	Oral Session C /// Room 204 /// 1:15 p.m.	84
Tith, Jevit	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	66
Torres, Sylvia	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	66
Touchette, Genna Lynn	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	106
Traczek, Erin Elizabeth	Oral Session D /// Room 344 /// 2:45 p.m.	151
Trombley, Brett	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	46
Troyer, Amanda	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	67
Trump, Sarah Lin	Oral Session A /// Kiva /// 9:30 a.m.	129
Turicek, Nicholas	Oral Session D /// Room 320 /// 3:15 p.m.	156
Turner, Lauren	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	123
Twydell, Jessica A.	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	55
Unema, Amber	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	166
Valasin, Christopher	Oral Session C /// Room 301 /// 2:15 p.m.	67
Van Wassehnova, Gabrielle N.	Oral Session D /// Room 352 /// 3:15 p.m.	95
Vandivier, Connor	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	86
Vasquez, Lois	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	67
Veit, Victoria	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	45
Verras, Cassandra	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	86
Vitale, Kody	Oral Session D /// Room 352 /// 2:45 p.m.	116
Vivier, Susan	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	106
Vladaj, Yllka	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	63
Vo, Trang	Oral Session B /// Auditorium /// 10:15 a.m.	102
Waissi, Rikhard	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	74
Walls, Ebony L.	Oral Session B /// Room 320 /// 10:30 a.m.	159
Waltz, Kelly	Oral Session B /// Auditorium /// 11 a.m.	102
Wanty, Luke	Oral Session B /// Room 104 /// 10:45 a.m.	130
Warford, Sean M.	Oral Session B /// Room 301 /// 10:15 a.m.	149
Wesson, Carissa	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	45
Wesson, Carissa	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	46
Wesson, Carissa	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	46

Westcott, Tiffany A.	Oral Session A /// Room 320 /// 9 a.m.	84
Whitlock, Daniel	Oral Session A /// Room 350 /// 9:15 a.m.	169
Wiacek, Daniel	Oral Session C /// Room 320 /// 2:15 p.m.	138
Wiecek, Dustin	Oral Session D /// Room 350 /// 3 p.m.	56
Wiemer, Megan	Oral Session D /// Room 350 /// 3:15 p.m.	56
Wilkins, Sara	Oral Session A /// Room 301 /// 8:30 a.m.	68
Williams, Alicia	Oral Session C /// Room 104 /// 2 p.m.	130
Willman, Alan	Oral Session D /// Room 344 /// 2:45 p.m.	151
Windas, Robert John	Oral Session D /// Room 104 /// 3 p.m.	106
Winkler, Alyssa	Poster Group 1 /// Room 310 /// 9-11:10 a.m.	68
Winston, Nathaneil	Oral Session C /// Room 352 /// 1:45 p.m.	39
Wojtas, Caitlin Jennifer	Oral Session B /// Room 301 /// 10 a.m.	149
Wolfe, Carol	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	41
Wolterman, Andrew	Design Expo /// Room 300 /// 9 a.m.-4 p.m.	161
Woolson, Robert Keith	Oral Session A /// Room 350 /// 9:15 a.m.	169
Wooten, Khallid A.	Oral Session D /// Student Art Gallery /// 2:45 p.m.	96
Wyse, Lisa	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	56
Xu, Congzhe	Oral Session C /// Student Art Gallery /// 2:15 p.m.	116
Xu, Rongyan	Oral Session C /// Student Art Gallery /// 1:30 p.m.	136
Xu, Rongyan	Oral Session D /// Room 301 /// 3 p.m.	137
Yousef, Bader	Oral Session D /// Kiva /// 3 p.m.	139
Zarate, Ashlyn Julia	Oral Session A /// Student Art Gallery /// 9 a.m.	96
Zavac, Christopher	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	73
Zhang, Hui	Poster Group 2 /// Room 310 /// 1:30-3:40 p.m.	65

NOTES

JULIE A. EADEH



We are pleased to welcome Julie A. Eadeh as she presents the Dennis M. Beagen Undergraduate Symposium Keynote Address at today's event luncheon. A veteran of our event, she was a student presenter at the 1999 Undergraduate Symposium. Ms. Eadeh gave two presentations sponsored by faculty mentors H. Roger King and Janice Terry from the Department of History and Philosophy.

A career member of the Foreign Service, Ms. Eadeh joined the Department of State in 2002 as a Presidential Management Fellow where she served in the Bureau of Democracy, Human Rights, and Labor. In 2004, she covered human rights and the first ever Saudi elections as a Political Officer at the U.S. Embassy in Riyadh, Saudi Arabia. Ms. Eadeh was the Chief of American Citizen Services at the U.S. Embassy in Beirut, Lebanon and assisted in the largest civilian evacuation of American citizens since World War II. From 2007-2008, Ms. Eadeh covered press and media relations as the Assistant Information Officer at the U.S. Embassy in Baghdad, Iraq. From 2009-2012, she served as the Environment, Science, Technology, Health and Energy Officer at the U.S. Consulate General in Shanghai, China. Ms. Eadeh currently serves as the Public Affairs Officer at the U.S. Embassy in Doha, Qatar.

Born in Ohio, Ms. Eadeh was raised in Michigan. She is a graduate of Eastern Michigan University, summa cum laude, and the Center for Contemporary Arab Studies at Georgetown University. Her foreign languages include Chinese, Arabic, French, and Spanish. Ms. Eadeh is married to another Foreign Service Officer and has one son.

An extraordinary representative of EMU, it is our pleasure to have Julie A. Eadeh return to her alma mater for the 34th Undergraduate Symposium.

