MEETING OF MINDS XXII

May 9, 2014

This is the twenty-second annual Meeting of Minds gathering. The purpose of this meeting is to highlight the accomplishments of undergraduate students and their interactions with faculty members from represented universities.

Each year the meeting is held on the campus of one of the participating universities. This year, Oakland University will host 139 oral and poster presentations. The sessions will be held in the Oakland Center (OC) and in South Foundation Hall (SFH).

Oral presentations are grouped into four time slots with multiple sessions at each time. There will be morning and afternoon poster sessions held across from Café O'Bears in the Oakland Center. All presentation details can be found in the program. In addition, an alphabetical index of student presenters is included at the back of the program.

We extend a special thanks to all faculty sponsors for the generous time and effort spent in working with their undergraduate students and assisting them in presentation preparation. Faculty sponsor names are included with the abstracts in the program.

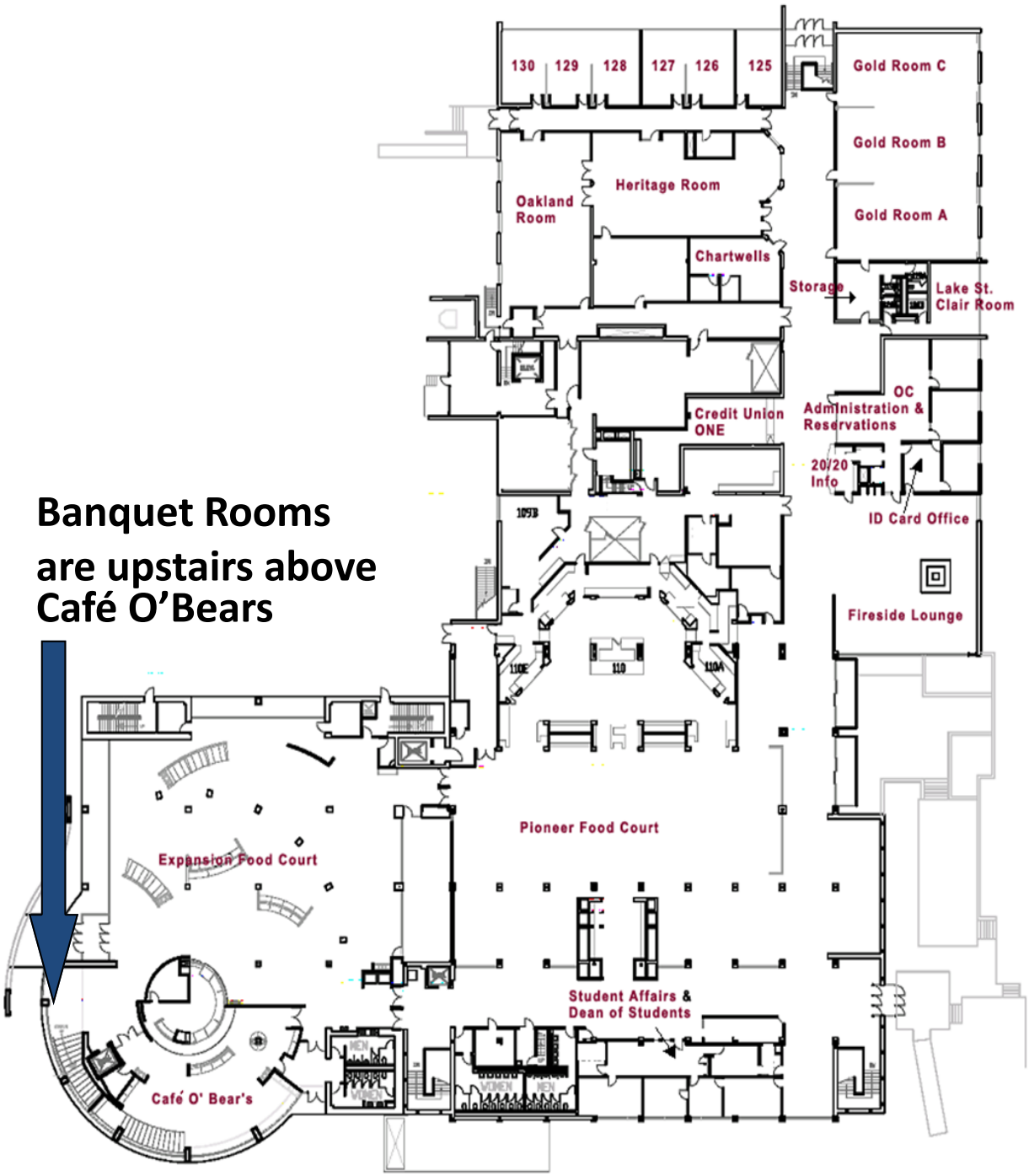
MEETING OF MINDS XXII

Oakland University was created in 1957, when the late Alfred G. and Matilda R. Wilson donated their 1,444-acre estate and $2 million to Michigan State University for a new college in Oakland County. In 1970, OU became an independent campus and is now a comprehensive state-assisted institution with over 20,000 students. Anchored by a strong liberal arts program, the university is organized into the College of Arts and Sciences, School of Business Administration, School of Education and Human Services, School of Engineering and Computer Science, School of Health Science, School of Nursing and the Oakland University – William Beaumont School of Medicine. Its more than 500 full-time faculty members have a distinguished record of research and scholarship, much of which is performed jointly with undergraduate students. Currently the university offers 139 baccalaureate programs and 125 graduate degree and certificate programs. Located in suburban northeast Oakland County, OU is easily accessible to millions of Detroit's metropolitan residents.

Since its founding in 1959 with a gift of 196 acres from Ford Motor Company, the University of Michigan-Dearborn has been distinguished by its commitment to providing excellent educational opportunities responsive to the needs of southeastern Michigan. Shaped by a history of interaction with business, government, and industry of the region, UM-Dearborn has developed into a comprehensive university offering undergraduate and graduate degrees in arts and sciences, education, engineering and computer science, and management. One-third of the campus, more than 70 acres, is maintained as one of the largest natural areas in metropolitan Detroit, serving as a research and educational resource for the campus and the region. For the 9,000 enrolled students, University of Michigan-Dearborn is a place where students learn and grow, explore new ideas, and acquire the knowledge and skills they need to achieve their personal and professional goals. As graduates of University of Michigan-Dearborn, students will have a broad knowledge of the many fields of human achievement, and will be prepared for their careers with imagination, reasoning, and creative problem-solving abilities.

"The University of Michigan-Flint is one of three campuses of the prestigious University of Michigan. Located in the heart of downtown Flint, UM-Flint is a premier urban campus nationally recognized leader in civic engagement, student veteran support, and outstanding academic programs. Since 1956, action-oriented academics is at the heart of the UM-Flint experience. This approach to learning allows the best students engage issues head-on, explore varying points of view, seek input from others, and become as familiar with realities as they do theories. UM-Flint faculty from over 100 areas of study pour their expertise and creativity into the development of research and service-learning projects that match course curriculum with today's most-pressing issues. Such projects bring learning to life, address community needs, and fulfill students' desires to contribute to the common good."

OAKLAND CENTER, O.C. - Main Floor



Banquet Rooms are upstairs above Café O'Bears

MEETING OF MINDS XXII

8:30-9:30 am	Registration/Orientation Continental Breakfast	Banquet Rooms, OC
9:30-11:20 am	Poster Session 1	Across from Café O'Bears, OC
9:30-10:20 am	Oral Presentations 1, A-F	South Foundation Hall
10:30-11:20 am	Oral Presentations 2, A-G	South Foundation Hall
11:30-11:50 pm	Photo Sessions 11:30 UM Dearborn 11:40 UM Flint 11:50 OU	Stairway to Banquet Room, OC
11:45-1:15 pm	Lunch	Banquet Room, OC
	Student Success Story: Kathleen F. Delaney, M.D., Pediatrics, Beaumont Hospital	
1:30-3:20 pm	Poster Session 2	Across from Café O'Bears, OC
1:30-2:20 pm	Oral Presentations 3, A-G	South Foundation Hall
2:30-3:20 pm	Oral Presentations 4, A-D	South Foundation Hall

Guitarists

Lauren Wilson

Jessica Julian

MEETING OF MINDS XXII

Oral Presentations

Session 1 9:30 a.m. to 10:20 a.m.

Session 1A 163 SFH

#27 Panopticism before Foucault: The Silent Surveillance and Deterrence through visual arts in Renaissance Venice (In the case of San Marco)

Oakland University

Student Authors : Eva Shillair

Faculty Advisors : John Corso, Galina Tirnanic, Susan Wood

#25 Ernst Ludwig Kirchner's Philosophy in Art

Oakland University

Student Authors : Lisa Montgomery

Faculty Advisors : Claude Baillargeon

#22 The Architectural Legacy of Nero

University of Michigan - Dearborn

Student Authors : Margaret Waligora

Faculty Advisors : Diana Ng

Session 1B 164 SFH

#96 The Cultural Importance of Slut Walks: Sexuality, Slut-Shaming, and Feminist Protest

Oakland University

Student Authors : Megan Clavier

Faculty Advisors : Jo Reger

#78 The Symbolic Annihilation of the New Woman

University of Michigan - Flint

Student Authors : Amanda Schwarzberg

Faculty Advisors : Michael Kassel

#123 Heart-breaker vs. Heart-broken: Does it Matter for Posttraumatic Growth?

Oakland University

Student Authors : Sharell Elam, Kellie McGuire

Faculty Advisors : Kanako Taku

MEETING OF MINDS XXII

Oral Presentations

Session 1 9:30 a.m. to 10:20 a.m.

Session 1C 165 SFH

#126 Als der Krieg zu Ende war: German Plays, and the Status of Women, in the Immediate Aftermath of World War II

Oakland University

Student Authors : Amela Agic

Faculty Advisors : Seth Howes

#121 Mary's Ignorance: A Critique of Frank Jackson's Knowledge Argument

University of Michigan - Dearborn

Student Authors : Damen Washington

Faculty Advisors : Kathleen Wider

#102 Deciphering & Deliberation: Translating the Text of "L'homme qui m'offrait le ciel"

Oakland University

Student Authors : Dana Parke

Faculty Advisors : Dikka Berven

Session 1D 166 SFH

#46 It was Beauty Killed the Beast: American Ideological Shifts Shown Through the Cinematic Remaking of King Kong (1933)

Oakland University

Student Authors : Steve Swetich

Faculty Advisors : Hunter Vaughan

#119 Modern Dance: Anti-Ballet or Anti-Realist?

Oakland University

Student Authors : Emily Sese

Faculty Advisors : Elizabeth Kattner

#114 Signing With A Sword: Signature Sign Patterns of Semiotics as Connotative Constructs Applied to Chinese Martial Arts Cinema.

Oakland University

Student Authors : Lisa Schneider

Faculty Advisors : Andrea Eis

MEETING OF MINDS XXII

Oral Presentations

Session 1 9:30 a.m. to 10:20 a.m.

Session 1E 167 SFH

#115 How Competition Outcome Affects Facial Preferences in Men and Women

Oakland University

Student Authors : Jonathan Saulter

Faculty Advisors : Lisa Welling

#58 Interpersonal Reality Monitoring: The Devil is in the Details

University of Michigan - Dearborn

Student Authors : Jonathon Whitlock

Faculty Advisors : Arlo Clark-Foos

#44 Pathways of Stress and Coping in Emerging Adulthood

University of Michigan - Dearborn

Student Authors : Jillian Out, Shelby Wilson

Faculty Advisors : Justin Peer

Session 1F 168 SFH

#111 The Novel Synthesis of 1,5-Benzodiazepines

Oakland University

Student Authors : Jonathon Young

Faculty Advisors : Roman Dembinski

#100 Transfer of Plasmid containing Carbapenem Resistance Genes From Klebsiella pneumoniae to Enteric Bacteria.

Oakland University

Student Authors : Chithra Muraleedharn, Deepa Talreja, Dipanshu Walia

Faculty Advisors : Satish Walia

#93 Calculation of Band Gaps in Photonic Crystals

Oakland University

Student Authors : Luke Levin-Pompetzki

Faculty Advisors : Ivan Lisenkov, Andrei Slavin

MEETING OF MINDS XXII

Oral Presentations

Session 2 10:30 a.m. to 11:20 a.m.

Session 2A 163 SFH

#30 END-QUENCH OR JOMINY TEST

University of Michigan - Flint

Student Authors : Brendon Green, Jeremy Langdon, Jessica Polidan, Ronald Wood

Faculty Advisors : Olanrewaju Aluko

#110 Characterization of the JAK/STAT pathways in Cardiac Myocytes in Angiotensin II-induced Hypertension

Oakland University

Student Authors : Feras Hares

Faculty Advisors : Amy Banes-Berceli

#33 Electrochemical analysis: Domain specific tau aggregation with inducing agents

Oakland University

Student Authors : Hanna Trzeciakiewicz

Faculty Advisors : Sanela Martic

Session 2B 164 SFH

#107 The distinct comparison between Modern dance and Ballet.

Oakland University

Student Authors : Chelsea Nabozny

Faculty Advisors : Elizabeth Kattner

#98 Horror Films: A Stage for Subversion

Oakland University

Student Authors : Melina Lescoe

Faculty Advisors : Graham Cassano

#41 Ballet: Early Development and European Dissemination

University of Michigan - Flint

Student Authors : Melanie Schott

Faculty Advisors : Andrew Morton

MEETING OF MINDS XXII

Oral Presentations

Session 2 10:30 a.m. to 11:20 a.m.

Session 2C 165 SFH

#95 The American Taboo of Redistribution

Oakland University

Student Authors : Jane Dixon

Faculty Advisors : Alan Epstein

#77 A Case Study of Humanitarian Aid in Panama

Oakland University

Student Authors : Paul Marvin

Faculty Advisors : Cecilia Saenz-Roby

#65 Religion and Exceptionalism in American Culture

Oakland University

Student Authors : Melissa Gillum

Faculty Advisors : Cindy Sifonis

Session 2D 166 SFH

#94 Where the Holes Come From: The idea behind the Holes and Cuts of Lucio Fontana

Oakland University

Student Authors : Kyra Rietveld

Faculty Advisors : Claude Baillargeon

#86 The Special Photographs: Sydney's New Style of Prison Portraits, 1919 -1930

Oakland University

Student Authors : Kelley Foley

Faculty Advisors : John Corso

#83 François Villon: a Troubled Artist

University of Michigan - Dearborn

Student Authors : Katelyn Hovey

Faculty Advisors : Gabriella Eschrich

MEETING OF MINDS XXII

Oral Presentations

Session 2 10:30 a.m. to 11:20 a.m.

Session 2E 167 SFH

#90 Novel Synthesis of Enaminones from But-3-yn-1-ones

Oakland University

Student Authors : Miranda Belcher

Faculty Advisors : Roman Dembinski

#59 Hydrothermal Synthesis and Purification Methods of High Aspect Silver-Carbon Nanocables

University of Michigan - Flint

Student Authors : Jeremy Munsell, Trang Nguyen

Faculty Advisors : Mojtaba Vaziri

#52 Synthesis and Characterization of Aryl-imine Aluminum Complexes

University of Michigan - Flint

Student Authors : Tyler Doyon

Faculty Advisors : Nicholas Kingsley

Session 2F 168 SFH

#55 Experiments in Photon Entanglement and Quantum Optics

University of Michigan - Flint

Student Authors : Benjamin Frye, Patrick Ross, Irwyn Sadien

Faculty Advisors : Chris Pearson

#81 A Numerical Method To Solve The Mechanical Bidomain Model Of Cardiac Tissue

Oakland University

Student Authors : Samip Gandhi

Faculty Advisors : Brad Roth

#3 A Finite Element Analysis Method to Determine Characteristic Length of Composite Joints in Tension

University of Michigan - Flint

Student Authors : Xiaoyi Ma, Yibo Qi

Faculty Advisors : Olanrewaju Aluko

MEETING OF MINDS XXII

Oral Presentations

Session 2 10:30 a.m. to 11:20 a.m.

Session 2G 169SFH

#21 Printmaking: Why Aren't You Doing This Already?

University of Michigan - Dearborn

Student Authors : Denise Malone-Harris, Elisabeth Marietti, Edward Poulos, Ashlee Szabo, Robert Turner

Faculty Advisors : Julie Lambert

MEETING OF MINDS XXII

Oral Presentations

Session 3 1:30 p.m. to 2:20 p.m.

Session 3A 163 SFH

#109 Alterations in Phosphotidylinositide-3 Kinase (PI3-K) Signaling Pathway in Human Renal Cell Carcinoma (RCC)

Oakland University

Student Authors : Aws Polina, Sunny Rishi, Sara Singhal

Faculty Advisors : Amy Banes-Berceli

#9 Metropolitan Research and Student Engagement at iLabs, Center for Innovation Research

University of Michigan - Dearborn

Student Authors : Nicole Mangis

Faculty Advisors : Nicole Mangis

#108 Alterations in Janus (JAK2)/Signal Transducer of Activated Transcription (STAT) Signaling Pathway in Human Renal Cell Carcinoma (RCC)

Oakland University

Student Authors : Aws Polina, Sara Singhal

Faculty Advisors : Amy Banes-Berceli

Session 3B 164 SFH

#97 The Investigation of Copyrighting and Dance: The Importance and the Consequences

Oakland University

Student Authors : Karin Spencer

Faculty Advisors : Elizabeth Kattner

#76 Artemisia Gentileschi: What a Woman Can Do

Oakland University

Student Authors : Alexandra Nickolaou

Faculty Advisors : Galina Tirnanic, Susan Wood

#63 Progression of Darkness: Tenebroso in Baroque Art

University of Michigan - Flint

Student Authors : Amanda Kimberly

Faculty Advisors : Sarah Lippert

MEETING OF MINDS XXII

Oral Presentations

Session 3 1:30 p.m. to 2:20 p.m.

Session 3C 165 SFH

#68 The Conflicts of the Baghdad Pact: Britain, the United States, Nasser's Egypt, and Iraq

Oakland University

Student Authors : Emma Barko

Faculty Advisors : Don Matthews

#42 The Radical Revolution: An examination of American militancy from 1966-1974

University of Michigan - Dearborn

Student Authors : Margaret Waligora

Faculty Advisors : Pamela Pennock

#15 Machines of Loving Grace – What Man Ray's Misread Misogyny Means to Postmodern Feminist Criticism

University of Michigan - Dearborn

Student Authors : Chene Koppitz

Faculty Advisors : Nadja Rottner

Session 3D 166 SFH

#69 Princess, Housewife, or Independent Woman: The Evolution of Female Identity and Transformation in French Fairy Tales & Their Film Adaptations

Oakland University

Student Authors : Brittany Kelley

Faculty Advisors : Stacey Hahn

#67 The "I" in the Center of a Hidden Geometry: Existentialism, the Individual, and Interconnectivity in Orhan Pamuk's "Snow"

University of Michigan - Flint

Student Authors : Vincent Slocum

Faculty Advisors : Mary Jo Kietzman

#48 Sexuality and Agency of Female Superheroes: The Male Gaze in Comic Books

University of Michigan - Dearborn

Student Authors : Jaclyn Dziurgot

Faculty Advisors : J. Caitlin Finlayson

MEETING OF MINDS XXII

Oral Presentations

Session 3 1:30 p.m. to 2:20 p.m.

Session 3E 167 SFH

#47 Powerful patron & Dutiful wife: The duality of Isabella d'Este

University of Michigan - Dearborn

Student Authors : Megan Milewski

Faculty Advisors : Nicole Benoussan

#29 Cindy Sherman's Untitled Film Stills: The Domestic Woman

Oakland University

Student Authors : Jaclyn Wicker

Faculty Advisors : Claude Baillargeon

#32 Seeing the Spirit in Duane Michals' Photography

Oakland University

Student Authors : Kelley Foley

Faculty Advisors : Claude Baillargeon

Session 3F 168 SFH

#26 Implementation of Fault Detection technique on Embedded Board

University of Michigan - Flint

Student Authors : Erik Leaske

Faculty Advisors : Young-Man Kim

#40 Four Point Bending

University of Michigan - Flint

Student Authors : Ali Asghar, Yibo Qi, Kaijun Wu

Faculty Advisors : Olanrewaju Aluko

Session 3G 169 SFH

#34 Dirigible

University of Michigan - Flint

Student Authors : Melanie Schott

Faculty Advisors : Emma Davis

MEETING OF MINDS XXII

Oral Presentations

Session 4 2:30 p.m. to 3:20 p.m.

Session 4A 163 SFH

#12 Wind Turbine Power Generation

University of Michigan - Flint

Student Authors : Connie Lam, James Pung

Faculty Advisors : Ulan Dakeev

#104 Feasibility of using Passive Integrated Transponder (PIT) technology to study behavior of Great Lakes larval sea lampreys

University of Michigan - Flint

Student Authors : Alexander Maguffee

Faculty Advisors : Heather Dawson, Danielle Potts

#80 The Round Goby: The Effect of an Invasive Species on the Great Lakes and the Lower Rouge River

University of Michigan - Dearborn

Student Authors : Robert Muller

Faculty Advisors : Orin Gelderloos

Session 4B 164 SFH

#132 Character Revolution: The Development of Voice and Alternatives to Archetypal Womanhood in Historic and Literary Tradition

University of Michigan - Flint

Student Authors : My Proulx

Faculty Advisors : Jacqueline Zeff

#23 Incurable Neurosis: The Sexual Fixation of Egon Schiele

Oakland University

Student Authors : Nicole Peterson

Faculty Advisors : Claude Baillargeon

#106 Semiotics and the Book of Kells

Oakland University

Student Authors : Brittany Forth

Faculty Advisors : Claude Baillargeon

MEETING OF MINDS XXII

Oral Presentations

Session 4 2:30 a.m. to 3:20 p.m.

Session 4C 165 SFH

#20 Welcome to Summoners Rift: Exploring Gendered Behavior and Avatar Choices

Oakland University

Student Authors : Zachary Willockx

Faculty Advisors : Jo Reger

#16 Stakes and Stones: The Affective/Effective Feminist Legacy of "Buffy the Vampire Slayer" on the Transcendent Teen Masculinity of "Teen Wolf".

University of Michigan - Dearborn

Student Authors : Chene Koppitz

Faculty Advisors : Suzanne Bergeron

#130 "Rock, Paper, Scissors": An English Translation of Catherine Kalengula's "Pierre, feuille, ciseaux"

Oakland University

Student Authors : Brittany Kelley

Faculty Advisors : Dikka Berven

Session 4D 166 SFH

#14 Building Impactful Anti-Bullying Programs

University of Michigan - Dearborn

Student Authors : Julia Cuneo

Faculty Advisors : Lora Lempert

#131 Close Reading for Students

University of Michigan - Dearborn

Student Authors : Zeinab Saad

Faculty Advisors : Michelle Jarenski

#135 An Examination of Suspensory Postures in Captive and Wild Alouatta

University of Michigan - Dearborn

Student Authors : Amelia Stachowicz

Faculty Advisors : Janet Dunn

MEETING OF MINDS XXII

Poster Presentations

Morning Session 9:30 a.m. to 11:20 a.m.

Oakland Center, across from Café O'Bears

#5 ***Vallisneria americana* herbicide resistance and bio film composition**
University of Michigan - Flint
Student Authors : Anna Darzi, Lukas Stilgenbauer
Faculty Advisors : Jerry Sanders

#137 Determination of Cocaine using Gas Chromatography–Mass Spectrometry on Paper Currency Collected in the Metro Detroit Area
University of Michigan - Dearborn
Student Authors : Justin Kandah, Aaron Zhang
Faculty Advisors : Yiwei Deng

#56 The Use of Riboflavin Binding Protein as an Educational Tool
University of Michigan - Dearborn
Student Authors : Amit Bhandari, Michael Saruna
Faculty Advisors : Marilee Benore, Sheila Smith

#128 Riboflavin Binding to DNA and Inhibition of Polymerase Chain Reaction
University of Michigan - Dearborn
Student Authors : Michal Skorupka
Faculty Advisors : Marilee Benore, Sheila Smith

#125 Biodiversity Provides Insight into Rouge River Recovery
University of Michigan - Dearborn
Student Authors : Sarah Corral, Lindsey Scupholm
Faculty Advisors : Abigail Fusaro

#127 Development of New Protein Purification Technique of Avian Riboflavin Binding Protein Utilizing its Isoelectric Point
University of Michigan - Dearborn
Student Authors : James Matchynski
Faculty Advisors : Marilee Benore, Sheila Smith

#122 The Effects of Music in a Story Generation Task: Aliens, Military, and War
Oakland University
Student Authors : William Fuss, Darci Molina
Faculty Advisors : Cynthia Sifonis

#124 Referential and embodied meaning examined in conceptual priming
Oakland University
Student Authors : Brittany Ventline
Faculty Advisors : Cynthia Sifonis

#120 The effect of conceptual priming on perceived levels of creativity
Oakland University
Student Authors : Alex Lekander
Faculty Advisors : Cindy Sifonis

MEETING OF MINDS XXII

Poster Presentations

Morning Session 9:30 a.m. to 11:20 a.m.

Oakland Center, across from Café O'Bears

#118 Finding the Best Digest for DNA-Fingerprinting
University of Michigan - Dearborn
Student Authors : Louis Lotvola
Faculty Advisors : Abigail Fusaro

#89 Posttraumatic Growth in Adolescents after Sports-Related Injuries
Oakland University
Student Authors : Rebekah Hendrian, Kellie McGuire
Faculty Advisors : Kanako Taku

#129 Effects of Phenolics on Amphibian Larval Development, Growth and Survival
Oakland University
Student Authors : Bradley Barr, David Oaks
Faculty Advisors : Keith Berven

#117 Charge and spin transfer by excitation of guanine cation radical in acyclovir, penciclovir, and ganciclovir: Formation of neutral carbon-centered side chain radicals
Oakland University
Student Authors : Cassie Bishop, Cameron Hanson, Alex Petrovici
Faculty Advisors : Amitava Adhikary, Anil Kumar, Michael Sevilla

#116 Are everyone's DNA fingerprints unique based on D-loops in mtDNA?
University of Michigan - Dearborn
Student Authors : Shelby Szymoniak
Faculty Advisors : Abigail Fusaro

#113 Academic Motivation in College Students: A Look at Majors and Enrollment Status
University of Michigan - Flint
Student Authors : Rebecca Horning
Faculty Advisors : Jeannette Stein

#112 Poetry and Syntax: Exploring the Linguistic Structure of an Artistic Form
Oakland University
Student Authors : Elena Durnbaugh
Faculty Advisors : Lisa Levinson

#105 The effect of Great Lakes sea lamprey recruitment dynamics on the potential management options to control this invasive species
University of Michigan - Flint
Student Authors : Adam Brown, Eddy Elkassis, Drew Schaft
Faculty Advisors : Heather Dawson

MEETING OF MINDS XXII

Poster Presentations

Morning Session 9:30 a.m. to 11:20 a.m.

Oakland Center, across from Café O'Bears

#103 Paternity patterns in long-jawed spiders (*Tetragnatha*)
University of Michigan - Dearborn
Student Authors : Jamilah Alhashidi, Byron Cheng
Faculty Advisors : Anne Danielson-Francois

#136 The ability of a newly identified Paenibacillus species to form endospores.
University of Michigan - Flint
Student Authors : Andrew Wiltz
Faculty Advisors : Jerry Sanders

#138 Women's Rape Avoidance Behaviors and Surgency: A Correlational Study
University of Michigan - Flint
Student Authors : Jacob Orr
Faculty Advisors : William McKibbin

#99 The Effects of Compression on Cartilage Morphology
Oakland University
Student Authors : Dylan Twardy
Faculty Advisors : Yang Xia

#101 Pathways to Posttraumatic Growth: Can the Way We Ruminate About an Event Affect Our Experience of Growth
Oakland University
Student Authors : Sharell Elam, Leah LaLonde
Faculty Advisors : Kanako Taku

#134 Identification and Characterization of Bacterial Isolate Exhibiting Antimicrobial Properties
University of Michigan - Flint
Student Authors : Eric Spilker
Faculty Advisors : Jerry Sanders

#91 Synthesis and characterization of Re and Mn-based catalysts containing diaminophenyl derivatives
Oakland University
Student Authors : Brooke Corbin, Badrinath Dhakal, Daniel A. Kurtz
Faculty Advisors : Greg A. N. Felton

#92 Electrocatalysts for Carbon Dioxide Reduction
Oakland University
Student Authors : Jessica Burkey, Richard Hulme
Faculty Advisors : Greg Felton

#88 The Black Sheep Effect in Minimal Groups
University of Michigan - Dearborn
Student Authors : Lauren Anthony, Fahtme Elsayed, William Isom, Cjersti Jensen, Shawnna Walser
Faculty Advisors : Robert Hymes

MEETING OF MINDS XXII

Poster Presentations

Morning Session 9:30 a.m. to 11:20 a.m.

Oakland Center, across from Café O'Bears

#84 "Geek Identity in Flint, Michigan"
University of Michigan - Flint
Student Authors : Candace Lester
Faculty Advisors : Erica Britt

#85 Religous Threat and Physiological Response
University of Michigan - Dearborn
Student Authors : Lauren Anthony, Olivia Deyonker, William Isom, Cjersti Jensen, Melissa Maczuga, Robert Siegle
Faculty Advisors : Robert Hymes

#139 How Does Birth Order Affect Teamwork? Birth Order, Personality, and Teamwork Behaviors.
University of Michigan - Flint
Student Authors : Noelle Looney
Faculty Advisors : Marianne McGrath

#87 Gene Identification for Riboflavin Binding Protein Deficiency in Mutated Chicken
University of Michigan - Dearborn
Student Authors : Usha Kadiyala, Brandon Kennedy
Faculty Advisors : MarIlee Benore, Sheila Smith

#133 Effects of Identification and Fusion on Muslim Americans in Response to a Threat
University of Michigan - Dearborn
Student Authors : Hanan Hashem, Jatia Sylvester
Faculty Advisors : Muniba Saleem

#82 Perceived Discrimination and Self-Esteem in Arab Americans
University of Michigan - Dearborn
Student Authors : Zahraa Al-Khafaji, Lauren Anthony, Will Chow, Olivia Deyonker, Rob Siegle, Shawnna Walser
Faculty Advisors : Robert Hymes

#79 Schematic Processing in Novel Social Categories
University of Michigan - Dearborn
Student Authors : Jamilah Alhashidi, Fahtme Elsayed, Rob Siegle, Dima Swaidan, Kelsey Tajer
Faculty Advisors : Robert Hymes

#75 Toward a Description of What Makes a Black Hole Hurl
University of Michigan - Flint
Student Authors : Hillary Sewell, Adam Weidman
Faculty Advisors : Rajib Ganguly

#74 A Time Study of Sacred Structures in Downtown Detroit's Woodward Corridor
University of Michigan - Dearborn
Student Authors : Thomaz Carvalhaes
Faculty Advisors : Claude Jacobs

MEETING OF MINDS XXII

Poster Presentations

Afternoon Session 1:30 p.m. to 3:20 p.m.
Oakland Center, across from Café O'Bears

#72 Differential splicing alters the transcript diversity of Helitron captured genes between maize inbred lines
Oakland University
Student Authors : Katarina Klusman, Brian Lynch, Tara Patrick
Faculty Advisors : Shailesh Lal

#73 Religion and Ritual in the Natural of the Capuchin Order of St Joseph St Bonaventure
University of Michigan - Dearborn
Student Authors : Denise Malone-Harris
Faculty Advisors : Claude Jacobs

#71 The Role of Intimal Hyperplasia in Solid Organ Transplant Rejection and the Discovery of Collagen-1 Expressing Fibrocyte Accumulation after Vascular Injury
University of Michigan - Flint
Student Authors : Sharnée Mead
Faculty Advisors : Joseph Sucic

#70 The Link Between Mindfulness and Distress Tolerance
Oakland University
Student Authors : Adrianna Sesi
Faculty Advisors : Andrea Kozak, Michele Parkhill Purdie, Scott Pickett

#62 Decade by Decade Comparison of Chord Usage in American Popular Music
University of Michigan - Dearborn
Student Authors : Cody Bouse
Faculty Advisors : Thomas Fiore

#66 Positive Affect on Stress Reactivity
University of Michigan - Dearborn
Student Authors : Sunpreet Singh, Walaa Tout
Faculty Advisors : Susana Peciña

#17 Childhood Socioeconomic Status and Adult Stress Reactivity
University of Michigan - Dearborn
Student Authors : Chandar Balakumar, Jeanette Herrando, Angela Singh, Sunpreet Singh, Walaa Tout
Faculty Advisors : Susana Peciña

#64 The effect of objectifying images on women and men's relative memory for the dress and physical features of an average versus thin speaker.
University of Michigan - Flint
Student Authors : Noelle Looney
Faculty Advisors : Terrence Horgan

#61 Self-Reported Memory Accuracy is predicted by Personality Constructs
University of Michigan - Dearborn
Student Authors : Erik Alan Wagenheim
Faculty Advisors : Arlo Clark-Foos

MEETING OF MINDS XXII

Poster Presentations

Afternoon Session 1:30 p.m. to 3:20 p.m.
Oakland Center, across from Café O'Bears

#60 Trimming women's advantage over men in appearance accuracy
University of Michigan - Flint
Student Authors : Tiffany Long, Patrick Wegman
Faculty Advisors : Terrance Horgan, Marianne McGrath

#57 Hexatonic Systems and Dual Groups in Mathematical Music Theory
University of Michigan - Dearborn
Student Authors : Cameron Berry
Faculty Advisors : Thomas Fiore

#54 Analysis of Parent-Adolescent Discourse on Morality: Development of the Moral Messages Coding Scheme
Oakland University
Student Authors : Tiffany Davis, Kayla Fike, Dominique McClain, Susanna Taylor
Faculty Advisors : Mary Lewis

#53 Through my Eyes: Nursing Student's Reflection of Intensive Immersion Course in the Dominican Republic
University of Michigan - Flint
Student Authors : Adrianne Andries, Emily Gross, Tiffani Moore, Meagan Severeide
Faculty Advisors : Maureen Tippen

#51 Construction of an Ion Pump Driven Ultra High Vacuum Chamber
University of Michigan - Flint
Student Authors : Jeremy Munsell, Trang Nguyen, Matthew Sutter
Faculty Advisors : Chris Pearson

#50 Diversity Among Corporate Directors in 2005
University of Michigan - Flint
Student Authors : Cordell Harris
Faculty Advisors : Roy Barnes

#49 Managing Early Successional Habitat for an Isolated Population of Six-lined Racerunners (*Aspidoscelis sexlineata*) in Michigan
University of Michigan - Flint
Student Authors : Reine Ecker
Faculty Advisors : Teresa Yoder-Nowak

#45 Novel adjuvant therapies that prevent endothelial cell activation augments chemotherapy induced leukemia cell killing
Oakland University
Student Authors : Bahareh Pezeshkian, Gau Shoua Vue
Faculty Advisors : Gerard Madlambayan

#43 Decreasing Obesity Among Elementary School Students Via School Based Community Gardens in Flint, Michigan
University of Michigan - Flint
Student Authors : Denise Martin
Faculty Advisors : Gergana Kodjebacheva, Ph.D.

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University of Michigan - Dearborn
Student Authors : Katie Krajewski, Katie Pfannes
Faculty Advisors : Arlo Clark-Foos

#31 Difficult to Auscultate Blood Pressure Readings in Collegiate Athletes
Oakland University
Student Authors : Alex Pieters
Faculty Advisors : Sara Arena

#39 Responses of proximate neighbors to an explosion with fatality: A preliminary report.
University of Michigan - Flint
Student Authors : Ian M. Cangemi, Martin W. Rivera-Salas
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#35 The Photoreceptor Protein Peripherin/rds and its Interactions with Membranes
Oakland University
Student Authors : Mark English, Melanie Gary
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#36 Hand Operated Sheet Metal Shear
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Student Authors : Krista Edwards, Ryan Stevenson, Kurt Valutis
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#37 Vacuum Former Design
University of Michigan - Flint
Student Authors : Michael Bright, Andrew Findlater, Joe Hyde, Jeff Martin
Faculty Advisors : Aluko Olanrewaju

#28 Tip-of-the-Tongue States in Bilinguals and Monolinguals
University of Michigan - Dearborn
Student Authors : Jamilah Alhashidi, Zeina Mikhael, Walaa Tout
Faculty Advisors : Arlo Clark-Foos

#24 Attributional Ambiguity Physiology
University of Michigan - Dearborn
Student Authors : Jeff DiMambro, Alexandra Dluzniewski, Melissa Maczuga, Jodi Puchalski, Kelsey Tajer
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#19 Public playgrounds for children with physical and sensory impairments
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#18 Assessment of Spatial Factors Significant to African Hingeback Tortoise Conservation Efforts Using Geographic Information Systems
University of Michigan - Flint
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#13 Classroom Inclusion: A multi-district comparison of special education service between traditional public schools and public school academies
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#11 Gender Bias in Attention
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Student Authors : Sarah Carmody
Faculty Advisors : Nitya Sethuraman

#10 Revisit of the reaction mechanism to form levoglucosan
University of Michigan - Flint
Student Authors : John Henry, Brendan Leja
Faculty Advisors : Jie Song

#8 Women, Leadership, and Social Change Oral History Project
University of Michigan - Dearborn
Student Authors : Susan Lowe, Rebecca Richardson
Faculty Advisors : Georgina Hickey

#6 Aggression and Stress Response in Captive Chimpanzees
University of Michigan - Dearborn
Student Authors : Melissa Maczuga
Faculty Advisors : Francine Dolins

#7 Principles of Corpus Construction
Oakland University
Student Authors : Jozefina Ujka
Faculty Advisors : Tony Shaska

#4 Age and Insurance: Comparing age range to uninsured rates
University of Michigan - Dearborn
Student Authors : Patrick Hufnagel
Faculty Advisors : Patricia Smith

MEETING OF MINDS XXII

Poster Presentations

Afternoon Session 1:30 p.m. to 3:20 p.m.

Oakland Center, across from Café O'Bears

#1 Structures of some low-lying excited states of Si2?H
University of Michigan - Flint
Student Authors : Anthony Seitz
Faculty Advisors : Jie Song

#2 Rational points on elliptic curves
Oakland University
Student Authors : Rachel Shaska
Faculty Advisors : Tony Shaska

#1 Structures of some low-lying excited states of Si2?H

University of Michigan - Flint
Student Authors : Anthony Seitz
Faculty Advisors : Jie Song

Abstract : The chemistry of silicon in the gas phase is a driving force of the semi-conductor industry, which is essential in the search for accelerated computational power. During the chemical vapor deposition processes, in which thin, pure films are applied to the surface of a substrate, silane (SiH4) is often transformed into different isomers of silicon hydrides. One of the most interesting of these is silaethnyl (Si2H), which exhibits some unique and surprising properties. Due to its abnormal structure, it has been difficult to determine its ground state geometry, as different theory levels and basis sets often generate different conclusions. Experimental studies have not yielded definitive results either. It has been shown that high theory level with a very large basis set are required in order to determine the ground state between 2A1 and 2B1. In addition, the low-lying excited states also are seen to have significantly different structures, and revealing these states could help to understand the characteristics of bonding in carbon and silicon as well as the process of chemical vapor deposition. In this study, post-MCSCF methods have been applied using various basis sets to get the structures of low-lying electronic states.

#2 Rational points on elliptic curves

Oakland University
Student Authors : Rachel Shaska
Faculty Advisors : Tony Shaska

Abstract : We give a quick review of the group structure of an elliptic curve, torsion points and Mazur's theorem, integral points and the Nagell-Lutz theorem, and some of the open conjectures for elliptic curves.

#3 A Finite Element Analysis Method to Determine Characteristic Length of Composite Joints in Tension

University of Michigan - Flint
Student Authors : Xiaoyi Ma, Yibo Qi
Faculty Advisors : Olanrewaju Aluko

Abstract : Accurate prediction of joint strength in laminated composites has been an important research topic and the search to provide solutions to joint problems has remained a driving force for researchers. Finite element analysis software ANSYS 14.5 was used to determine the characteristic length in tension for different orthotropic materials was developed for the failure analysis of a composite joint. The analysis involved the computer-aided drawing, the specification of displacement expressions, and path operations that were used to determine the characteristic length for failure. The generality of the model makes it of practical importance to the researchers of composite joints and structures.

#4 Age and Insurance: Comparing age range to uninsured rates

University of Michigan - Dearborn
Student Authors : Patrick Hufnagel
Faculty Advisors : Patricia Smith

Abstract : This research presents and examines the theory that the percentage of the United States population aged 24 to 34 and the percentage of the population that is uninsured are positively correlated. It presents data on both the variables and conducts hypothesis tests using data collected to prove the proposed theory correct.

#5 *Vallisneria americana* herbicide resistance and bio film composition

University of Michigan - Flint
Student Authors : Anna Darzi, Lukas Stilgenbauer
Faculty Advisors : Jerry Sanders

Abstract : *Vallisneria americana*, water celery, has become increasingly more difficult to control with herbicides. A proposed mechanism of this herbicide resistance has been postulated to be associated with the microorganisms forming a biofilm on the surface of the plant. This study was undertaken to sample and characterize the bacterial flora that contribute to the biofilm present on *Vallisneria americana* during natural growth and decomposition of the plant. *Vallisneria americana* samples were obtained from Lobdell Lake in Genesee county Michigan and subsequently studied over the course of several weeks under conditions that either caused a preservation of the natural plant or its decomposition. From these samples, bacteria were isolated and characterized by a variety of microbiological techniques.

#6 Aggression and Stress Response in Captive Chimpanzees

University of Michigan - Dearborn
Student Authors : Melissa Maczuga
Faculty Advisors : Francine Dolins

Abstract : Aggression and Stress Behavior in Captive Chimpanzees Melissa A. Maczuga Faculty Sponsor: Dr. Francine Dolins Abstract This study evaluates the relationship between aggressive behavior, stress response behavior, and conflict resolutions in a group of captive chimpanzees (Pan tryglodytes). Previous studies have reported mixed interpretations about the role of reconciliation, consolation and affiliation, together referred to as conflict resolution with regard to stress following a conflict. In the Integrated Hypothesis, consolation and affiliation are seen as an alternative to reconciliation thereby reducing stress and repairing relationships (e.g., Fraser & Aureli, 2008; Koski, Koops & Sterck, 2007; Palagi, Cordoni & Borgognini Tarli, 2006; and Romero & de Waal, 2011), compared to more recent research, yet to be fully described, which suggests that stress levels are not impacted by consolation (e.g., Koski & Sterck, 2007; Romero, Catellanos & de Waal, 2011; and de Waal, 1982). An observational study was conducted at the Detroit Zoo in the Summer of 2013. We tested the prediction that there would be a positive correlation between various levels of aggression and stress with stress negatively correlated with conflict resolution if the Integrated Hypothesis holds true. Findings show that aggression and stress are positively correlated with frequency of behaviors. An analysis of duration of behavior showed that most levels of aggression were positively correlated with stress, while levels of stress also seemed to be positively correlated with levels of reconciliation. However, only the highest level of aggression was positively correlated with conflict resolution. This indicates that while stress occurs at increased levels of aggression, conflict resolution also increases when duration of behavior is evaluated.

#7 Principles of Corpus Construction

Oakland University
Student Authors : Jozefina Ujka
Faculty Advisors : Tony Shaska

Abstract : In linguistics, a corpus or text corpus is a large and structured set of texts. They are used to do statistical analysis and hypothesis testing, checking occurrences or validating linguistic rules within a specific language territory. We will describe the mathematical methods used to build a corpora and its uses in artificial intelligence. Our methods are illustrated in building a corpus for the Albanian language.

#8 Women, Leadership, and Social Change Oral History Project

University of Michigan - Dearborn
Student Authors : Susan Lowe, Rebecca Richardson
Faculty Advisors : Georgina Hickey

Abstract : We conducted sixty-five semi structured interviews lasting 20-90 minutes with attendees at the 2013 annual Michigan and National NOW conferences to gather ideas, perspectives, and history about women's leadership from multiple generations of feminists. While we sought interviews with a handful of formal NOW leaders, most participants volunteered. The youngest respondent was 19, the oldest 88; the median age was 63. Respondents came from as far away as Florida, Maryland, and California, but most were from the Midwest. Ninety-five percent of the respondents were white women and virtually all respondents had attained at least some college education. After being asked a series of background questions, we focused on participants' leadership experiences and philosophies. The interviews concluded with open-ended questions about the status of the women's movement and its future trajectory. As participant observers, we also attended keynote, plenary, and workshop sessions at both conferences. Interviews and conference events were then processed and coded by a team of two students and the professor.

#9 Metropolitan Research and Student Engagement at iLabs, Center for Innovation Research

University of Michigan - Dearborn
Student Authors : Nicole Mangis
Faculty Advisors : Nicole Mangis

Abstract : Students working with iLabs, Center for Innovation Research, engage in real-world projects that add value to the broader conversations such as brain drain, economic development, job growth and innovation.

#10 Revisit of the reaction mechanism to form levoglucosan

University of Michigan - Flint
Student Authors : John Henry, Brendan Leja
Faculty Advisors : Jie Song

Abstract : Fast pyrolysis of renewable cellulosic biomass is considered an important step in producing carbon-neutral, drop-in transportation fuel. Many experimental and theoretical efforts have been made to understand the reaction mechanism forming levoglucosan. A variety of mechanisms have been proposed but none are perfect. Theoretical studies, based on a relatively small model, have been applied. However, two similar studies generate two different mechanisms. The similarity between these two studies is that both are based on cellobiose and the difference is only one considers the solvation effect. In this study, both solvation and size effects of theoretical models are considered and compared with previous studies. A hybrid QM/MM approach is used through Gaussian 09. M06 is used for the QM part and UFF is used for MM part. PCM model is used for the solvation. All calculations are performed using Gaussian 09.

#11 Gender Bias in Attention

University of Michigan - Dearborn
Student Authors : Sarah Carmody
Faculty Advisors : Nitya Sethuraman

Abstract : Change blindness, a phenomenon in which viewers fail to detect a change to an object in a scene, demonstrates that only a certain amount of items enter our visual awareness at any given time. Whether or not our gender has any bearing on this has yet to be examined. However, it is clear that males and females do respond differently to different objects, especially when those objects are gender-stereotyped. Merging this with our knowledge of change blindness the goal here was to determine whether males are more likely to notice a change when it occurs to a stereotypical male toy and vice-versa for females. Participants were students enrolled at the University of Michigan-Dearborn who completed the task by viewing 30 sets of images that featured an original image followed by a modified version of that image. Of these 30, 10 featured stereotypical girl toys, another 10 featured stereotypical boy toys, and the final 10 featured gender-neutral toys. The results are to be determined.

#12 Wind Turbine Power Generation

University of Michigan - Flint
Student Authors : Connie Lam, James Pung
Faculty Advisors : Ulan Dakeev

Abstract : Wind is the process where the movement of air flows from an area of high pressure to an area of low pressure. This course of movement exists because the heat of the sun is unevenly distributed along the surface of the Earth. Wind power is currently the fastest growing source of electricity production in the world. Today, wind turbine utilization at a residential level is becoming increasingly widespread. The course of this study is to develop a new and effective way to generate more power from a wind turbine with a reduced amount of energy input. A new approach is defined by using an empirical method; in this case, the wind tunnel attachment (WTA) is used to improve the effectiveness of lower wind velocity through a small scaled wind turbine. One challenge in the renewable power industry is the ability of a wind turbine to produce power during slower wind velocities. The WTA will produce an increased wind velocity by harnessing wind energy. The results of harnessing wind energy will allow for a more laminar flow and wind shear. Displacing wind into smaller regions and combining fluid particles will inhibit higher velocity which will in turn reduce the average power-producing speed.

#13 Classroom Inclusion: A multi-district comparison of special education service between traditional public schools and public school academies

University of Michigan - Dearborn
Student Authors : Christopher Urbanik
Faculty Advisors : Joseph Musial

Abstract : A secondary analysis was performed on publicly available data from the Michigan Department of Education regarding regular classroom inclusion for special education students with individual education programs (IEP). Multiple comparisons were performed utilizing school year data from 2010-2011, among traditional public schools (TPS) and public school academies (PSA), which analyzed classroom inclusion by school districts in Kalamazoo, Kent, and Wayne County. Chi-square analysis was employed to examine districts within each county using two domains: 1) Regular classroom inclusion for at least 80% of the day, and 2) Regular classroom inclusion for less than 40% of the day. Of the 6 comparisons, 5 were statistically significant, $p < 0.001$, $df = 1$. Among the statistically significant results, the percentage of students spending less than 40% of the day ranged from 15%-21% in TPS and was 0% in PSAs, respectively. Special education students spending less than 40% of time in the classroom receive an extensive range of services depending on the severity of their disability; therefore, TPS were more likely to provide a wider range of services for students with the most challenging disabilities than were PSAs.

#14 Building Impactful Anti-Bullying Programs

University of Michigan - Dearborn
Student Authors : Julia Cuneo
Faculty Advisors : Lora Lempert

Abstract : Current anti-bullying programs largely deal with bullying as a conflict between battling students. This narrative ignores the power dynamics we see in almost all bullying situations. This presentation will explore why programs based on such assumptions will inevitably fail and possibly even exacerbate the problem. I will propose a broad and entirely unique anti-bullying framework. This program is based on an understanding of bullying as a microcosm of wider societal oppressions. Therefor, it uses the tools and vocabulary of anti-oppression work to teach students to stand up for their rights. It also encompasses types of bullying commonly ignored: sexual harassment, in-group bullying, and teacher bullying. Not only is it a whole-school approach which engages teachers, administration, students, and staff in fixing the problem, but it defines the problem differently. If bullying functions like oppression, we must begin at the grassroots to oppose it. Therefore, students are given the agency to address their lived experiences as valid and problematic. Discussion focuses around root causes and environmental issues, not individual interpersonal situations. This framework has the potential to be a powerful change agent in many lives. Adults can begin to view bullying in a whole new light. Students can take the lead in creating a new understanding about how we all treat each other.

#15 Machines of Loving Grace – What Man Ray's Misread Misogyny Means to Postmodern Feminist Criticism

University of Michigan - Dearborn
Student Authors : Chene Koppitz
Faculty Advisors : Nadja Rottner

Abstract : Through its analysis of Man Ray's multi-decade career, with emphasis placed on 1920's Dancer/Danger and 1933's Erotique Voilée (Veiled Erotic) series, this paper will challenge the Third Wave feminist assertion that surrealism as a form maintained and reinforced patriarchal and/or misogynistic artistic standards of its era and originated the modern male gaze in popular culture.

#16 Stakes and Stones: The Affective/Effective Feminist Legacy of "Buffy the Vampire Slayer" on the Transcendent Teen Masculinity of "Teen Wolf".

University of Michigan - Dearborn
Student Authors : Chene Koppitz
Faculty Advisors : Suzanne Bergeron

Abstract : While popular television dramas and sitcoms have been accused historically of reinforcing traditional gender roles, science fiction and fantasy shows are often praised for upending hegemonic gender norms along with cultural values. From Rod Serling's TWILIGHT ZONE to the television adaptation of THE WALKING DEAD, issues of gender - and sometimes, sexuality – are far less troublesome than surviving an alien attack or a dystopian future. More interestingly, teens and young adults are often key cast members in such shows, as evidenced by the number of supernatural dramas featuring high school students and college age adults (BUFFY THE VAMPIRE SLAYER, ROSWELL, SUPERNATURAL, SMALLVILLE, THE VAMPIRE DIARIES, DEAD LIKE ME, MISFITS, MY BABYSITTER'S A VAMPIRE, POINT PLEASANT, THE SECRET CIRCLE, TEEN WOLF, HEX, TODD AND THE BOOK OF PURE EVIL, HEROES, TWIN PEAKS). While BUFFY THE VAMPIRE SLAYER was touted (and academically analyzed) as a feminist treatise, its male characters - much like those of the aforementioned shows - and their various and varying masculine identities were rarely examined with the same scrutiny as those of female-identified characters. In the decade since BUFFY went off the air, supernatural teen dramas have come and gone, but few have linked gendered behavior, maturation and simply surviving high school as implicitly as TEEN WOLF. Operating from BUFFY producer Joss Whedon's mantra that "high school is hell," the creators of TEEN WOLF have made the corridors of Beacon Hills High School just as dangerous as those of Sunnydale High - socially and supernaturally - but focus on a young man rather than a young woman. This paper will examine the portrayal of teenage masculinity in both TEEN WOLF and BUFFY THE VAMPIRE SLAYER, review that BUFFY scholarship related to masculinity and determine what the legacy of television's first final girl has wrought on today's teen werewolf.

#17 Childhood Socioeconomic Status and Adult Stress Reactivity

University of Michigan - Dearborn
Student Authors : Chandar Balakumar, Jeanette Herrando, Angela Singh, Sunpreet Singh, Walaa Tout
Faculty Advisors : Susana Peciña

Abstract : Individuals vary in their psychological and physiological responses to stress. These differences in stress reactivity may be predictive of risk for stress-related disorders. Childhood socioeconomic status (SES) is an important predictor of a variety of adult health outcomes, and it is possible that this relationship is mediated in part by the effect of childhood SES on stress reactivity. To test this hypothesis, the Trier Social Stress Task (TSST) was administered to induce stress so that reactivity could be assessed (Kirschbaum, Prike, & Hellhammer, 1993). The TSST involves a public speaking component followed by an arithmetic test. Blood pressure measurements were taken before, during, and after the TSST to monitor changes. Saliva samples were also collected to analyze changes in cortisol levels. Participants completed a number of questionnaires, including two assessing childhood and current SES. Preliminary analyses of blood pressure data indicate that, contrary to expectations, several indicators of status were positively correlated with stress reactivity. Final results will be presented.

#18 Assessment of Spatial Factors Significant to African Hingeback Tortoise Conservation Efforts Using Geographic Information Systems

University of Michigan - Flint
Student Authors : Brittany Price
Faculty Advisors : Marty Kaufman

Abstract : Kinixys is a genus of the family Testudinidae, colloquially known as Hingeback Tortoises or Hinged Tortoises, consisting of at least eight species endemic to sub-Saharan Africa with one sub-species (K. zombensis domerguei) found in northwestern Madagascar. The ranges of the various Kinixys species cover a broad area of Africa and current efforts to understand these tortoises have been somewhat limited to select species, thus little is known about Kinixys in much of their range. In recent years, declines have been observed in parts of their range. These declines can be attributed to anthropogenic factors such as habitat loss and fragmentation, capture and sale for pet trade, and harvesting for consumption. Growth of human populations throughout Africa is likely contributing to an increase in these factors, and it is also likely that severity and types of threats vary across individual species' ranges. This study provides a preliminary geographic analysis of Kinixys based on presently available data using GIS. Geospatial analysis in GIS is becoming increasingly useful in wildlife conservation efforts due to its ability to integrate and manipulate multiple spatial data in one interactive map. It is a valuable tool in conservation and management of Kinixys as their varying species, ranges, and threats may otherwise be difficult to track and manage over such a broad range of habitat. Current threats, areas of greatest concern, and existing areas of protected land are identified using various spatial analysis tools and maps. Gaps in spatial data are discussed, along with information gaps that can be addressed through continued research and future work with mapping to aid in conservation efforts for these unique tortoises.

#19 Public playgrounds for children with physical and sensory impairments

University of Michigan - Flint
Student Authors : Tina Sabo
Faculty Advisors : Gergana Kodjebacheva

Abstract : Playgrounds promote the healthy development of children. Boundless playgrounds, built in a limited number of neighborhoods, are open to children living with and without disabilities. The objectives of the research were to: map the location of boundless playgrounds in Michigan in relationship to poverty; and assess the design of the playgrounds in terms of their accessibility. Each playground was visited and assessed using an observation form. Most playgrounds were located in affluent areas. They had high levels of accessibility for children with physical disabilities but not for those with sensory disabilities. No children living with disabilities visited the playgrounds. The following are several recommendations: 1. locate more playgrounds in poor areas; 2. educate parents and special-education teachers on the location of the playgrounds; 3. add Braille signs throughout the playground; 4. increase playground maintenance and make useful additions to the playgrounds such as wheelchair-accessible bathrooms and drinking fountains.

#20 Welcome to Summoners Rift: Exploring Gendered Behavior and Avatar Choices

Oakland University
Student Authors : Zachary Willockx
Faculty Advisors : Jo Reger

Abstract : The rise of videogames as a popular media has warranted studies on the possible effects of playing such games. These studies have shown how videogame play can impact a player's identity. Currently, the most popular videogame on the market is League of Legends, with the recent world championship games reaching 32 million viewers. While many studies have looked at gender portrayals in videogames, very few have looked at player behavior in relation to avatar gender. I perform a content analysis on the championship games to examine the actions the players make in relation to their avatar's gender. I found that in general, masculine avatars were used to perform more offensive actions than female avatars.

#21 Printmaking: Why Aren't You Doing This Already?

University of Michigan - Dearborn
Student Authors : Denise Malone-Harris, Elisabeth Marietti, Edward Poulos Poulos, Ashlee Szabo, Robert Turner
Faculty Advisors : Julie Lambert

Abstract : Printmaking is a process by which an artist or person can create an image that has the capability of being reproduced multiple times. Multiples allow a maker to experiment with different approaches and have a quantity that can be used to create a set or for distribution. Historically, prints allowed a person the ability to easily and quickly distribute information, to share artwork and make it more readily available to the masses by reducing cost. There are several printmaking processes including Woodblock and Screen Printing, both of which we will demonstrate. Printmaking is and has been used to make commercial documents such as movie posters, books, calenders, stationary, t-shirts, wall paper and many others. It also has a long history as a fine art medium. The fine art printmaking community consists of artists from all mediums, such a sculpture, photography and painting, who converge in print as an additional platform to explore their ideas and further their expression. Heavy machinery, chemicals and expensive equipment are what the medium was developed with. However, we would like to introduce print as a process that is inexpensive, approachable and accessible to any person wanting to express their ideas or create a beautiful item to gift or have. Using items purchased at a local art supply store, we will exhibit just how fun and easy these processes are and that there really is no reason why one would not already be doing this.

#22 The Architectural Legacy of Nero

University of Michigan - Dearborn
Student Authors : Margaret Waligora
Faculty Advisors : Diana Ng

Abstract : Since his death in 68 CE, the infamy of Rome's most notorious emperor, Nero, has been accepted without question by many classical scholars, who draw their evidence from ancient literary sources. These accounts have lead many historians to assume that Nero's rule as emperor was ultimately a reflection of his erratic personality. The decadence of his Golden Palace is often cited as a primary example of his overindulgence in imperial pleasures. However, recent revisionist interpretations by historians and art historians have suggested that, despite Nero's maniacal style as emperor, he was crucial to the expansion and evolution of Roman architecture through the creation of temples, villas, and baths. Through a critical analysis of historical accounts by Tacitus and Suetonius and a comparative examination of the architectural programs of former Julio-Claudian Emperors, the reader will be able to recognize the overlooked positive influence Nero had on Rome.

#23 Incurable Neurosis: The Sexual Fixation of Egon Schiele

Oakland University
Student Authors : Nicole Peterson
Faculty Advisors : Claude Baillargeon

Abstract : In late 19th/early 20th century Vienna, sexuality was a subject of supreme suppression However, contemporaries Egon Schiele (1890–1918) and Sigmund Freud (1856–1939) were not afraid to confront the taboos of their time. While Schiele delved into a lifelong exploration of his own sexual desires, Freud focused his research on the unconscious and psychosexual development, and through his studies, proposed that artists could use their creativity as a means of avoiding neurotic disorders. In this essay, I explore Schiele's unorthodox behavior and the drawings he made of his sister, his young models, and even himself, in order to understand the ways in which his artwork and lifestyle relate to Freud's views on creativity as a remedy for neurosis. Instead of sublimating, or transforming his desires into a socially acceptable form, Egon Schiele both lived and expressed himself in ways that reflected his sexual fixation.

#24 Attributional Ambiguity Physiology

University of Michigan - Dearborn
Student Authors : Jeff DiMambro, Alexandra Dluzniewski, Melissa Maczuga, Jodi Puchalski, Kelsey Tajer
Faculty Advisors : Robert Hymes

Abstract : Attributional Ambiguity Physiology Maczuga, M., DiMambro, J., Dluzniewski, A., Puchalski, J., Tajer, K. Faculty Advisor: Dr. Robert Hymes Abstract In the current study, groups of African Americans, Arab Americans and Caucasians were evaluated with regards to their physiological responses during various tasks. Crocker (1991) describes an attributional ambiguity paradigm which was used in the current study. Physiological measures were taken to test the idea that the increased rates of hypertension in minority groups may differ from white participants. Subjects were told to write an essay that would be evaluated by another subject and then received feedback from the other subject. Results of the study show that both African Americans and Arab Americans do show significantly increased physiological responses, measured by blood pressure, heart rate, and skin conductivity, when compared to the Caucasian control. Furthermore, African Americans displayed a higher diastolic rate than Arab Americans (approximately 9.63 mmHg higher) which may be related to their higher rates of hypertension within society.

#25 Ernst Ludwig Kirchner's Philosophy in Art

Oakland University
Student Authors : Lisa Montgomery
Faculty Advisors : Claude Baillargeon

Abstract : My formal research project is on German Expressionism, specifically the works of Ernst Ludwig Kirchner, (1880-1938). Kirchner was a founding member of the group called “Die Brücke”. Kirchner was responsible for and wrote Die Brücke’s manifesto (1906), in which he stated that they were a new generation “who want freedom in our work and in our lives.” These artists worked in a collective societal setting, sharing not only ideals and philosophy but also a bohemian lifestyle of free love and nudity. I will explore Kirchner’s works from Dresden and Berlin produced between 1909 and 1913. The question that I seek to answer with my research paper is: How are Ernst Ludwig Kirchner’s philosophies, beliefs and lifestyle embodied and displayed in his works of art created in Dresden and Berlin from 1909 to 1913? It is my intention to show that through a review of his paintings and writings by and about him, we can see what he came to believe; that art can and should be created without rules, restrictions or conformity and in understanding this we can see the effects of these tenets on his works of art.

#26 Implementation of Fault Detection technique on Embedded Board

University of Michigan - Flint
Student Authors : Erik Leaske
Faculty Advisors : Young-Man Kim

Abstract : Fault detection is the theory on how to indicate when a device leaves its desired operating condition. One of the primary goals in engineering is to create devices that can adapt to changing conditions with as little degradation of performance and stability as possible. In this research, we use motion control which is one of most basic ways of fault detection to show how fault detection operates is motor control. Motor control is the application of the theory of controls on a torque producing device.. In this case the research involved a simulated motor circuit being analyzed for voltage changes. If the voltage drops too low the motor may not function and if voltage is too high the motor can be damaged. In order to detect these faults a fault detection system is developed to detect fault ASAP to prevent any damage or disaster. Using an analog to digital converter, the safe motion of a motor is continuously monitored. To implement that, an analog to digital converter takes an analog value and converts into a value that can be read by the micro controller. The microcontroller then using a programmed set of commands displays the status of the voltage being supplied to the motor. Using the educational demo board, ‘Dragon 12 embedded system board’, we implemented the fault detection system to demonstrate its effectiveness.

#27 Panopticism before Foucault: The Silent Surveillance and Deterrence through visual arts in Renaissance Venice (In the case of San Marco)

Oakland University
Student Authors : Eva Shillair
Faculty Advisors : John Corso, Galina Tirnanic, Susan Wood

Abstract : The practices of applying observation and punishment when an undesirable behavior is detected has been around for thousands of years. In criminology, we refer to the acts of observation as “surveillance” and the actual punishment as “deterrence.” Throughout history examples of justice, fair judgement, surveillance and deterrence can be seen through arts, such as paintings, sculptures and mosaics. Furthermore, traditionally we often think of art as decorative rather than retributive. To examine how the arts delivered the purpose of justice, fair judgement, surveillance and fair judgement to the people of Venice during Renaissance, I will examine specific art works that exemplify the importance of functions mentioned above throughout the exterior of Doge’s Palace and the interior of St. Mark’s Basilica located at the St. Mark’s Square in Venice.

#28 Tip-of-the-Tongue States in Bilinguals and Monolinguals

University of Michigan - Dearborn
Student Authors : Jamilah Alhashidi, Zeina Mikhael, Walaa Tout
Faculty Advisors : Arlo Clark-Foos

Abstract : Tip-of-the-tongue (TOT) describes a retrieval failure accompanied by an intense FOK. Previous research has established that bilinguals experience more TOT states than monolinguals. Using a methodology devised by Yaniv and Meyer (1987) we found that this effect may depend on the way in which TOT states are induced.

#29 Cindy Sherman’s Untitled Film Stills: The Domestic Woman

Oakland University
Student Authors : Jaclyn Wicker
Faculty Advisors : Claude Baillargeon

Abstract : Cindy Sherman, the photo-based artist, created her Untitled Film Stills series from 1977 to 1980. As a recent graduate, Sherman tapped into her love of 1950s B-movies to capture the essence of womanhood, as it was defined in the 50s and still today. The Untitled Film Stills #12 (1978), #14 (1978), and #35 (1979) are a small portion of Sherman’s photographs that are representing domestic scenes (others include: film stills #3, 1977; #10, 1978; #11 1978; #84, 1978; #50, 1979; etc.). The focus of my research is based on these three photographs being representative of the feelings a number of women have towards their predetermined “role” in society. The negative emotions expressed through Sherman’s three film stills mirror those of most modern women in today’s society. Sherman’s strong influence of 1950s film, amongst other experiences, shaped the characters she portrayed within the frames of her Untitled Film Stills.

#30 END-QUENCH OR JOMINY TEST

University of Michigan - Flint
Student Authors : Brendon Green, Jeremy Langdon, Jessica Polidan, Ronald Wood
Faculty Advisors : Olanrewaju Aluko

Abstract : The study in the design of a Jominy End Quench Test is both an exercise in design elements and the practical application of hardenability testing. The goal of this project was to design and construct an efficient Jominy End Quench test to improve the lab quality for future students taking ASTM standards into consideration. Multiple designs were considered and ranked on a selected criterion to help select which design was best. Also taking into account the average class size, limited lab space, and time allowed for labs, these were considered to be constraints. Parametric design was utilized to ensure the structurally integrity and function of the overall design. Furthermore, the target of this project was to design a project that follows ASTM standards and best utilizes both time, and space.

#31 Difficult to Auscultate Blood Pressure Readings in Collegiate Athletes

Oakland University
Student Authors : Alex Pieters
Faculty Advisors : Sara Arena

Abstract : The occurrence of difficult to auscultate (DTA) blood pressure (BP) measurement has been reported among the elderly population with co-morbidities of atherosclerosis, vasoconstriction, low cardiac output, or edema. Although advancing age and specific medical conditions may contribute to the occurrence of DTA BP measures, there is paucity of evidence identifying the occurrence of this clinical finding among collegiate athletes. The purposes of this study were to 1) describe the prevalence of DTA BP measures in apparently healthy collegiate athletes and, 2) compare differences in BP readings between athletes that had DTA BP and those with normal Korotkoff sounds. METHODS: Following IRB approval, collegiate athletes were recruited using a sample of convenience. The men's soccer, women's volleyball, men's and women's swimming and cross country teams were included. All athletes were deemed apparently healthy after a preseason physical. Data collectors were trained using established measurement protocols. Additionally, aneroid BP cuffs were calibrated and amplified stethoscopes ensured acoustic sensitivity. Athlete demographics, two BP readings on each upper extremity (UE), and the occurrence of DTA BP were documented. Blood pressure readings were obtained during both a pre- and post-season measurement. Descriptive statistics provided information on demographics and the prevalence of DTA BP measures. A t-Test detected measurable differences in mean systolic blood pressure (SBP) and diastolic blood pressure (DBP) between individuals with DTA BP and those with normal Korotkoff sounds. Analysis was conducted using STATISTICA 12.0 (StatSoft Inc) with statistical significance set at ($p \leq .05$). RESULTS: Ninety one collegiate athletes (51 males); age 19.4 (SD = 1.28) years; were recruited in the sports of men's soccer (n = 21), women's volleyball (n = 7), men's (n = 19) and women's (n = 23) swimming and men's (n = 11) and women's (n = 10) cross country. Three athletes were identified as having DTA BP during pre-season measurement and six athletes during post-season measurement. Two athletes had these readings during both measurements. Athletes identified as DTA during the pre-season measurements had lower right UE SBP ($p = 0.05$) and right UE DBP ($p = 0.00$) compared to athletes with normal Korotkoff sounds. Three month post-season BP readings identified continued lower right UE SBP ($p = 0.01$) among the DTA athletes. DISCUSSION AND CONCLUSION: This study identified the clinical occurrence of DTA BP in collegiate athletes. Additionally, lower BP readings among athletes with DTA reached clinical significance. Contributing variables to the relationship between lower BP readings and DTA measurement, including low blood volumes, requires further research. ACKNOWLEDMENTS: This study was supported by the School of Health Sciences, the Prevention Research Center, Oakland University Athletics, the Undergraduate Physical Therapy Research Educational Experience (UPTREE) Oakland University Credit Union Dean's Choice Grant Award and the Oakland University Research Committee Student Travel Award.

#32 Seeing the Spirit in Duane Michals' Photography

Oakland University
Student Authors : Kelley Foley
Faculty Advisors : Claude Baillargeon

Abstract : The following paper addresses the use of light, double exposures, and long exposures in Duane Michals' depictions of the spiritual and unseen in his photo sequences. Without these three techniques, his photographs would not clearly convey the images he had previously held only in his mind. An ex-Catholic, Michals spent most of his life seeking different ways of thinking about life and death, choosing to focus on the wondrous journey of the soul after life rather than the agony of death. Inspired by the horrific murders of two of his close friends in 1966, Michals began making sequences out of his photographs, creating between five and eight gelatin silver prints for each series. Acting as the photographer, producer, and director of his sequences (which he has compared to the stretching-out of haikus), the ground-breaking photographer explores new territory with his work and has continued to influence the art world to this day.

#33 Electrochemical analysis: Domain specific tau aggregation with inducing agents

Oakland University
Student Authors : Hanna Trzeciakiewicz
Faculty Advisors : Sanela Martic

Abstract : Tau is a non-catalytic structural protein most commonly found in neurons, that promotes tubulin assembly and stabilizes axonal microtubules at various domains of the protein [1]. Tau aggregates into soluble oligomers, paired helical filaments, and neurofibrillary tangles, which are hallmark biomarkers for neurodegenerative diseases such as Alzheimer disease and dementia [2]. To understand the early-onset of aggregation of Tau protein, we carried out in vitro electrochemical studies targeting the tau protein's domain: N-terminus and Cysteines binding sites. As a model system, inducing agents such as Heparin and Arachidonic Acid were used to promote Tau aggregation. Electrochemical Impedance Spectroscopy and Cyclic Voltammetry were the electrochemical methods used to probe the effect of biomolecular interactions, between protein and inducing agent, on the electrochemical signal. The effects of concentration, temperature, time, and pH with respect to the aggregation agent binding to Tau protein were investigated to monitor which domain binds inducing agent and promotes eventual Tau aggregation. References [1] Alonso, A. C., et al., Proc. Natl. Acad. Sci. U.S.A. 1994, 91, 5562-5566. [2] Alonso, A. C., et al., Nat. Medicine, 1996, 2, 1-5.

#34 Dirigible

University of Michigan - Flint
Student Authors : Melanie Schott
Faculty Advisors : Emma Davis

Abstract : "Dirigible" is a modern dance piece that is influenced by Doris Humphrey's "fall and recovery" technique.

#35 The Photoreceptor Protein Peripherin/rds and its Interactions with Membranes

Oakland University
Student Authors : Mark English, Melanie Gary
Faculty Advisors : Andrew Goldberg

Abstract : Vision is a process that is important for the day to day lives of countless people and the eye is the central organ of vision and is the first step for image formation. The eye is composed of several different tissues and cell types that work together to make sight possible. The cell type most essential for light detection are the photoreceptors, a cell which uses highly organized membranes containing a light sensitive pigment that send a signal to the brain when light is present. These highly organized membranes require the protein peripherin/rds which is involved with shaping the cell. When peripherin/rds is not present the photoreceptors lose their shape, which leads to blinding the diseases retinitis pigmentosa and macular degenerations. To provide a more complete understanding of the relationship between peripherin/rds and photoreceptor structure, I have developed a standard measurement for the affinity of peripherin/rds and cell membranes. With this standard measurement, currently as a researcher in the Eye Research Institute at Oakland University, I will also able to test the relationship between peripherin/rds and membranes of varying compositions. The results of this study will be relevant for the understanding of the relationship between peripherin/rds and photoreceptors when present and to better understand the relationship between its disappearance and various blinding diseases.

#36 Hand Operated Sheet Metal Shear

University of Michigan - Flint
Student Authors : Krista Edwards, Ryan Stevenson, Kurt Valutis
Faculty Advisors : Olanrewaju Aluko

Abstract : Our Senior Design 2 group was given the task to design and build a hand operated sheet metal cutter. This task was given so the students in the engineering lab could cut aluminum or steel sheet metal for their projects. We researched existing products and then designed our own cutter with a paper cutter style blade. With the help of engineering analysis programs and experience we built a sufficient table.

#37 Vacuum Former Design

University of Michigan - Flint
Student Authors : Michael Bright, Andrew Findlater, Joe Hyde, Jeff Martin
Faculty Advisors : Aluko Olanrewaju
Submitted : March 19, 2014
Abstract : This report details the senior engineering design project commenced by undergraduate seniors in the Mechanical Engineering department at the University of Michigan-Flint. The goal of this project is to design and manufacture a vacuum thermal former that will be used in the engineering lab for years to come. Our final goal is to construct an efficient, user-friendly vacuum-forming table that will be used by future university students to further understand their knowledge in vacuum former as a manufacturing process. To ensure an efficient and successful design, a complete list of customer requirements were closely looked over with the design constraints kept in mind to transform these requirements into certain quantitative design specifications using a morphology table and a Quality Function Deployment (QFD). For this design project the customer being considered are the future engineering students that will be using the vacuum former in the materials lab to further expand there knowledge on pressure forming in the manufacturing process. The design process in its wholeness is outlined and explained within the report. This includes, Methodologies, comparison of numerous alternatives, a Bill of materials, and procedures. Also included, are detailed CAD drawings of each all components.

#38 Effect of Distraction on Emotional Appraisal

University of Michigan - Dearborn
Student Authors : Katie Krajewski, Katie Pfannes
Faculty Advisors : Arlo Clark-Foos

Abstract : Area 1: Memory – Episodic / Area 2: Emotion

In order to study emotion's effects on memory several corpora of stimuli have been developed and normalized for emotion and arousal content, such as the Affective Norms for English Words (Bradley & Lang, 1999). The original corpus was normalized by a large group of University of Florida undergraduates. Although this corpus has been re-normed recently to test for changes in cohort and geographical ratings (Libkuman et al., 2007) nobody has yet asked whether the actual ratings of emotion and arousal can be affected by other cognitive processes.

The current field of emotion and memory research has revealed several mechanisms that are responsible for emotional memory enhancement (EME). Specifically, researchers have identified both automatic and controlled processes as responsible for improving memory for emotional events (c.f., Kensinger & Corkin, 2004). Our question is whether the actual conscious appraisal of emotion is required in order to experience EME. We asked participants to renormalize the ANEW corpus under full or divided attention. We predict that appraisal of emotion is a conscious process that requires controlled resources. Therefore, participants experiencing divided attention tasks should be less likely to rate stimuli as emotional (i.e., ratings should be closer to neutral).

#39 Responses of proximate neighbors to an explosion with fatality: A preliminary report.

University of Michigan - Flint
Student Authors : Ian M. Cangemi, Martin W. Rivera-Salas
Faculty Advisors : Thomas A. Wrobel

Abstract : As defined in the DSM-5 both Post-Traumatic Stress Disorder (PTSD) and Acute Stress Disorder (ASD) may result from the witnessing of a loss of life, or a circumstance in which life is threatened. Not all stressors, however, result in one of these diagnoses and different researchers have focused on determining which personal as well as circumstantial variables are predictive of the development of either PTSD or ASD. In order to examine the effects of a single traumatic event we surveyed a neighborhood in which a fatal explosion occurred. Variables of interest included demographic questions, experiences of the explosion, prior psychiatric history, the Social Support Scale, (Huang, J., Wong, R., Chen, C., Mao, I., Huang, C., Chang, W., & Wang, L. (2011), Acute Stress Disorder Scale. (ASDS, Bryant, 2000), and PTSD CheckList--Civilian Version (PCL-C). Participants are to be recruited one year following the explosion to complete the information anonymously online. Available results will be presented.

#40 Four Point Bending

University of Michigan - Flint
Student Authors : Ali Asghar, Yibo Qi, Kaijun Wu
Faculty Advisors : Olanrewaju Aluko

Abstract : Four point bending is a cornerstone element of the beam flexure portion of a sophomore-level mechanics of materials course. Its tests in many specification yield valuable information for asphalt mix designs and assessment of new materials. A prismatic beam specimen is subjected to sinusoidal loading in either controlled strain or controlled stress modes. Four point bending theory is developed from free-body diagram through beam deflection.

#41 Ballet: Early Development and European Dissemination

University of Michigan - Flint
Student Authors : Melanie Schott
Faculty Advisors : Andrew Morton

Abstract : For this presentation, I will discuss the origination of ballet and trace its early spread throughout Europe, highlighting some key influential individuals and their specific contributions. In order to better delineate the development and dispersal of ballet, I have divided the presentation into sections designated by country. The country that each individual is discussed under is not necessarily their native country, but rather the country in which their most influential work was done and their careers developed. This is by no means a complete linear history of ballet, but instead focuses on the general spreading of the art form and a few specific people who played significant roles in its development.

#42 The Radical Revolution: An examination of American militancy from 1966-1974

University of Michigan - Dearborn
Student Authors : Margaret Waligora
Faculty Advisors : Pamela Pennock

Abstract : The 1960s were a turbulent time in American history noted for the development of multiple social movements. A majority of this scholarly focus has been concentrated on the Students for a Democratic Society (SDS), Student Non-Violent Coordinating Committee (SNCC), and the counterculture. These “first generation” movements of the early 1960s gravitated towards a more militant mind set over time, generating a new violent standard for protest, political and civil disobedience, and retaliation. Many historians fail to examine the influence that these “first generation” movements had on various radical factions that followed them. This paper will analyze the factors leading to radicalization and examine the impact on three main groups: the Black Panther Party, the Weather Underground and the American Indian Movement. I demonstrate the similarities and differences between “first” and “second” generation movements, as well as the contrasting goals of these radical groups.

#43 Decreasing Obesity Among Elementary School Students Via School Based Community Gardens in Flint, Michigan

University of Michigan - Flint
Student Authors : Denise Martin
Faculty Advisors : Gergana Kodjebacheva, Ph.D.

Abstract : The poster presents the objectives, design and evaluation plan of a proposed program to decrease obesity among elementary school students in Flint, MI. The objective of the 12-month proposed program is to increase intake of fruits and vegetables by offering participants the opportunity to grow healthy produce in a community garden at a local elementary school. The multi-component program will include nutritional lessons that emphasize the benefits of a diet that includes fruits and vegetables, provision of monthly fruit and vegetable snacks, instructional support for developing school-based gardens, planning sessions to assist in the selection of crops and planting, maintaining and harvesting a garden. The outcome evaluation will use qualitative post-intervention focus groups with students, parents, teachers and volunteers. The questions will assess the effectiveness of the program by evaluating changes in participants' eating habits, improved academic performance and self-sufficiency.

#44 Pathways of Stress and Coping in Emerging Adulthood

University of Michigan - Dearborn
Student Authors : Jillian Out, Shelby Wilson
Faculty Advisors : Justin Peer

Abstract : Stress is an inherent part of the lives of many emerging adults as they experience major life changes and explore their identities (Arnett, 2000). Stress, if not managed effectively, can have significant mental and physical health impacts. While some research has been conducted on stress in emerging adulthood, little has been done to explore and better understand the interaction between level of stress, specific coping strategies, and wellbeing. This study aimed to examine how emerging adults cope based on level of stress and how this impacts clinical anxiety. Measures that were used to gather data included the Perceived Stress Scale and the Zung Self-rating Anxiety Scale. The sample consisted of 213 undergraduate students with ages 18 to 25 at the University of Michigan-Dearborn. The use of descriptive statistics and a one-way ANOVA found a significant relationship between ratings of clinical anxiety based on level of stress. Large proportions of the sample rated themselves at moderate to high levels of stress as well as significant levels of anxiety. Our one-way ANOVA found that moderate and high levels of stress predicted clinically significant levels of anxiety.

#45 Novel adjuvant therapies that prevent endothelial cell activation augments chemotherapy induced leukemia cell killing

Oakland University
Student Authors : Bahareh Pezeshkian, Gau Shoua Vue
Faculty Advisors : Gerard Madlambayan

Abstract : Annually, greater than 12,000 new cases of acute myeloid leukemia (AML) are reported with <10% responding favorably to therapy and ~80% of patients relapsing despite initial remission. Therefore, a better understanding of the growth and survival of AML is essential. Several studies show that endothelial cells (ECs) support normal hematopoiesis. We recently reported that a synergistic relationship also exists between ECs and AML cells. AML cells induce an EC activation-based process resulting in cell adhesion, quiescence, and resistance to chemotherapy. These AML cells eventually detach and proliferate mimicking relapse. This knowledge is now guiding the development of novel adjuvant therapies that inhibit this synergistic relationship. We show that agents that prevent EC activation can significantly augment chemotherapy to enhance AML cell killing by reducing cell adhesion-based quiescence. This approach will provide new combination treatment strategies to increase leukemia cell susceptibility to chemotherapy and to prevent subsequent patient relapse.

#46 It was Beauty Killed the Beast: American Ideological Shifts Shown Through the Cinematic Remaking of King Kong (1933)

Oakland University
Student Authors : Steve Swetich
Faculty Advisors : Hunter Vaughan

Abstract : This essay explores ideological concepts of race, ethnicity, gender, sexuality, and American imperialism applied to two related cinematic texts through the use of the industrial remake. It examines King Kong (1933) to the 2005 remake directed by Peter Jackson. Accounting for criticism and theory, the analysis focusses primarily on the film form and content to evaluate the ideological shifts in American popular culture. The paralleled narrative and setting mimicked in the remake allows for a point of reference. The cultural anxieties projected upon the audiences of each film existed within a different social context. These cultural contexts and the themes that differed from one film to the next are indications of social progression and the changing American ideological landscape. These changes range from the era of the New Deal to the overly anxious years following 9/11. As both films are American made films with an iconic name and narrative, the transformation paralleled with society can reflect the way we as Americans perceive cinema and our own values, morals, ethics, and beliefs – conscious and subconscious. Finally, the essay moves to address the issue of the contemporary definition of what we see as "beauty" and what we see as the "beast". The original film begins and ends with the proverb indicating that "it was beauty killed the beast". This navigates its way through the idea of the arts, expression, and identity. I argue that the image of beauty in the original is that of traditional images of whiteness and puritanical imagery that perpetuated racial, ethnic, and sexual hierarchy of the time period. Consequently this idea of beauty puts the image of the beast as the opposite of those puritanical and traditional images. This is problematic as it once encouraged the patriarchal social indications of the time. I then argue that the 2005 remake is a progressive film that purposely subverts the traditional roles of gender, race, and ethnicity through significant changes to the film form and content; specifically to the characters of Ann and Kong as they exist in each incarnation of the story.

#47 Powerful patron & Dutiful wife: The duality of Isabella d'Este

University of Michigan - Dearborn
Student Authors : Megan Milewski
Faculty Advisors : Nicole Benoussan

Abstract : This paper explores the famed early modern woman, Isabella d'Este, and her dealings in the realm of art patronage. The bulk of the examination is a case study of two portraits she had made: one done by Venetian master, Titian, and the other by the quintessential Renaissance man, Leonardo da Vinci. In this exploration, it becomes clear that Isabella wished to perpetuate two separate identities: the ideal Renaissance woman, and the powerful, intellectual patron.

#48 Sexuality and Agency of Female Superheroes: The Male Gaze in Comic Books

University of Michigan - Dearborn
Student Authors : Jaclyn Dziurgot
Faculty Advisors : J. Caitlin Finlayson

Abstract : This paper explores the representation of female superheroes in comic books by adapting and applying Laura Mulvey's theory of the Male Gaze from her article "Visual Pleasure and Narrative Cinema." Looking specifically at Selina Kyle from DC's Catwoman and Kate Bishop from Marvel's Young Avengers, the Male Gaze is reframed from its original purpose of studying film, to work with the study of comic books. By applying this reframed Male Gaze to both comics this paper looks at how the Gaze is used on both characters and studies the significant disparity between the way they are represented and thus how they are viewed in their respective works.

#49 Managing Early Successional Habitat for an Isolated Population of Six-lined Racerunners (*Aspidoscelis sexlineata*) in Michigan

University of Michigan - Flint
Student Authors : Reine Ecker
Faculty Advisors : Teresa Yoder-Nowak

Abstract : The six-lined racerunner (*Aspidoscelis sexlineata*) is a small species of whiptail lizard, named for its 6 to 7 characteristic dorsal stripes. Although its full geographic range extends east of Wyoming from Minnesota to Florida and into Mexico, only one known population exists in Michigan, located on 4.13 hectares of grassy hillside at Murphy Lake State Game Area. Graduate work at the University of Michigan-Flint by Teresa Yoder-Nowak and Ghada Sharif suggests they are a glacial relict, cut off from other populations by roads and agriculture. Due to their potentially natural origins and limited habitat, the six-lined racerunners of Michigan were listed as a Threatened species in 2009. Recently, trees from the surrounding forest have begun to encroach on the lizards' hillside, threatening to further reduce the grassland habitat in which six-lined racerunners thrive. To combat the loss of habitat, we plan to implement a habitat management experiment that will remove the trees and inhibit their regrowth. The objectives of this experiment will include restoring the suitability of the lizards' habitat, measuring success in habitat restoration, and providing wildlife managers with our data so they can make informed long-term management decisions.

#50 Diversity Among Corporate Directors in 2005

University of Michigan - Flint
Student Authors : Cordell Harris
Faculty Advisors : Roy Barnes

Abstract : This presentation explores the gender and racial diversity among the largest corporations in the United States across a wide variety of sectors in 2005. After describing the network of interlocking directors in this time period, the data show that women of color, though a small percentage of the directors, have the highest average degree centrality and the lowest average geodesic distance. To further investigate the structural importance of these underrepresented directors, we also investigate the distribution of brokerage roles based on race and sex status of the directors. The data found show that minorities have a disproportionately higher rate of serving as particular brokers.

#51 Construction of an Ion Pump Driven Ultra High Vacuum Chamber

University of Michigan - Flint
Student Authors : Jeremy Munsell, Trang Nguyen, Matthew Sutter
Faculty Advisors : Chris Pearson

Abstract : An ultra high vacuum chamber was constucted from custom machined parts, for the purpose of deposition.

#52 Synthesis and Characterization of Aryl-imine Aluminum Complexes

University of Michigan - Flint
Student Authors : Tyler Doyon
Faculty Advisors : Nicholas Kingsley

Abstract : There has been a great deal of research in recent years into organometallic catalysts for intermolecular hydroamination of aminoalkenes. Various catalytic models utilizing early and late transition metals, as well as rare earth metals have been well documented. The recent focus of our research group centers on the use of aryl-imine ligands as a framework for aluminum and gallium alkyl complexes. The framework of these ligands provide unique structural and electronic properties when compared to the commonly used N,N; N,O,N and N,N,N frameworks. We have prepared nine novel aryl-imine aluminum complexes, which serve as potential pre-catalysts for intermolecular hydroamination. The synthesis and characterization of these complexes will be discussed.

#53 Through my Eyes: Nursing Student's Reflection of Intensive Immersion Course in the Dominican Republic

University of Michigan - Flint
Student Authors : Adrianne Andries, Emily Gross, Tiffani Moore, Meagan Severeide
Faculty Advisors : Maureen Tippen

Abstract : Traveling to a developing country, experiencing a new culture, and providing service to impoverished villages provides students with different realities then a college classroom. The purpose of this poster presentation is to describe experiences and reflections of nursing students who completed an 8 day immersion international service learning course in the Dominican Republic. Nursing students provided direct health care to the population, provided health teaching, examined the culture, and focused on culturally sensitive communication and interactions. The international service learning course provided student opportunity to expand critical thinking, growth personally and professionally, engagement in global social issues, and gain understanding of a different culture. The concluding element of this cultural immersion course involves student reflection and how their future careers as nurses will be impacted.

#54 Analysis of Parent-Adolescent Discourse on Morality: Development of the Moral Messages Coding Scheme

Oakland University
Student Authors : Tiffany Davis, Kayla Fike, Dominique McClain, Susanna Taylor
Faculty Advisors : Mary Lewis

Abstract : The purpose of this literature review is to extend previous coding schemes that measure the ways in which parents communicate moral messages to their adolescents. Eight articles were used which studied interactions in parent-adolescent interviews and coded for specific conversational characteristics that encourage or diminish moral development in adolescents. Analysis of these eight articles were used as a foundation upon which additional conversational features were created to better capture the ways in which parents might use inductions, moral reasoning, elaborative style, and moral obligation. While many of the topics included in the development of this coding scheme already exist, we expounded upon to the extent to which those codes were relevant to the current study. It is the goal of this research group to both acknowledge long-standing measures and further enhance the assessment of parent-adolescent discourse.

#55 Experiments in Photon Entanglement and Quantum Optics

University of Michigan - Flint
Student Authors : Benjamin Frye, Patrick Ross, Irwyn Sadien
Faculty Advisors : Chris Pearson

Abstract : It is popular knowledge nowadays that light exhibits a seemingly paradoxical wave-particle duality at the microscopic level. This sometimes-confusing quantum nature of light is made transparent in a series of interference-based experiments developed by the research team, each designed for easy set up by undergraduate students. The experiments highlight different aspects of quantum mechanics, from single photon interference to the mysterious entanglement of photon pairs. Using an adaptable apparatus and clear procedures, our team brings light to the subject of light itself.

#56 The Use of Riboflavin Binding Protein as an Educational Tool

University of Michigan - Dearborn
Student Authors : Amit Bhandari, Michael Saruna
Faculty Advisors : Marilee Benore, Sheila Smith

Abstract : Riboflavin Binding Protein (RBP) is a stable glyco-phospho-protein abundant in egg white and yolk. The function of the protein is to transfer riboflavin to the developing embryo, and the protein has been identified in numerous oviparous species. Because of its bright yellow color, stability and intriguing properties, this is a good model protein. We are currently investigating the protein use for an undergraduate lab as well as an outreach project for K-12 students. Using the mutant and regular chicken eggs we have modified an education series as an informative and didactic approach towards problem-based learning. Our main motive was to approach middle school students with an experiment highlighting the presence of Riboflavin within normal eggs as opposed to their absence in mutated eggs. The undergraduate research style experiment for advanced biochemistry lab students that can teach students the integral logic of protein purification techniques, while allowing for anticipated errors .We have modified the procedure by implementing expedited steps, and conducted the entire experiment in room temperature, and have successfully purified the protein.

#57 Hexatonic Systems and Dual Groups in Mathematical Music Theory

University of Michigan - Dearborn
Student Authors : Cameron Berry
Faculty Advisors : Thomas Fiore

Abstract : Just as mathematics is useful in investigating a broad array of physical phenomena, it is capable of analyzing musical compositions. In this presentation I will use concepts of neo-Riemannian music theory to investigate some of the relationships between the motion of major and minor triads. Given the set of 24 consonant triads one can use mathematical group theory as a basis for analysis. Of this set, I look at hexatonic systems; there are four different hexatonic systems each with six chords. Richard Cohn in a paper describing hexatonic cycles gives an example of hexatonic motion from a section of Wagner's Parsifal: Eb major, B minor, G major, and finally to Eb minor. These are chords from a single hexatonic system. One can traverse these chords by what are called the parallel and leading tone exchange operations or simply P and L, respectively. Mathematically, these operations form a group on each hexatonic system. Likewise, certain transpositions and inversions form a group on each respective system. I show that these groups are dual, as defined by music theorist David Lewin, and that both are dihedral of order 6. I use a paper by Fiore and Noll and another by Crans, Fiore, and Satyendra to prove this result. Analyzing music using techniques from neo-Riemannian theory can yield new insights by viewing compositions in light of well understood mathematical structures.

#58 Interpersonal Reality Monitoring: The Devil is in the Details

University of Michigan - Dearborn
Student Authors : Jonathon Whitlock
Faculty Advisors : Arlo Clark-Foos

Abstract : How do we discern reality from imagination? An imagined event can mimic a real event and distort the recall of information. These memory failures are not always intentional but can nevertheless cause irreparable damage. Reality monitoring (RM) is our ability to tell the difference between our own experienced and invented memories (Sporer & Sharman, 2006). Interpersonal reality monitoring (IRM) is our ability to use a method similar to reality monitoring to decide if others' memories are real or imagined. Johnson, Bush, and Mitchell (1998) found that the amount of quality detail and the source of the information affect IRM. The number of perceptual and conceptual qualities of an account correlates with its believability (Johnson & Suengas, 1989). Imagined memories may also have more cognitive descriptors. Previous evidence suggests that an event will be judged as real if the source is perceived to be sincere and gives a qualitative detailed account. Ironically, given the same detailed account but lead to believe the source is deceptive, participants will judge the event as a lie. Modifications of this experiment show that longer, detailed memories are more likely to be judged as real than shorter, succinct memories. The source's appearance also has an effect on source credibility and the judgment of their accounts. We intended to not only study participants' accuracy but also the particular reasons they give when making IRM judgments. To reduce biases the study was conducted in two parts, the first of which asked students to type out real or imagined accounts. In the second part, new participants were asked to judge these accounts as real or imagined and describe how they reached their conclusion. The results suggest that participants used analytic rather than holistic parameters when deciding between real or imagined events. Participants identified specific words that signaled deception rather than evaluating the memory as a whole. Additionally, sensory details were used to justify real judgments far more often (50%) than imagined judgments (35%), while cognitive operations were given as justification more often for imagined (25%) than for real (9%) judgments. The data empirically validate predictions from the Source Monitoring Framework (SMF; Johnson, Hashtroudi, & Lindsay, 1993) about which details of others' memories may be used to judge them as real or fabricated. Moreover, they suggest that people will often rely on the presence of specific words or phrases to justify their judgments rather than accounting for reported details.

#59 Hydrothermal Synthesis and Purification Methods of High Aspect Silver-Carbon Nanocables

University of Michigan - Flint
Student Authors : Jeremy Munsell, Trang Nguyen
Faculty Advisors : Mojtaba Vaziri

Abstract : Conductive nanowires and nanocables are very important for technological applications due to their fascinating and unusual electrical and optical properties. At the nanoscale level, the metallic material and in particular silver, is very sensitive to air and moisture. Therefore, coaxial nanocables which are made of a nanowire core wrapped with several shell layers is a very interesting system to study. In this work, we present the production and characterization of sliver/carbon nanocables. The nanocables are produced by hydrothermal chemical synthesis method in which the chemical reaction occurs at high temperature and pressure. At this extreme set of conditions, and in a solution of precise chemical composition, co-axial nanocables, with a strand of elemental silver as the core and a carbonaceous sheath, spontaneously self-assemble. The presence of silver-carbon nanocables is verified by scanning electron microscopy and x-ray diffraction studies. The lengths of these nanocables are in the range of several hundreds of micrometers. Various methods, such as chemical washing and extraction with a soxhlet apparatus, are employed to improve the purity of these nanocables.

#60 Trimming women's advantage over men in appearance accuracy

University of Michigan - Flint
Student Authors : Tiffany Long, Patrick Wegman
Faculty Advisors : Terrance Horgan, Marianne McGrath

Abstract : Which aspects of people's appearance do women remember better than men? In three studies, participants watched a videotaped target and completed a test of their memory for her/his appearance. Men and women were equal at remembering the target's physical features but men were less accurate than women at recalling the target's dress. The implications of these findings for eyewitness accuracy are discussed.

#61 Self-Reported Memory Accuracy is predicted by Personality Constructs

University of Michigan - Dearborn
Student Authors : Erik Alan Wagenheim
Faculty Advisors : Arlo Clark-Foos

Abstract : We examined relationships between self-reported memory accuracy using the PRMQ and personality characteristics as indexed by the Five Factor Model. We found significant negative correlations between emotional stability and all measures of memory. Results suggest that self-reported memory accuracy is negatively related to several personality characteristics (e.g., emotional stability).

#62 Decade by Decade Comparison of Chord Usage in American Popular Music

University of Michigan - Dearborn
Student Authors : Cody Bouse
Faculty Advisors : Thomas Fiore

Abstract : In their 2013 article, Compositional Data Analysis of Harmonic Structures in Popular Music, the authors John Ashley Burgoyne, Jonathan Wild, and Ichiro Fujinaga examine the proportions of different chords contained in popular music between the 1960s and the 1990s. My goal in this project is to study the proportion of I, IV, and V chords, the proportion of II, III, and VI chords and the proportion of all the other chords in different decades of music. I will examine these proportions in different eras using compositional data analysis and draw statistical conclusions from the data. I will be using Burgoyne, Wild, and Fujinaga's data set which is comprised of randomly selected McGill Billboard Hot 100 songs to draw these statistical conclusions. These three have also reduced the chords within the songs to the roots which I will use in the statistical analysis. With this data set, I will analyze the proportion of the different groups of chords as compared to other groups. This will allow me to compare three distinct groups of chords, all of which are important to popular music throughout several decades. I will use various methods of compositional data analysis including ternary diagrams, subcompositions, and amalgamations to discover similarities and differences between these three groups of chords. My end goal is to conclude whether there is any significant difference between the proportions of these three groups of chords between the four decades which I will be studying.

#63 Progression of Darkness: Tenebroso in Baroque Art

University of Michigan - Flint
Student Authors : Amanda Kimberly
Faculty Advisors : Sarah Lippert

Abstract : Drastic changes were made to the subject and style of art produced under the Roman Catholic Church at the time of the Counter Reformation, in order to achieve these new reformative goals. For instance, it was during this time that a constant progression of darkness in art develops. From the 1600s onward, darkness seems to conquer the light in paintings, sometimes taking up as much as 2/3 of a composition. This new trend was highly controversial and brought many problems along with it. Critics saw it as art through iconoclasm, which is the objection to and destruction of religious imagery. Baroque art was viewed by many as contradictory to the Counter Reformation; church leaders thought that it meant to "stupefy" rather than to clear up. Terms like sinful, ruinous, and deceitful were attributed to Baroque naturalist paintings. Acclaimed artists, such as Michelangelo Merisi da Caravaggio (1571-1610) and Rembrandt van Rijn (1606-1669), were accused of hiding mistakes in the shadows of their paintings, rather than being given credit for painting in dark tones, as a result of deliberate theological objectives. Darkness normally represents the unknown; "it introduces an element of mystery, ambiguity, and understatement." Humans generally shy away from such dark and mysterious things. [Slide 11] Leon Battista Alberti, the famous Renaissance art theorist, said that "by nature we like bright things" and that one should "avoid black and terrible works." This was the basis for the argument against darkness. The purpose of this paper is the counter argument for the progression of darkness and realism in the art of the Baroque era.

#64 The effect of objectifying images on women and men's relative memory for the dress and physical features of an average versus thin speaker.

University of Michigan - Flint
Student Authors : Noelle Looney
Faculty Advisors : Terrence Horgan

Abstract : The project addressed whether seeing objectifying images of women in advertising on a daily basis will subsequently affect female and male's memory for the appearance of a female speaker. The study recruited 150 female and 104 male undergraduates from an upper Midwestern university to view either body-objectified or body-competent images of women as part of an advertising-related task. In another task, participants listened to a female speaker discussing bicycles while viewing images of the speaker on a computer monitor. The images portrayed the speaker with either a thin body build in one condition or with an average body build in the other condition. Afterward, participants completed a questionnaire that assessed their memory for the speaker's dress and physical features. The findings suggest that speakers primed with objectifying images had relatively better memory for the speaker's dress when in the average condition; however, in the ideal condition participants had relatively better memory for the speaker's physical features. The implications of these findings highlight that men and women exposed to sexualized women will concentrate more on how a woman adorns herself when having an average body build and more on her physical features when having a thin body build.

#65 Religion and Exceptionalism in American Culture

Oakland University
Student Authors : Melissa Gillum
Faculty Advisors : Cindy Sifonis

Abstract : This thesis examines the relationship between American religious values and American political values from an interdisciplinary perspective. Specifically, this thesis examines the theory of American Exceptionalism. American Exceptionalism originates out of a mythical American ideal of the rugged individualist who also happens to be religiously affiliated. At the core of the major religious traditions in American history is also a fundamental belief in the exceptional nature of each religious group. Out of this arises the myth of American Exceptionalism. A 2014 article from The Atlantic magazine puts forth the thesis that American Exceptionalism is coming to an end with the current generation, known as Millenials. This thesis seeks to refute that hypothesis, examining trends in the current religious and socio-economic climate as well as conducting a thorough literature review. I expect to prove that American Exceptionalism is alive and well with the Millenial generation and that its existence and cultural transmission is ongoing while at the same time arguing that on a fundamental values-based level, American Exceptionalism is a premise whose values are incompatible with one another at their core.

#66 Positive Affect on Stress Reactivity

University of Michigan - Dearborn
Student Authors : Sunpreet Singh, Walaa Tout
Faculty Advisors : Susana Peciña

Abstract : Individuals vary in their physiological responses to stress. These differences in stress reactivity may be predictive of risk for stress-related disorders. The relationship between psychological variables and physiological responses may help explain how some behaviors are connected to stress reactivity. Participants in this study were asked to complete a number of questionnaires, including several trait measures, and then introduced to the Trier Social Stress Task (TSST) to induce mild stress. The TSST involves a public speaking component followed by an arithmetic test (Kirschbaum, Prike, & Hellhammer, 1993). Blood pressure measurements were taken before, during, and after the TSST to monitor changes. Saliva samples were also collected to assess cortisol levels at different stages of the experiment. Data analyses indicate that higher levels of positive affect were associated with lower systolic and diastolic blood pressures at baseline and during the stress-inducing tasks. Positive affect was also associated with a number of health behaviors including exercise and sleep quality.

#67 The "I" in the Center of a Hidden Geometry: Existentialism, the Individual, and Interconnectivity in Orhan Pamuk's "Snow"

University of Michigan - Flint
Student Authors : Vincent Slocum
Faculty Advisors : Mary Jo Kietzman

Abstract : In his novel “Snow,” Orhan Pamuk weaves an intricate narrative that involves the dynamic interplay of individualism, the existential “self”, and the role of the individual within society. Amidst the backdrop of three-day military coups, Pamuk sends the reader careening through a quagmire of conflicting ideologies that is both hauntingly tragic and beautiful. At the heart of these conflicting ideologies, is the struggle to maintain individual identity in the face of the collective, societal pressure to conform to the demands of either fundamentalist Islam or the polity, and in the middle of these pressures stands Ka, the novel’s relentlessly self-serving protagonist. The goal of this project, as such, is to discuss the various ways in which Pamuk interposes existentialist themes amidst an ongoing series of connections and clashes between the novel’s characters. How do characters define themselves in relation to those around them? How does Turkey define itself in relation to Western and its own clash of secular/religious identity? These are all questions that Pamuk explores in “Snow,” and it is his response to these questions that this project seeks to answer.

#68 The Conflicts of the Baghdad Pact: Britain, the United States, Nasser’s Egypt, and Iraq

Oakland University
Student Authors : Emma Barko
Faculty Advisors : Don Matthews

Abstract : With the threat of Soviet aggression after the Second World War, Britain and the United States strived to protect their personal interests in the Middle East with the formation of the Baghdad Pact. During the Eisenhower administration communications were made with Turkey, Iraq,Great Britain, Pakistan, and Iran, and were finalized in February of 1955. This paper will argue why the Pact ultimately failed because Eisenhower’s policy was not well thought out because US policymakers underestimated several important points of the way in which Britain would use the Pact for its own interest of imperialism, the opposition in Iraq to Nuri al-Sa’id’s regime and his ties with Great Britain that would continue until the fall of the Hashemite monarchy, the influence of anti-imperialism and nationalism in the Arab world with the conflicts of the Western Powers, especially after the Suez crisis, and the failure of the Americans to identify the Iraqi army officer corps as a major threat to the Hashemite regime. These are the circumstances that led to the failure of the Baghdad Pact.

#69 Princess, Housewife, or Independent Woman: The Evolution of Female Identity and Transformation in French Fairy Tales & Their Film Adaptations

Oakland University
Student Authors : Brittany Kelley
Faculty Advisors : Stacey Hahn

Abstract : France has a long tradition of fairy tales, in their various forms, and the conte de fée has permeated French culture, literature, art, and film. Throughout the history of cinema, French filmmakers have adapted fairy tales for the big screen, utilizing the technology of the day and various techniques characteristic of a common cinematic movement of that time period. The role of women and female identity, themes present in some form in numerous fairy tales, are interpreted in a unique way by each auteur. By examining the following films, one can analyze the evolution of female identity as presented at various key periods of the twentieth century and as reflective of contemporary society: Cendrillon and Cendrillon ou la pantoufle mystérieuse by Georges Méliès, Jean Cocteau's La Belle et la bête, and La belle endormie by Catherine Breillat. The extent to which each film portrays the role of female sexuality and independence in the formation of a woman's identity can shed light on both the original literary fairy tales by Perrault ("Cinderella" and "Sleeping Beauty") and Madame Leprince de Beaumont ("Beauty and the Beast"), as well as the increasing acceptance and acknowledgement of these feminist themes through the course of the century. The role of the female protagonist becomes more and more prominent, significant, and heroic through the nineteenth century and into the twentieth century.

#70 The Link Between Mindfulness and Distress Tolerance

Oakland University
Student Authors : Adrianna Sesi
Faculty Advisors : Andrea Kozak, Michele Parkhill Purdie, Scott Pickett

Abstract : Background: Studies have shown that lower levels of distress tolerance, or difficulty coping with aversive life experiences, is a risk factor for substance, eating, and mood disorders and that mindfulness-based interventions are effective for treating these disorders. Therefore, mindfulness meditation may be beneficial for those who lack distress tolerance since this Eastern-based practice involves awareness and acceptance of the present moment, positive or negative. The current study's aim was to investigate a possible relationship between distress tolerance and dispositional mindfulness. Methods: A sample of 360 undergraduate students (234 female and 126 male; mean age: 20.1) completed the Five Facet Mindfulness Questionnaire (FFMQ) and the Distress Tolerance Scale (DTS) through an online survey. The FFMQ measures mindfulness over five facets: observing, describing, acting with awareness, non-judging of inner experience and non-reactivity to inner experience. The DTS measures distress tolerance on four factors: tolerance, appraisal, absorption and regulation, with a total score calculated from the means of the subscales. Higher scores on both scales indicate higher levels of mindfulness or distress tolerance. A linear regression model was conducted with two subscales of mindfulness (non-judging and non-reactivity) hypothesized to be associated with total DTS score. The model was adjusted for gender since men typically having higher DTS scores, and religiosity, due to a potential influence on meditation practices. Results: As predicted, a significant positive relationship was found between non-judging of inner experience and total DTS ($p<.000$) as well as non-reactivity to inner experience and total DTS ($p<.000$). Conclusions: Mindful awareness and acceptance are related to one's ability to tolerate distress. This suggests that mindfulness training might be an effective treatment for increasing distress tolerance. Controlled trials are needed to determine the effectiveness of mindfulness as an intervention for distress tolerance.

#71 The Role of Intimal Hyperplasia in Solid Organ Transplant Rejection and the Discovery of Collagen-1 Expressing Fibrocyte Accumulation after Vascular Injury

University of Michigan - Flint
Student Authors : Sharnée Mead
Faculty Advisors : Joseph Sucic

Abstract : Solid organ transplantation is used to alleviate organ failure in thousands of patients each year. However, this procedure has limited success. After the procedure, injured blood vessels are infiltrated with coagulation proteins which lead to the development of intimal hyperplasia (IH). IH is characterized by complex vascular remodeling to the blood vessel, progressive loss of lumen, and chronic ischema of downstream tissues. In addition, it causes inflammation and narrowing of the injured blood vessels, thus giving rise to conditions that lead to organ rejection. Though the pathway by which this occurs is largely unknown, research has found that IH is associated with a specific subset of bone-marrow derived smooth muscle cells that express both CD34 and ?-smooth muscle actin. By use murine models, it was even found that specific manipulation of these cells led to healing of the vasculature to a pre-injured state, which would have profound implications in preventing organ rejection after a solid organ transplant procedure in humans. The goal of this study was to characterize both lymphocyte and non-lymphocyte cell populations that circulated after vascular injury in wild-type, CD31-TFPI-Tg, and ?-TFPI-Tg mice in order to further identify the cells responsible for IH. This was accomplished by purifying both populations from the mouse blood three days after endoluminal injury. Using RT-PCR, ?-SMA, Collagen-1, PDGF-?, NG2, PAR-1, and CD34 genes were targeted and amplified. Relative gene expression for each gene and population was calculated and it was found that the RT-PCR data correspond with results from past immunocytofluorescent data for ?-SMA, PDGF-?, and collagen-1 expression, indicating that both experiments yielded results that are reliable in further characterization. Furthermore, this data revealed that collagen-1 was only expressed by CD34+ peripheral blood mononuclear cells. These results, coupled with the immunocytofluroescent data, revealed a close correlation between the collagen-1 expression by CD34+?-SMA+ cells and the proportion of these cells expressing collagen-1. This indicated that accumulating cells responsible for IH are collagen -1 expressing CD34+?-SMA+ fibrocytes. Data from this study also supported the hypothesis that IH is caused by the expression of TF on the bone marrow-derived smooth muscle cells accumulating in the area of vascular injury.

#72 Differential splicing alters the transcript diversity of Helitron captured genes between maize inbred lines

Oakland University
Student Authors : Katarina Klusman, Brian Lynch, Tara Patrick
Faculty Advisors : Shailesh Lal

Abstract : The propensity to capture and mobilize gene fragments by the highly abundant Helitron family of transposable elements in maize may have significantly impacted the evolution of genes in maize. These elements provide a substrate for natural selection by giving birth to chimeric transcript intertwining exons of disparate genes. They also capture flanking exons by read through transcription. Here we describe the expression of selected Helitrons in different maize inbred lines. We recently reported these Helitrons in inbred B73 produced multiple isoforms of transcripts via alternative splicing (Barbaglia et al., 2012). Despite sharing high degrees of similarity in sequence and insertion site, the splicing profile of Helitrons differed among various maize inbred lines. The comparison of Helitron sequences identified unique polymorphisms in inbred B73, which potentially gives birth to the alternative splice sites utilized by transcript isoforms. These observations not only add another level to the creation of transcript diversity by Helitrons among inbred lines, but also provide novel insights into the cis - acting elements governing splice site selection during pre-mRNA processing.

#73 Religion and Ritual in the Natural of the Capuchin Order of St Joseph St Bonaventure

University of Michigan - Dearborn
Student Authors : Denise Malone-Harris
Faculty Advisors : Claude Jacobs

Abstract : This research examines the uniqueness of the Capuchins of the Franciscan Order. It will show how the teachings and exemplary life of St Francis of Assisi have led them to dedicate themselves to an urban community on the eastside of Detroit Michigan in need, and to use their kinship with nature to connect with people and help them to attain a renewed self. Through participant observation and historical analysis this research shows how from the time of the Great Depression to today has worked through the form of spirituality and agriculture to connect the community to the natural environment. It will also show how symbols and rituals are used to bring one to Sainthood and to spark faith in others. while Durkheim states that humans divide the world into two realms, the sacred and the profane, for him the sacred is not just personal beings which are called gods or spirits, but also rocks, trees, springs, or pieces of wood, in a word, anything can be sacred. (Durkheim 1965:52) The Capuchins have built their religious practices on the gospel of Jesus and the lifelong example s of a Saint and his spiritual fervor and dedication. The Capuchins have a strong belief that religion and nature are intimately intertwined. In this research the focus is on the Capuchins and how through religion and nature have connected a community to social support, agriculture, self-reliance, food security and sustainability.

#74 A Time Study of Sacred Structures in Downtown Detroit's Woodward Corridor

University of Michigan - Dearborn
Student Authors : Thomaz Carvalhaes
Faculty Advisors : Claude Jacobs

Abstract : Downtown Detroit is home to several religious structures erected early in the city's history. Originally, these sites were founded upon the demand of residents the surrounding area. Over decades, these neighborhoods became increasingly replaced by non-residential, and secular commercial structures. They appear to be particularly dense by the colloquially known "Woodward Corridor", a section along Woodward Avenue partitioning the city into East and West regions, and spearheading into the heart of downtown. The purpose of this study was to seek verification of the latter relationship, and to explore changes in the landscape of the area versus selected major historical churches and synagogues geospatially via Geographic Information Systems (GIS). As noted by Bret E. Carroll, "Any attempt to understand this dynamic – indeed, to understand religion – must begin by recognizing that it is fundamentally spatial" (Carroll). The result was a visual layout displaying aerial photographs from 1949, 1997, and 2014, overlaid by the selected historical churches and synagogues. These layouts, in turn, allow for spatial analysis of urban development surrounding sites that were operating through the study period, as well as the development of further research objectives.

#75 Toward a Description of What Makes a Black Hole Hurl

University of Michigan - Flint
Student Authors : Hillary Sewell, Adam Weidman
Faculty Advisors : Rajib Ganguly

Abstract : Supermassive black holes at the center of galaxies grow by feeding on matter that spirals inward in the form of a disk. This disk shines brightly from being heated to high temperatures. Some of the matter is driven away from the black hole at high velocities as an outflow. We can detect the outflow silhouetted against the light from the disk and make measurements of the outflow properties (e.g., velocity, mass, density). Based upon these properties the systems can be classified for the purpose of examining how those properties potentially relate to other properties of the system (e.g., the black hole mass, accretion rate). This classification process can be carried out efficiently using the human eye (i.e., through visual inspection). However, such a subjective scheme should be tempered by more objective criteria. Our main goal is to use measurements of outflows to systematically examine how best to reproduce a classification scheme carried out through visual inspection by experts in the field. In turn, this will lead to better classification of data that will be used to explore how outflows are formed, what governs their properties, and how they potentially impact the host galaxy and its evolution.

#76 Artemisia Gentileschi: What a Woman Can Do

Oakland University
Student Authors : Alexandra Nickolaou
Faculty Advisors : Galina Tirnanic, Susan Wood

Abstract : Today, feminist scholars consider Artemisia Gentileschi a leading feminist of the 17th century; her female dominant paintings show the female struggles against male supremacy. Since the “rediscovery” of her paintings in the middle of the 20th century, many feminist authors have taken her personal life and used that to explain her convincing female protagonists and how she had turned them into courageous heroes. Others have theorized that Artemisia suggests indirectly that women also partook in the human condition. Though her characters seem persuasively real, this merging of conventional women and protagonists in her works continue to plague feminist scholars today. Considering the repetition of some of the characters that Artemisia depicted in her works, was the “feminist” content of Artemisia’s work recognized by anyone in her day? Was Artemisia creating powerful female characters in her works to supports the “feminist” and “anti-feminist” battle? In attempting to answer these questions, it is important to remember that women of the 17th century did not have as much freedom. I will be analyzing and focusing on Artemisia during the rape trial proceedings, her Judiths and other lesser known works, her letters to her patrons and assessing scholars’ views in order to show that Artemisia used the notoriety from her rape trial to become distinguished as a female artist and that she exploited that reputation in order to separate her artistic voice other artists during that time - which shows that she was aware she was able to produce her sexually charged, female dominant works for her male patrons.

#77 A Case Study of Humanitarian Aid in Panama

Oakland University
Student Authors : Paul Marvin
Faculty Advisors : Cecilia Saenz-Roby

Abstract : The relationships between the nations of the world are often complex and daunting. Seemingly insurmountable differences can divide citizens of differing countries, preventing communication across cultures and languages. The inevitable process of globalization however, demands an outward-looking perspective from its constituents- one which strives to overcome these obstacles and integrate to promote understanding. For this reason it is imperative as citizens of a global community to aspire to embrace this challenge and to focus on the incredible similarities shared by all of its members.

#78 The Symbolic Annihilation of the New Woman

University of Michigan - Flint
Student Authors : Amanda Schwarzberg
Faculty Advisors : Michael Kassel

Abstract : The New Woman of the 1920s was sexual, smart, and free. This project aims to illustrate how, a decade later, the New Woman had been symbolically annihilated by an increasingly conservative media existing under Hollywood’s Motion Picture Production Code. The first section reviews womens’ increased social, political, and reproductive freedoms, as well as their resulting effects on societal norms and values. The second section examines how these values are depicted in two Pre-Code movies, Blonde Venus and She Done Him Wrong.The third section explains how censorship removed images of complicated, strong, independent women from movie screens. My research concludes that this was an intentional stratagem to leave women with little choice but to mold themselves into images that had been created to disempower them.

#79 Schematic Processing in Novel Social Categories

University of Michigan - Dearborn
Student Authors : Jamilah Alhashidi, Fahtme Elsayed, Rob Siegle, Dima Swaidan, Kelsey Tajer
Faculty Advisors : Robert Hymes

Abstract : Many studies examine the conditions in which ingroup favorability occurs, fewer look at why it occurs- the cognitive bases for ingroup favorability. The present study examines how placement in groups activates a “category schema” (Dion & Celejewski, 1991), then presumably, this schema contains expectations for one’s self and others that can then affect interpretations, memory, and expectations for ingroup and outgroup behavior. Our study looks directly at the expectations generated by the categorization process immediately upon activation of the schema. We predict that categorized individuals will associate positive evaluations as more typical and probable of an ingroup (IG) member. We also predict that non-categorized individuals will demonstrate an absence of expectation of categorized others in terms of ingroup or outgroup favorability. Participants were either categorized or not categorized into minimal groups. They were asked to take the perspective of both groups and rate each group on several personality traits. Participants then filled out their own trait evaluations and assessed the typicality and probability based on the responses, that the person was an ingroup or outgroup member. All participants demonstrated ingroup favorability. Statistical analyses also demonstrated a significant interaction for typicality ratings, between participants’ categorization and category members’ evaluations. Categorized participants were better able to state that ingroup favorability was more typical of categorized others. Non-categorized participants demonstrated lower expectations of ingroup favorability. This suggests that categorization into groups activates group based schemas. Presumably these schemas consist of expectations of ingroup and outgroup member behavior, such as the ingroup favorability bias.

#80 The Round Goby: The Effect of an Invasive Species on the Great LAkes and the Lower ROuge RIver

University of Michigan - Dearborn
Student Authors : Robert Muller
Faculty Advisors : Orin Gelderloos

Abstract : The round goby is an invasive species that has the characteristics to make it the perfect invader. Since its discovery, it has spread to all five of the Great Lakes, adversely affecting its native fish populations. As its range expanded into Great Lakes tributaries, the goby had a similar effect in these rivers. Within the Lower Rouge River, the gobies upstream expansion was blocked by a dam. Below this dam the goby has become the dominant species. In 2012, the dam on the Lower Rouge was removed and the goby began migration into a previously protected fish community. After the first year of field work in the Lower Rouge River the following results can be reported: 1). below the removed dam the goby average 50% of the fish community, 2) the goby has migrated 10,000 meter upstream. Prediction can be made as to its effect above the removed dam.

#81 A Numerical Method To Solve The Mechanical Bidomain Model Of Cardiac Tissue

Oakland University
Student Authors : Samip Gandhi
Faculty Advisors : Brad Roth

Abstract : Introduction: Mechanical forces may cause remodeling of cardiac tissue in the border zone adjacent to an ischemic region. The mechanical behavior in this border zone is analyzed using the mechanical bidomain model (ISRN Tissue Eng, 2013:863689), a new mathematical model of cardiac tissue that accounts for the mechanical properties of the intracellular and extracellular spaces individually, and predicts forces acting across the cell membrane. The mechanical bidomain model consists of two coupled, fourth-order partial differential equations. Although previously these equations have been solved analytically for special cases, this abstract reports the first numerical method to solve these equations. Methods: The partial derivatives (including the Laplacian and biharmonic operators) are approximated numerically using a finite-difference method. A relaxation technique is then used to solve for the intracellular and extracellular displacements simultaneously. Simulations are performed using MATLAB in a rectangular sheet of tissue in which the active tension is uniform everywhere except for a circular region at the tissue center (the ischemic region), where it is zero. Results: The results indicate that the membrane forces are large in the border zone, but are small inside the ischemic region. Conclusions: This calculation could provide new insight into how the heart tissue remodels following a heart attack.

#82 Perceived Discrimination and Self-Esteem in Arab Americans

University of Michigan - Dearborn
Student Authors : Zahraa Al-Khafaji, Lauren Anthony, Will Chow, Olivia Deyonker, Rob Siegle, Shawnna Walser
Faculty Advisors : Robert Hymes

Abstract : Prior research has shown that minority group members may take action based feedback as a form of evaluator stereotyping due to prejudice, rather than legitimate feedback based on their actions. This phenomenon is known as attributional ambiguity, and can to relieve or increase stress in an individual. Additional work done by Crocker, Voelkl, Testa, & Major (1991) has shown that individuals will tend to rate themselves more positively if the negative feedback was given by a prejudiced evaluator than a non-prejudiced evaluator. These results have been consistent across women, African Americans, and overweight individuals. This present study serves to examine this phenomenon among Arab Americans. The present study consisted of 96 undergraduate psychology students. Participants completed several questionnaires (i.e. Rosenberg self-esteem, Multi-Ethnic Identity Measure and Positive and Negative Affect Schedule) and an essay. This essay was then evaluated by another individual. Prior to the participant receiving the feedback towards his or her essay, the attitudes of the evaluator were revealed (indicating prejudiced or not toward the participant's ethnicity). Then the participant received his or her feedback and evaluated the other individual's essay. Analysis was conducted on participants' ratings of self-esteem, controlling for participants' overall rating of their own essay. The predicted trend was found as participants in the prejudice-negative feedback condition displayed the highest rating of self-esteem. Analysis revealed a significant 3-way interaction for whether participants felt the feedback they received was due to their ethnicity, $F(1, 95) = 7.39$, $p < .01$. Arab American participants who perceived the other participant as prejudiced, and received negative feedback, believed the feedback was due to their ethnicity more than any of the other participants. We did find that participants' ratings of self-esteem were highest for those in the prejudice-negative feedback category, as predicted. Furthermore, participants' positive affect was affected by their condition.

#83 François Villon: a Troubled Artist

University of Michigan - Dearborn
Student Authors : Katelyn Hovey
Faculty Advisors : Gabriella Eschrich

Abstract : François Villon is widely considered to be one of the most influential poets of the Middle Ages. He had a very difficult life growing up, but, despite his hardships, managed to get and education in the arts. Although he was imprisoned and exiled numerous times, he was able to write numerous works during his stay in prison. One example is his Ballade Finale. In this work, he expounds upon his obsession with death and his struggles with sin. Villon was truly ahead of his time in terms of his focus on humanism and an aptly represents of the struggles and hardships of those during the Middle Ages.

 # 84 "Geek Identity in Flint, Michigan"

University of Michigan - Flint
Student Authors : Candace Lester
Faculty Advisors : Erica Britt

Abstract : I am currently researching geek identity in Flint. I am using the community of practice model to study a group that all identify as geeks, and their practice is role playing games such as Dungeons and Dragons. I'm finding here in Flint with this group that the geek identity label is one of empowerment, and a way to accept yourself when coming from a rather socially awkward beginning. My research has included much field work, recording of interviews, and reading other academic sources.

#85 Religous Threat and Physiological Response

University of Michigan - Dearborn
Student Authors : Lauren Anthony, Olivia Deyonker, William Isom, Cjersti Jensen, Melissa Maczuga, Robert Siegle
Faculty Advisors : Robert Hymes

Abstract : In the past, research has been conducted on religion as a coping mechanism for identity threat, but little has been done that looks at threat to religious identity. This study intended to determine the relationship between religiosity and stress displayed when religious beliefs are threatened in college students. The participants consisted of 60 undergraduate students, recruited through a subject pool. Participants first completed a series of questionnaires, including demographic questions, the PANAS, a General Religiosity Scale, the RWA scale, and the Locus of Control Scale. Next, they were attached to a blood pressure monitor, and skin conductivity and heart rate finger cuffs. They were presented with two arguments, one about mandated military service, and one religious-threat argument. Through reading and answering questions on the arguments, physiological measurements were taken. Finally, the participants retook the PANAS and religiosity measure. Data is currently being complied and analyzed. It will be completed before the conference.

#86 The Special Photographs: Sydney's New Style of Prison Portraits, 1919 -1930

Oakland University
Student Authors : Kelley Foley
Faculty Advisors : John Corso

Abstract : A collection of one hundred thousand police photographs made in Sydney, Australia between the years 1912 and the late 1960s includes a collection of ‘Special Photographs,’ atypical mug shots used by police detectives of the Central Police Station in the 1920s. The unique collection, used to capture the natural appearance of professional criminals known to be recidivists (persons who repeatedly reoffend), shows a divergence from the typical prison portrait style that had been used by surrounding penal institutions since the late nineteenth century. This departure from the standard style of police officer and biometrics researcher Alphonse Bertillon, used widely since the late nineteenth century, demonstrates the detectives’ knowledge of photography as a tool for identifying criminals and preventing future crime. This change was one that greatly aided their efforts during the aftermath of the First World War, when a low number of prisoners showed a remarkably high rate of recidivism.

#87 Gene Identification for Riboflavin Binding Protein Deficiency in Mutated Chicken

University of Michigan - Dearborn
Student Authors : Usha Kadiyala, Brandon Kennedy
Faculty Advisors : MarIlee Benore, Sheila Smith

Abstract : Gene Identification for Riboflavin Binding Protein Deficiency in Mutated Chicken Usha Kadiyala and Brandon J. Kennedy Faculty Sponsor: Marilee Benore and Sheila Smith Abstract Riboflavin (Rf), Vitamin B2, is one of several antioxidant B vitamins that organisms need for survival. It is significant in fat, protein and energy metabolism, and plays a key role in maintenance of the nervous system and vision. Riboflavin is not synthesized in the human body; therefore it has to be obtained from food. In eggs, Rf is readily available, and Riboflavin Binding Proteins (RBP) transports it from the bloodstream of the laying hen into the eggs, where the vitamin is essential for embryonic development. In egg whites, RBP is thought to further serve as a riboflavin scavenger preventing bacterial growth. Our research group maintains a flock of mutants that lack the gene for RBP resulting in Rf deficient eggs. The normally pale egg white appears to be clear and the deficiency severely affects the embryo; however the embryo may be rescued and the flock maintained through the introduction of Rf from external sources. We are currently attempting to analyze the DNA of the mutant flock by purifying it using kits such as DNeasy Blood & Tissue and QIAamp DNA Blood. DNA sequencing and PCR methods will be implemented to identify the mutation site and the gene responsible for RBP deficiency.

#88 The Black Sheep Effect in Minimal Groups

University of Michigan - Dearborn
Student Authors : Lauren Anthony, Fahtme Elsayed, William Isom, Cjersti Jensen, Shawnna Walser
Faculty Advisors : Robert Hymes

Abstract : An interesting paradigm to study social categorization and intergroup biases is the minimal groups procedure (MGP). Tajfel et. al. (1971) found that categorizing people into arbitrary groups stimulates ingroup favorability. The present study uses MGP to examine how categorization can lead to other known outcomes for social categories: ingroup favorability, and the black sheep effect. Participants were categorized using a dot estimation task and assigned as either to either the Overestimator or Underestimator group. Participants completed a statement card sorting task and indicated if self disclosure statements (Positive, Negative, or Neutral) were made by a member of the Overestimator or Underestimator group. Participants also completed a Semantic Differential Measure (SDM) in which they evaluated both groups on traits (Hostile, Friendly). They also were asked to evaluate the accuracy of another participant's (either Overestimator or Underestimator) responses on the SDM, which demonstrated either favorability to the Overestimator group, favorability to the Underestimator group, or equality in rating to both groups. Another paired sampled t-test (pos.cards-neg.cards) was conducted, and revealed participants assigned more positive statements (M = 15. 31, SD = 5.12) to ingroup members and less negative statements (M = 9.17, SD = 5. 73) to ingroup members. This finding was significant, $t(2,35) = 3.617$, $p < .001$, and in the predicted direction. An ANOVA was conducted, and demonstrated a significant interaction between partner rating (pos.-neg.) and evaluation condition. This revealed that participants assigned less positive traits to an ingroup member if they showed outgroup favorability. Although ingroup favorability appeared, it did not seem to have a strong impact on the partner based on the rating of the two groups. While we have partial support for our hypotheses, with the card statement task demonstrating ingroup favorability, caution should be exercised (only six cases per condition). More data is currently being analyzed and will be ready prior to the conference. With more participants data we hope that are results are strengthened and we gain further insight into the black sheep hypothesis.

#89 Posttraumatic Growth in Adolescents after Sports-Related Injuries

Oakland University
Student Authors : Rebekah Hendrian, Kellie McGuire
Faculty Advisors : Kanako Taku

Abstract : The purpose of this study was to assess posttraumatic growth (PTG), or the positive psychological responses, to athletic injury through use of the 21-item Posttraumatic Growth Inventory (PTGI). The PTGI is scored as a whole and also separately in five domains: Personal Strength, Spiritual Change, New Possibilities, Relating to Others and Appreciation of Life. There were three research questions for this study: (1) Does PTG occur after athletic injury? (2) Which domain did participants score highest in? and (3) How does PTG after athletic injuries compare to existing literature concerning psychological growth after injury and after sports injuries? This study analyzed data of high school and undergraduate students from three studies (N=2,861) and selected those participants (N=28, .98% of total participants, M=17.90, SD=1.58) who cited a sports-related injury as their most traumatic event. Most participants reported individual scores that reflect a medium amount of growth (scores of 31-60) and across participants the mean PTGI total score was 45.92 (SD= 21.21), suggesting that athletic injuries did spawn personal growth. This mean was similar to a study of American and Japanese male undergraduate students who experienced a wide range of traumatic events where the mean PTGI total for American men was 46.45 (SD= 22.83) (Taku, 2013). The domain of Personal Strength had the highest level of growth in comparison to the other subcategories, showing that through dealing with athletic injuries adolescents develop greater psychological strength by dealing with physical injury. Results are congruent with current literature suggesting that people do grow after dealing with a traumatic physical injury, however this sample scored the highest in the Personal Strength domain whereas other groups score Appreciate of Life higher (Taku, 2013). Overall results suggest that although physically painful, dealing with a sports related injury can produce positive outcomes for adolescents. A major limitation of this study is that the original survey assessed a wide range of traumatic events and participants were chosen retrospectively from limited descriptions of their most traumatic event, future research should utilize a larger sample of self-identified athletes who experienced an injury. Keywords: Posttraumatic growth, athletes, injury, adolescents

#90 Novel Synthesis of Enaminones from But-3-yn-1-ones

Oakland University
Student Authors : Miranda Belcher
Faculty Advisors : Roman Dembinski

Abstract : The fusion of a diazepine ring with a benzene ring creates a benzodiazepine unit. The biological activity of benzodiazepines is recognized, and they are commonly perscribed as psychoactive drugs. The reaction of both the ketone and alkyne function of an alk-3-ynone 1 with the two amino groups from o-phenylenediamines 2 provides an effective method to synthesize 1,5-benzodiazepines 3. This reaction was carried out in a microwave reactor at 80°C in ethanol in the absence of a catalyst. After purification using silica gel column chromatogrpahy or recrystallization, a variety of 1,5-benzodiazepines were obtained in good yield (70-92%).

#91 Synthesis and characterization of Re and Mn-based catalysts containing diaminophenyl derivatives

Oakland University
Student Authors : Brooke Corbin, Badrinath Dhakal, Daniel A. Kurtz
Faculty Advisors : Greg A. N. Felton

Abstract : The synthesis and characterization of rhenium and manganese-based compounds for the conversion of carbon dioxide into usable liquid fuels is proposed. These diaminophenyl group derivatives perform as catalysts which lower the energy required to perform said conversion. Characterization from NMR, IR, and cyclic voltammetry has been detailed, demonstrating the catalytic capabilities in both the same rhenium and manganese-based products of this family of compounds.

#92 Electrocatalysts for Carbon Dioxide Reduction

Oakland University
Student Authors : Jessica Burkey, Richard Hulme
Faculty Advisors : Greg Felton

Abstract : Fossil fuels pose two problems for the world. One issue is that carbon dioxide is emitted into the atmosphere at a surprising rate causing an excess. Equally important is the fact that the world is dependent on fossil fuels; they will run out eventually and there is currently no substitute. Electrocatalysts can convert carbon dioxide into usable liquid fuels and solve these problems. Manganese, iron, and vanadium are earth abundant metals that are believed to be able to perform such catalysis. My research is working towards creating effective catalysts using these metals coordinated with a non-innocent ligand such as 2,2-bipyridine.

#93 Calculation of Band Gaps in Photonic Crystals

Oakland University
Student Authors : Luke Levin-Pompetzki
Faculty Advisors : Ivan Lisenkov, Andrei Slavin

Abstract : Photonic crystals are artificial media with periodically modulated refractive index. Partial reflection of electromagnetic waves (or light beams) from periodic variation of the refractive index in a photonic crystal results in the formation of band-gaps in the photonic crystal frequency spectrum. An example of a one-dimensional photonic crystal in the form a “Bragg mirror” (or a one-dimensional array of rectangular slabs with alternating refraction index) is considered theoretically. To calculate frequency spectra of a “Bragg mirror” a formalism of a transfer matrix is used. Two approaches for calculation of the frequency spectra are considered: an analytical model of an infinite “Bragg mirror” and a direct numerical calculation of electromagnetic wave propagation in a stack of dielectric slabs with alternating refractive index. The model of an infinite “Bragg mirror” demonstrates that the frequency bang gaps form a periodic sequence, and this conclusion is confirmed by a direct numerical calculation.

#94 Where the Holes Come From: The idea behind the Holes and Cuts of Lucio Fontana

Oakland University
Student Authors : Kyra Rietveld
Faculty Advisors : Claude Baillargeon

Abstract : Lucio Fontana (1899-1968) was an Italian artist born in Argentina. He is especially known for his Spatial Concepts that included monochromatic paintings with holes and cuts in them. These hundreds of works trying to capture space made him well known across the world in the 1950's and 60's. But where did this idea of holes and cuts come from? The concepts behind these works can be connected to his "White Manifesto" and "Technical Manifesto," written in 1946 and 1947, respectively. Even though there is a six-year gap between the making of the first manifesto and the first real canvas with holes that was part of the series, without the manifestos Fontana's holes and cuts would not be the same. This is because of the ideas stated in the manifestos, the art that evolved out of those ideas, and the pictures taken of these art works.

#95 The American Taboo of Redistribution

Oakland University
Student Authors : Jane Dixon
Faculty Advisors : Alan Epstein

Abstract : "Understand this is not a redistribution argument…This is not about taking from rich people to give to poor people. This is about us together making investments in our country so everybody's got a fair shot." This quote from President Obama eighteen months ago is obviously signaling a fear of the stigma redistribution conjures up in American's heads and its affects on the acceptance of the Affordable Care Act. This is just one example of the negative connotation that redistributive policies receive. Even though most of the world's rich resent taxation especially for programs that lower inequality the problem is much more rampant throughout America. In America, even the lower and middle class rally against redistribution. This may seem like an oxy moron to some, and it is in fact contradictory to their best interest. This is the paradox that this essay looks to unearth.

#96 The Cultural Importance of SlutWalks: Sexuality, Slut-Shaming, and Feminist Protest

Oakland University
Student Authors : Megan Clavier
Faculty Advisors : Jo Reger

Abstract : Previous research has argued that women's sexuality is viewed differently throughout varying cultures around the world. A slut walk is a recent development that protests sexual assault and slut-shaming in our society today. I performed a content analysis on five different websites for SlutWalk location's websites to determine if these walks, which are intended to empower women, are using the term "slut" in a similar manner. I focus on how each location uses the term "slut", and if the context surrounding the term varies between the five different locations. I find that these various cultures are not using the term "slut" the same, instead they use the slut walks to voice their own culture's issues with women's sexuality.

#97 The Investigation of Copyrighting and Dance: The Importance and the Consequences

Oakland University
Student Authors : Karin Spencer
Faculty Advisors : Elizabeth Kattner

Abstract : Copyrighting works of art to protect original ideas from being taken or changed without the consent of the artist can be complicated in dance. Violating US Copyrighting Laws can lead to fines and even serving jail time. Can these laws along with those same consequences be applied to choreography? What are the criteria for a dance work to be considered for copyrighting? What are the benefits for choreographers copyrighting their work? Lastly, what can the consequences of not copyrighting choreographic works be for dance artists? Based on popular media articles, law books, and numerous government and legal websites, this paper will address these questions, including the origin of U.S. Copyrighting Law and how they apply to dance. Finally, I will show dance artists can benefit from copyrighting their original choreographic works.

#98 Horror Films: A Stage for Subversion

Oakland University
Student Authors : Melina Lescoe
Faculty Advisors : Graham Cassano

Abstract : Linda Williams explains in her essay “Film Bodies: Gender, Genre, and Excess” that Classical Hollywood Cinema is “characterized as efficient action-centered, goal-oriented linear narratives driven by the desire of a single protagonist, involving one or two lines of action, and leading to definitive closure.” Horror films subvert this conventional action-centric style with their focus on sensation and excess, featuring “non-linear spectacles [that center] more directly upon the gross display of the human body.” Horror films tendency to eschew Classical Hollywood Style destabilizes the genre in a way that a lot of the conventional representation so associated with the style are destabilized as well – mainly the representation of women. Laura Mulvey in “Visual Pleasure and Narrative Cinema” explains that conventionally, women are introduced through the point-of-view shot of a male character, allowing “women [to be] simultaneously looked at and displayed, with their appearance coded for strong visual and erotic impact so they can be said to connote ‘to-be-looked-at-ness.’” The image of women, displayed through a male gaze, is invitingly coded to be looked at from a male perspective for both the male character and spectator. Not only is the image of women connoted through a male perspective, she is often denied the active relationship to the frame, space and narrative so common to men in Classical Hollywood Cinema. Women are often fragmented in the frame, close-ups of their breasts, butts, legs, etc. fetishizing them for the viewer. Mulvey explains female character’s “visual presence tends to work against the development of the story line, to freeze the flow of action in moments of erotic contemplation.” Horror films both uphold these typical representations of women and challenge it. Their tendency to fragment the female body through violent means brings attention to women’s passive presence in film and the tendency to fetishize that body. In this way, horror films are reflexive about the representations of women as presented in Classical Hollywood Cinema.

#99 The Effects of Compression on Cartilage Morphology

Oakland University
Student Authors : Dylan Twardy
Faculty Advisors : Yang Xia

Abstract : Articular cartilage contains many fine collagen fibers as its structural component. This project seeks to quantify the differences in the angle and the retardation of fibers in uncompressed and compressed canine cartilage using polarized light microscopy (PLM). Retardation refers to how the fibers are organized among themselves, while angle refers to how the fibers are oriented with respect to a common reference. Out of the total canine samples, half are compressed by about 20% strains using a small home-made plastic device. 6 micron-thick slices are obtained from both compressed samples and uncompressed samples using a microtome, and then imaged using PLM. The quantitative retardation and angle images extracted from PLM intensity images are expected to show uncompressed fibers in three histological zones: Superficial zone (perpendicular to the cartilage surface); Transitional zone (parallel to cartilage surface); and Radial zone (randomly oriented). Compressed tissue is expected to show a number of significant variations in a depth-dependent manner across the tissue's thickness. Understanding how cartilage fibers change shape and distribute stress will give insight about how to reduce the effects of cartilage degeneration.

#100 Transfer of Plasmid containing Carbapenem Resistance Genes From Klebsiella pneumoniae to Enteric Bacteria.

Oakland University
Student Authors : Chithra muraleedharn, Deepa Talreja, Dipanshu Walia
Faculty Advisors : Satish Walia

Abstract : Carbapenems are used for the treatment of multidrug resistant life threatening bacterial infections in humans. So far these antibiotics are not used as growth promoters in aquaculture or for swine and cattle production. Anthropogenic activities are responsible for the release of the biologically active form of antibiotics into the natural ecosystem. The objective of this study is to determine transferability of a multidrug resistant (MDR) Klebsiella pneumonia producing carbapenemase (KPC) isolated from Clinton River water sediments in Oakland County, Michigan. This strain is resistant to tetracycline, ciprofloxacin, cefotaxime, imipenem, ertapenem and meropenem. PCR amplification and DNA sequence analysis of the amplicon (624 bp) showed 99% similarity with blaKPC-2 gene. DNA-DNA hybridization analysis confirmed the location of KPC gene on a large plasmid (80 Kb) that was transferred to sodium azide resistant Escherichia coli J53, salmonella, and shigella. by conjugation. The abundance of bla KPC gene pollution was assessed in Clinton river water by quantitative real time PCR. The results of this study for the first time demonstrate the presence of carbapenemase producing MDR bacterial pathogen in Clinton River water sediments in Michigan and pose an urgent antibiotic resistance threat to public health.

#101 Pathways to Posttraumatic Growth: Can the Way We Ruminate About an Event Affect Our Experience of Growth

Oakland University
Student Authors : Sharell Elam, Leah LaLonde
Faculty Advisors : Kanako Taku

Abstract : It is through the act of cognitive processing that an individual can make meaning from trauma and experience posttraumatic growth (PTG: Tedeschi & Calhoun, 2004). This study aims to not only support current research demonstrating intrusive and deliberate rumination are necessary to experience growth after stressful life events, but to also examine intrusive and deliberate rumination in relation to the five domains of posttraumatic growth: Relating to Others, New Possibilities, Personal Strength, Appreciation of Life, and Spiritual Change. Japanese undergraduates (N= 302) specified how their thoughts manifested about the Great East Japan Earthquake in 2011 by filling out the Japanese translated Event-Related Rumination Inventory (ERRI), and reported positive changes from their experience with the earthquake by responding to the Posttraumatic Growth Inventory (PTGI). Results from two bivariate regression analyses showed that both higher levels of intrusive rumination and higher levels deliberate rumination significantly predicted posttraumatic growth, supporting our hypotheses. Five series of multiple regression analyses were run to assess if the two types of rumination predicted growth in the five domains of PTG. Results illustrated both intrusive and deliberate rumination significantly predicted growth in all of the domains, however deliberate rumination accounted for more of the variation in scores across all five domains. Although we hypothesized the role of intrusive and deliberate rumination would vary across the PTG domains, it was not supported. Future studies should look at other factors that may explain the variability of growth between the five domains. Clinical importance of research on cognitive processing and posttraumatic growth are discussed.

#102 Deciphering & Deliberation: Translating the Text of "L'homme qui m'offrait le ciel"

Oakland University
Student Authors : Dana Parke
Faculty Advisors : Dikka Berven

Abstract : Translating the novel, “L’Homme qui m’offrait le ciel” by Calixthe Beyala, from French to English throughout the Fall 2013 Semester demonstrated the complexities and many underlying nuances of translation. Simple words became week-long deliberations between the presenter and her faculty mentor. For example, the title alone can translate several ways: “The man who offered me the sky”; “The man who offered me heaven”; “The man who gave me the world”, etc. This tale of a passionate love affair between a single African mother and a famous French television host explores the intersectional themes of gender, race and class. Written by Cameroonian-born author Calixthe Beyala, this vivid novel contains the richness of French from a Francophone African country, for which the presenter draws upon her study abroad experience in Dakar, Senegal to decipher. After discussing the challenges and difficulties of translating, the presenter will finish by reading two pages of her final text in English.

#103 Paternity patterns in long-jawed spiders (*Tetragnatha*)

University of Michigan - Dearborn
Student Authors : Jamilah Alhashidi, Byron Cheng
Faculty Advisors : Anne Danielson-Francois

Abstract : Long-jawed spiders (Tetragnatha species) have been studied for their mating behavior, but few studies have determined the paternity patterns found in these species. Morphology predicts that the last male to mate should be favored. Here we perform a test of this hypothesis in Tetragnatha elongata by irradiating one set of males to mark their paternity using the classic sterile male technique. We mated females to two males sequentially in one of two treatments (1) either fertile-irradiated or (2) irradiated-fertile males. Here, we report the paternity patterns observed and the implications for sperm competition in Tetragnatha elongata.

#104 Feasibility of using Passive Integrated Transponder (PIT) technology to study behavior of Great Lakes larval sea lampreys

University of Michigan - Flint
Student Authors : Alexander Maguffee
Faculty Advisors : Heather Dawson, Danielle Potts

Abstract : In the Laurentian Great Lakes sea lampreys (Petromyzon marinus) are an invasive species controlled primarily through application of selective toxicants (lampricides) to tributaries expected to contain the most large larvae (>100 mm). Current assessment techniques make the assumption that larvae occupy habitat in the same proportion irrespective of size or life history stage. Investigating movements of larvae in situ is critical to evaluate the potential for bias in assessment techniques. To evaluate the feasibility of using passive integrated transponder (PIT) technology to detect sea lamprey larvae in situ, we implanted 8 mm PIT tags in larvae of less than 120 mm average length to assess whether the most characteristic behavioral pattern of larvae, the burrowing response, was altered in these tagged animals. We found differences in burrowing performance between 8 mm-tagged and untagged larvae of similar length, with tagged larvae taking significantly longer to completely withdraw below the surface. The use of these tags to track larvae of this size in natural environments would likely expose animals to higher mortality levels than they would normally experience; available evidence suggests that larvae older than age 0 experience relatively low and uniform mortality throughout the remainder of the larval stage due to their propensity to burrow in sediments, thus essentially avoiding predators (Potter 1980). Tracking movements of larvae tagged with 8 mm slim tags would likely not provide an accurate representation of natural behavior of larvae of this size, as tags may affect other behaviors (i.e., movement) in addition to burrowing performance.

#105 The effect of Great Lakes sea lamprey recruitment dynamics on the potential management options to control this invasive species

University of Michigan - Flint
Student Authors : Adam Brown, Eddy Elkassis, Drew Schaft
Faculty Advisors : Heather Dawson

Abstract : Applying a mating pheromone component to traps has been found to enhance trap capture of invasive Great Lakes sea lamprey. Management-scale tests have yielded valuable data on the cost and efficacy of pheromone-enhanced trapping as a potential control method. We utilized this information in a management strategy evaluation model, which explicitly accounts for uncertainty about population dynamics and effectiveness of management tactics. The model defined conditions under which integrating pheromone-enhanced trapping with lampricide applications (current control method and status quo) is expected to be cost-effective. Specifically, we evaluated pheromone-enhanced trapping methods as either baiting existing barrier-integrated traps (standard trapping) or combining standard trapping with additional baited traps meant to intercept sea lampreys moving away from existing traps (reverse-intercept trapping). We evaluated the sensitivity of the model results to the recruitment dynamics of sea lamprey. Additionally, we determined how changing recruitment dynamics would affect cost-effectiveness of integrating pheromone-enhanced trapping into the sea lamprey control program.

#106 Semiotics and the Book of Kells

Oakland University
Student Authors : Brittany Forth
Faculty Advisors : Claude Baillargeon

Abstract : The Book of Kells (ca. 800) is one of the foremost impressive examples of illuminated manuscripts the Western World still has intact. It was intended to be a liturgical Gospel codex. The Gospels were written by the four evangelists: Matthew, Mark, Luke, and John. The gospels of Matthew and John include a cover page depicting them and a carpet page illustrating Mark and Luke because their pages were lost over time. In this paper, "semiotics functions as a more interdisciplinary version of iconography and iconology, an expanded way of asking questions about what works of art mean and how they go about creating or expressing those meanings." Saussurean semiotics will be used to analyze some of the signs in the Book of Kells in order to get a better understanding of what the Celtic monks were trying to portray to people of the ninth century. Saussurean semiotics consists of a signifier and a signified that create a sign or symbol. The Book of Kells is full of rich, religious iconography that reflects the beliefs of the time, but can also be studied from a contemporary perspective.

#107 The distinct comparison between Modern dance and Ballet.

Oakland University
Student Authors : Chelsea Nabozny
Faculty Advisors : Elizabeth Kattner

Abstract : Ballet and modern dance: both genres of concert dance vary in approach, aesthetic and how they execute traditional "gender roles." The classic partnering of ballet where the male parades the female around in full control and dominance differs in comparison to the rebel modern dancers who completely switched the gender roles on stage and in performance choreography. Ballet strongly reflects a patriarchal society shown in the relationship the dancers have while dancing - men dominating the women – but the rebelling modern pioneers such as Mary Wigman, Martha Graham, and Charles Weidman broke that pattern. The roles in modern have women lifting women and women lifting men, as well as all female companies focused on deep emotions and breaking more boundaries such as bare feet. This paper will show through research how the gender roles have been switched and modern dance is not a patriarchal society as is ballet.

#108 Alterations in Janus (JAK2)/Signal Transducer of Activated Transcription (STAT) Signaling Pathway in Human Renal Cell Carcinoma (RCC)

Oakland University
Student Authors : Aws Polina, Sara Singhal
Faculty Advisors : Amy Banes-Berceli

Abstract : RCC accounts for 9 out of 10 cases of kidney cancer. Approximately 65,150 new cases and 13,680 deaths are expected from this disease in 2013. There is urgent clinical need for better treatment options as RCC responds poorly to current chemotherapy. A major limitation to developing new treatments is that the molecular mechanisms responsible for inappropriate cell survival and chemoresistance are unknown. One pathway suggested to be involved in vitro is the JAK2/STAT. We hypothesized that there would be altered expression of the members and regulators of the JAK/STAT pathways in RCC. We utilized samples from normal (n=14), benign (n=6), and histological Fuhrman grades: Grade 1 (n=3), Grade 2 (n=10), Grade 3 (n=14), and Grade 4 (n=3). We analyzed 31 RCC samples from patients as well as the normal and benign samples with Affymetrix human gene microarrays and Western Blot technology. The samples were all clear cell renal carcinomas which were verified by a Beaumont Hospital pathologist. We analyzed 22,148 genes and differentially expressed genes were then detected by ANOVA taking into account histological stage. We found 170 genes that were differentially expressed in all grades compared to both normal and benign kidney samples. We found both JAK1 and JAK2 mRNA to be highly expressed in the RCC samples compared to the controls. We did not observe any decrease in the mRNA or protein expression of the regulatory proteins SOCS1, SOCS3 or SHP-1. We did find an increase in SHP-1 serine phosphorylation which is inhibitory in the RCC samples. We also found decreased levels of the protective protein, Uromodulin, in the RCC samples compared to the control and benign samples. These data suggest that altered function of the regulators not expression may be involved in RCC pathogenesis.

#109 Alterations in Phosphotidylinositide-3 Kinase (PI3-K) Signaling Pathway in Human Renal Cell Carcinoma (RCC)

Oakland University
Student Authors : Aws Polina, Sunny Rishi, Sara Singhal
Faculty Advisors : Amy Banes-Berceli

Abstract : It is currently estimated that renal cell carcinoma (RCC) accounts for 9 out of 10 cases of kidney cancer. Approximately 65,150 new cases and 13,680 deaths are expected from this disease in 2013 according to the American Cancer Society. As RCC responds very poorly to current chemotherapy the 5 year survival rate is very low (less than 5% if it has metastasized). Therefore, there exists an urgent clinical need for better treatment options to be developed. One of the most important limitations to developing new treatments is that the there is a lack of information about the molecular mechanisms responsible for inappropriate cell survival and chemoresistance. One pathway suggested to be involved in vitro is the PI3-kinase pathway. This pathway has been linked to growth and survival in other cancers previously. We hypothesized that there would be altered expression of the members (PDK-1and AKT) and regulators (SHP-1 and PTEN) of the PI3-kinase pathway in RCC. We utilized samples from RCC biopsies determined by histological Fuhrman grades: Grade 1 (n=3), Grade 2 (n=10), Grade 3 (n=14), and Grade 4 (n=3) as well as samples determined to be normal (n=14), and benign (n=6). We analyzed these samples with Affymetrix human gene microarrays and Western Blot technology. As verified by a Beaumont Hospital pathologist, the samples were all clear cell renal carcinomas. We analyzed 22,148 genes and utilized an ANOVA to detect differentially expressed genes. We found both AKT and PDK-1 activity, measured via phosphorylation to be higher in the RCC samples compared to the controls and benign. We did not observe any decrease in the mRNA or protein expression of the regulatory proteins PTEN or SHP-1. We did find a decreased level of PTEN protein in the RCC samples compared to control and benign, suggesting that there is no change in mRNA expression but an increase in protein degradation. However, we did find an increase in inhibitory SHP-1 serine phosphorylation which correlates to a decrease in SHP-1 activity in the RCC samples. Based on these data, we speculate that altered function of the regulators of the PI3-Kinase pathway may be involved in the pathogenesis of RCC.

#110 Characterization of the JAK/STAT pathways in Cardiac Myocytes in Angiotensin II-induced Hypertension

Oakland University
Student Authors : Feras Hares
Faculty Advisors : Amy Banes-Berceli

Abstract : Currently, there is not enough data to draw definite conclusions as to the role Janus-Activated Kinase (JAK)/ Signal Transducers of Activated Transcription (STAT) pathways play in the heart during hypertension. Yet, JAK/STAT pathway signaling has been related with the response of the heart and isolated cardiac myocytes to diverse stresses. Therefore, we tested the hypothesis that activation of these pathways in the heart would be increased during hypertension. Using the angiotensin II (ANGII) infusion model of hypertension in male rats we found that there was an increase in JAK2 activation and an increase in the regulator SHP-1 activation as well. These data are surprising in that in previous in vitro work SHP-1 activity correlates with a decrease in JAK2 phosphorylation. There may be as yet unknown mechanisms which are protecting JAK2 activation during ANG II-induced hypertension. Alternatively, we may be seeing SHP-1 activity increasing but being diverted to regulate other intracellular signaling pathways such as the other JAKs (JAK1 and TYK2) or PI3-Kinase. It is known that JAK2 is only one of the pathways regulated by this phosphatase. In future studies we will fully characterize the JAK/STAT pathways and their regulators. These future studies will be required in order to investigate the regulation and activity of these proteins and what role they may be playing in the heart during hypertension.

#111 The Novel Synthesis of 1,5-Benzodiazepines

Oakland University
Student Authors : Jonathon Young
Faculty Advisors : Roman Dembinski

Abstract : The fusion of a diazepine ring with a benzene ring creates a benzodiazepine unit. The biological activity of benzodiazepines is recognized, and they are commonly perscribed as psychoactive drugs. The reaction of both the ketone and alkyne function of an alk-3-ynone 1 with the two amino groups from o-phenylenediamines 2 provides an effective method to synthesize 1,5-benzodiazepines 3. This reaction was carried out in a microwave reactor at 80°C in ethanol in the absence of a catalyst. After purification using silica gel column chromatogrpahy or recrystallization, a variety of 1,5-benzodiazepines were obtained in good yield (70-92%).

#112 Poetry and Syntax: Exploring the Linguistic Structure of an Artistic Form

Oakland University
Student Authors : Elena Durnbaugh
Faculty Advisors : Lisa Levinson

Abstract : Outside the realm of Dr. Seuss, most people have little patience for poetry. Common complaints are that it is too hard to understand, or too abstract to follow. It is not normally that the language is beyond comprehension, however, nor is it that the ideas are too complex. Rather, the trouble that so often arises for people in reading poetry is its use of abnormal sentence structure, or syntax. This project does a review of three different theoretical frameworks for dealing with poetic syntax, including Transformational-Generative Grammar, Minimalism, and Stylistics. Each framework is viewed through examples of poetic language, including excerpts from Emily Dickinson and ee cummings. The project concludes that there exists a deeper relationship between semantic interpretation and syntax in poetic language than in non-poetic language.

#113 Academic Motivation in College Students: A Look at Majors and Enrollment Status

University of Michigan - Flint
Student Authors : Rebecca Horning
Faculty Advisors : Jeannette Stein

Abstract : The purpose of this study was to examine how enrollment status (full time or part time) and academic major influence different types of motivation in college students. As part of a larger study comparing residential and commuter students, participants completed a questionnaire which asked about their education and demographic information. To assess motivation, participants completed the Academic Motivation Scale (AMS; Rattelle, Guay, Vallerand, Larose, & Senécal 2007).The AMS assesses 5 different types of motivation, including intrinsic and external. Originally we found that there were effects of living situation (commuter vs. residential) on motivation type (Horning, 2014). The current analyses suggest a main effect of major and a main effect of enrollment status on different types of motivation. There was also an enrollment status x major interaction. Results will be discussed.

#114 Signing With A Sword: Signature Sign Patterns of Semiotics as Connotative Constructs Applied to Chinese Martial Arts Cinema.

Oakland University
Student Authors : Lisa Schneider
Faculty Advisors : Andrea Eis

Abstract : This thesis proposes a new semiotic approach to analyzing films based on their sign patterns, or “signatures”, which attributes the sign pattern to a key influence in the production of the film. By using these signatures to identify the key influence in the film’s production, signature sign patterns can be found and applied in conjunction with previous semiotic approaches to create a holistic semiotic approach. Through historical analysis and film form signifiers, this new technique is used to identify and interpret the four major signatures in Chinese martial arts films: the Shaw Brothers, Bruce Lee, Jackie Chan, and the New Wave.

#115 How Competition Outcome Affects Facial Preferences in Men and Women

Oakland University
Student Authors : Jonathan Saulter
Faculty Advisors : Lisa Welling

Abstract : Several studies suggest that the hormone testosterone is affected by competition, whereby levels initially increase, remain elevated in winners, but sharply decline in losers. Additional findings indicate testosterone levels may influence the qualities we find attractive in a potential romantic partner. In particular, testosterone has been shown to be positively associated with women's preference for masculine traits in men and men's preference for feminine traits in women. Although one study found that male same-sex competition could heighten preference for female facial femininity in winners relative to losers, no studies have looked for similar findings in women. Here, we examined the effects of competition outcome (i.e., win/loss) on testosterone levels and face preferences in men and women. Male and female participants were randomly assigned to either win or lose a first-person shooter video game against an unseen same-sex confederate who could manipulate the game's outcome via cheats. Results indicate that winning (relative to losing) was associated with male winners' greater preference for more sex-typical faces. However, no equivalent effects were found in females. Given that testosterone increases after winning relative to losing, our findings parallel previous studies that suggest testosterone is positively associated with men's preference for female facial femininity.

#116 Are everyone's DNA fingerprints unique based on D-loops in mtDNA?

University of Michigan - Dearborn
Student Authors : Shelby Szymoniak
Faculty Advisors : Abigail Fusaro

Abstract : DNA fingerprinting is used in several types of applications, such as forensic science, human evolution, and population genetics. Fingerprinting analyzes RFLPs (Restriction Fragment Length Polymorphisms), which are sections of DNA cut by restriction enzymes. Individuals can be compared to each other by using their RFLP lengths from an electrophoresis gel (DNA fingerprint). Two types of DNA can be analyzed: nuclear and mitochondrial (mtDNA). mtDNA is passed on from a person's mother. As a result, siblings will have similar RFLP patterns. We analyzed mtDNA from unrelated individuals in a classroom in order to determine if the DNA fingerprints were unique for each individual. The class extracted mtDNA from cheek cells from each individual (9 students). We amplified the DNA using a PCR reaction and added Hae III (restriction enzyme) to each sample to cut the DNA. Then, we ran the samples on an electrophoresis gel to obtain each student's DNA fingerprint. We compared the fingerprints and six students' mtDNA were cut in the same position, thus displaying the same number of base pairs on the gel. This result would suggest that the students were closely related, which is unlikely. Two other individuals had unique patterns. There was some variation between the students, however, not as great we expected. Further research should be conducted to evaluate the variation in mtDNA between unrelated individuals. For example, instead of using one restriction enzyme, multiple enzymes should be involved to examine the variability in the classroom population.

#117 Charge and spin transfer by excitation of guanine cation radical in acyclovir, penciclovir, and ganciclovir: Formation of neutral carbon-centered side chain radicals

Oakland University
Student Authors : Cassie Bishop, Cameron Hanson, Alex Petrovici
Faculty Advisors : Amitava Adhikary, Anil Kumar, Michael Sevilla

Abstract : Purpose: The guanine cation radical (G•+) on absorption of visible light creates a highly oxidizing excited state. Previous work employing electron spin resonance (ESR) spectroscopy and calculations based on time-dependent density functional theory (TD-DFT), photoexcitation of dG•+ leads to the formation of neutral radicals on the sugar moiety via an excited-state hole transfer process. On this basis, we extend this work to investigate excited states of guanine cation radicals in anti-viral compounds containing guanine with linear (e.g. acyclovir) and with branched (e.g. penciclovir and ganciclovir) side chains.

#118 Finding the Best Digest for DNA-Fingerprinting

University of Michigan - Dearborn
Student Authors : Louis Lotvola
Faculty Advisors : Abigail Fusaro

Abstract : Modern-day "DNA-fingerprinting" exploits genetic hypervariability (high levels of variation) to identify individuals and groups of related individuals. Mitochondrial DNA, particularly the displacement loop (D-loop), has hypervariable regions that can be used for such purposes. One interesting aspect of DNA fingerprinting has to do with which restriction enzymes are the best to use. We expected that HaeIII would likely be a good restriction enzyme to use in DNA fingerprinting analysis. The Winter 2014 Biology 361 class tested this expectation by performing a restriction fragment-length polymorphism and PCR protocol in an attempt to identify an unknown sample of DNA from our class. We extracted cheek cell DNA from each student in the class (n=9), amplified the mitochondrial D-loop region, and then digested the amplified DNA with HaeIII. We ran a gel electrophoresis and determined that two of the extracted DNA samples failed to amplify. The gel also showed three banding patterns (one common, two rare) for the digested DNA, meaning that the unknown sample of DNA could not be conclusively identified. Observation of only three banding patterns may suggest that HaeIII is not a good enzyme to digest the D-loop for DNA fingerprinting. However, a more likely explanation is that the small sample size increased the likelihood of having repeated banding patterns in the class. A similar experiment on a much larger population would need to be conducted to determine the effectiveness of a HaeIII digest in the D-loop.

#119 Modern Dance: Anti-Ballet or Anti-Realist?

Oakland University
Student Authors : Emily Sese
Faculty Advisors : Elizabeth Kattner

Abstract : In this paper, the origins of modern dance in the twentieth century are explored. The pre-existing notion that anti-ballet sentiment forced modern dance into the world is dispelled by evidence of a flourishing of ballet at the time of its supposed decline. Rather than emerging from a rebellion against ballet, modern dance is derived from a manifestation of the Modernist theory during the 1900s. Modernist themes, ideals, and philosophies birthed a yearning for new, experimental movement forms—leading to the creation of modern dance. Using Vaslav Nijinsky's Rite of Spring, the paper argues that the beginnings of modern dance borrow these Modernist ideas regarding novelty and anti-realism in choreography, dancing, and performance. The essay also argues that a Modernist mindset provided a responsive audience for the pioneers of modern dance. Dance critics such as John Martin held tightly to Modernist theories, revealing the importance of anti-realism and self-awareness. Their work forged the legitimacy of Modern dance into the mid-1950s.

#120 The effect of conceptual priming on perceived levels of creativity

Oakland University
Student Authors : Alex Lekander
Faculty Advisors : Cindy Sifonis

Abstract : Music has the ability to influence our existing knowledge, modifying our behavior in new circumstances. It is possible that this occurs through conceptual priming. Research has demonstrated that conceptual priming by external stimuli affects concept generation or changing existing knowledge to adapt to novel situations. For example, Boltz (2001) demonstrated music has the ability to alter our perception of movie scenes through conceptual priming. Specifically, pairing ominous music with an ambiguous scene was associated with participants' negative interpretation of the scene; likewise, pairing pleasant music was associated with a more positive interpretation of the scene. Additional studies have demonstrated how participants, engaged in an idea-generation task may be influenced by hostile sentences, relative to neutral sentences such that those exposed to hostile sentences prior to idea generation are more likely to generate ideas with hostile elements compared to those exposed to neutral sentences. This suggests that idea-generation tasks can be used to examine whether music alone has the ability to activate concepts in memory. In the present study, participants listened to an ethnic themed piece of music before or after they wrote a story describing their adventure on an uncharted inhabited land. The results showed that when participants listened to the music before the task, they were more likely to incorporate concepts associated with the ethnic music. However, this effect was only seen with participants that were familiar with the ethnic music theme. These participants were also more likely to think their stories were more creative than participants who had not listened to ethnic-themed music. Using concepts that may have not otherwise been activated in their stories, might have caused these participants perceive their stories as more creative.

#121 Mary's Ignorance: A Critique of Frank Jackson's Knowledge Argument

University of Michigan - Dearborn
Student Authors : Damen Washington
Faculty Advisors : Kathleen Wider

Abstract : In the papers "Epiphenomenal Qualia" and "What Mary Didn't Know", philosopher Frank Jackson argues against the notion of physicalism, which is the belief that reality can be fully explained in the language of physical science. Jackson presents his argument in the form of an illustration in which a physical scientist that has attained all physical knowledge about reality has learned these facts from the comfort of a black-and-white room. He argues that this scientist's lack of colorful visual experience means that she has no knowledge of the subjective facts about the interaction between light waves, the human eye, and the human brain. And this lack of knowledge illuminates the limits of a physicalistic view of reality. The subjective facts about conscious experience, or qualia, are not explicable in this worldview. In this paper, I will argue that Jackson correctly asserts physicalism's inability to effectively explain the subjective aspects of experience, but I will also argue that this inability of physicalism is not problematic because these subjective aspects of experience ought not be considered facts.

#122 The Effects of Music in a Story Generation Task: Aliens, Military, and War

Oakland University
Student Authors : William Fuss, Darci Molina
Faculty Advisors : Cynthia Sifonis

Abstract : Music is an integral part of our daily lives that can effect mood, emotion, and cognition. Previous research has shown that thematic music (e.g. war music) can activate certain concepts. Sifonis and Fuss (2014) show that a familiar piece of music such as Wagner's "Ride of the Valkyrie", can prime participants to include more war themed words in a story generation task. This research seeks to expand on this finding by taking a larger concept activation and looking for specific words such as military and run. In order to do this we looked at the relationship between listening to thematic music and the activation of concepts stored within semantic memory that become evident during a story generation task. Participants listened to a 90 second piece of thematic music. The music was either familiar or unfamiliar and was presented either before or after the story generation task. Stories were later coded for both war-themed concepts as well as concepts associated with the specific song listened to (e.g. military, and run). It was found that there was an interaction between gender and prime as well as gender and place. Males were more likely to include the war like features overall. Females were more likely to include the concepts of interest when they heard a music excerpt before the generation task. Participants who listened to an excerpt of unfamiliar music after the generation task were most likely to incorporate the concepts specified. These results may be due to failure of random assignment or the possibility that the concepts of interest are simply activated by the generation task itself making it difficult to distinguish between the two pieces of music as a trigger.

#123 Heart-breaker vs. Heart-broken: Does it Matter for Posttraumatic Growth?

Oakland University
Student Authors : Sharell Elam, Kellie McGuire
Faculty Advisors : Kanako Taku

Abstract : One example of how sociocultural elements impact Posttraumatic Growth, or the positive psychological change experienced after a stressful life event, is knowing someone who has experienced this positive psychological after a stressful experience (Tedeschi & Calhoun, 1996; Lindstrom et al., 2013). With this in mind, the question arises of whether people would report higher PTG when they know that their listener has not only experienced a similar event, but has also experienced PTG as a result of the event? The first purpose of this study was to replicate the priming effect of a listener's experiences that was found in an American sample in Japanese undergraduate students who experienced romantic issues that are considered to be highly stressful. The second purpose of this study was to assess if different types of romantic issues (e.g. initiator status such as broken up with versus ended the relationship; different types such as rejected, broken up with versus mutual ending) affects PTG experienced. It was hypothesized that priming conditions and romantic event type would significantly impact PTG. A total of 990 Japanese undergraduate students participated in this study, with 136 participants that identified romantic relationship issues as their most stressful event. Each participant completed a paper and pencil survey that asked them to identify what their romantic issue entailed, which later was coded into subcategories, as well as completing the Posttraumatic Growth Inventory to assess their growth after the issue. Before completing the PTGI, each participant was randomly assigned to read a paragraph that disclosed that either an imaginary listener had experienced distress as a result of the event (Non-PTG-prime condition), the listener had experienced distress as well as positive changes after the event (PTG-prime condition) or had no listener at all (Control group). Results from a one-way ANOVA showed that the priming effect was significant, supporting our first hypothesis. However, results from Kruskal-Wallis tests showed there were no significant differences in PTG experienced based on who initiated or three types of romantic issues. These findings show that a listener's experience is likely to affect PTG; however, the nature of the event or the type of romantic issue (e.g. Rejected, broken up with, mutual ending) is not. One limitation was that romantic event type was limited by sample size in each event type. Future studies should assess if similar patterns will be shown in other populations; younger populations (e.g. high school students) may be affected differently by the priming effect or by types of relationship issues.

#124 Referential and embodied meaning examined in conceptual priming

Oakland University
Student Authors : Brittany Ventline
Faculty Advisors : Cynthia Sifonis

Abstract : External stimuli, such as certain types of music, can become paired with concepts in our semantic memory and over time these associations can strengthen, also known as conceptual priming. In this way, listening to music can convey meaning by activating preexisting associations. This is why hearing graduation music can bring to mind many of the things related to a commencement ceremony. Trainor and Trehub (1992) proposed that music can have two types of meaning, embodied meaning – a physical or emotional response resulting from the physical properties of the music or referential meaning – music activating concepts in semantic memory. Meyers-Levy and Zhu (2010) demonstrated that men were more likely to process embodied meaning while women were more likely to process both embodied and referential meaning when the music was paired with an ad. However, no studies have examined whether music alone can bring to mind complex concepts in individuals or whether there are gender differences in the perception of musical meaning. In the current study, we had participants listen to either a familiar or unfamiliar piece of war-themed music before or after writing a story. We predicted men will process embodied meanings while women should pick up on embodied and referential meaning. We examined the valence of the stories on a scale of 1-7 in terms of how emotionally positive they were (1 = extremely negative/hostile, 7 = extremely positive). The stories written by participants were also examined for incorporation of war-themed concepts. The results support the prediction that males will pick up on the embodied meaning. However, it doesn't support the prediction that women will too. The prediction that women but not men would be influenced by the referential meaning of the stories is supported.

#125 Biodiversity Provides Insight into Rouge River Recovery

University of Michigan - Dearborn
Student Authors : Sarah Corral, Lindsey Scupholm
Faculty Advisors : Abigail Fusaro

Abstract : Benthic macroinvertebrate sampling is an integral component of freshwater stream monitoring programs. The Friends of the Rouge is a non-profit organization that employs this method to evaluate the integrity of the Rouge River, promoting the restoration and stewardship of this ecosystem. Caddisfly (Trichoptera) larvae are among the more abundant indicator insects found in the four branches of the Rouge River. We identified Trichoptera collected from multiple sites along each branch using DNA barcoding of the mitochondrial cytochrome c oxidase subunit I (COI) gene. We further evaluated those individuals identified as the netspinner caddisfly Hydropsyche betteni and H. simulans for relatedness and distribution along the river branches. We constructed phylogenetic trees from these DNA sequences to analyze patterns of movement and gene flow of these species through the Rouge watershed. Information about Trichoptera populations in the watershed may also reveal insights into water quality and recovery of the Rouge River.

#126 Als der Krieg zu Ende war: German Plays, and the Status of Women, in the Immediate Aftermath of World War II

Oakland University
Student Authors : Amela Agic
Faculty Advisors : Seth Howes

Abstract : The Play, When the War was Over, by Swiss playwright and novelist, Max Frisch was written in 1948. The writer portrays the immediate post WWII effects in Germany, such as poverty among the civilian population, and the violence committed against both men and women. Through the duration of the play a German family spends their entire time in their basement, while their house is invaded by the Red Army. During this time, they had to face the aftermath of the war, which consisted of a lack of essential life resources such as water, food, and clean clothing. The play illustrates violence among soldiers of both sides, and violence against both men and women. The few who no longer wanted to fight have committed suicide, women were raped and abused, civilian men were attacked and had to hide for years, and families were separated. This play makes one wonder why is it that individuals conduct themselves in such an inhuman manner during conflicts? These calamities bring out the most brutal and cruel behaviors that only appear during these dark times. In order for the victims to survive they have to confront the universal postwar problems weather they are ready for them or not.

#127 Development of New Protein Purification Technique of Avian Riboflavin Binding Protein Utilizing its Isoelectric Point

University of Michigan - Dearborn
Student Authors : James Matchynski
Faculty Advisors : Marilee Benore, Sheila Smith

Abstract : The protein riboflavin binding protein (RBP) has a few unique characteristics. It is yellow when bound to its ligand riboflavin, with a pI in the range of 4.1 - 4.4; it can maintain its structure when exposed to a pH close to its pI. These characteristics are useful because they allow one to control the net charge in a range of low pHs where most other proteins have only one charge. Controlling the net charge is important because anything charged may be subject to motion in a particular direction by means of an electric field. The aim of this project is to examine whether or not RBP can be moved on a mass scale using an electrical field. Using areas of high current density to serve as one way passages for proteins to flow, we are investigating a new technique for the purification of RBP from eggs. Where negatively charged proteins like RBP will migrate anodically, most other proteins that are positively charged at low pH will migrate cathodically. The technique is similar to gel electrophoresis but in order to allow the effect to occur faster and on a larger scale, no gel is used. Additionally only very low buffer concentrations are used in order to maximize migrational current of the protein. A specially designed apparatus was engineered to fit these needs and used to test the effectiveness of this technique.

#128 Riboflavin Binding to DNA and Inhibition of Polymerase Chain Reaction

University of Michigan - Dearborn
Student Authors : Michal Skorupka
Faculty Advisors : Marilee Benore, Sheila Smith

Abstract : Riboflavin Binding to DNA and Inhibition of Polymerase Chain reaction Michael Skorupka Marilee Benore & Sheila Smith Riboflavin, also known as vitamin B2, is a water-soluble precursor to the coenzymes Flavin Mononucleotide (FMN) and Flavin Adenine Dinucleotide (FAD). It is well documented that Riboflavin demonstrates nonspecific affinity for DNA binding. Evidence also indicates that Riboflavin plays a role in bacterial gene expression by binding to mRNA sites called Riboswitches. We are developing a novel method to study small molecule binding to DNA by PCR inhibition. Riboflavin's affinity and specificity of eukaryotic DNA binding is characterized using Polymerase Chain Reaction (PCR) inhibition against the Riboflavin Binding Protein cDNA and gene.

#129 Effects of Phenolics on Amphibian Larval Development, Growth and Survival

Oakland University
Student Authors : Bradley Barr, David Oaks
Faculty Advisors : Keith Berven

Abstract : Previous studies have shown that larval amphibian fitness traits are affected by litter quality (Carbon/Nitrogen/Phosphorus content), primary producer biomass and water chemistry (polyphenolics and pH). Polyphenolics, such as tannins, that are released by decomposing leaves in ponds have been shown to negatively affect the survival, growth and development of many larval species. Polyphenolics may directly affect amphibian fitness by altering physiological and endocrine pathways, or indirectly by reducing food resources. In the present controlled laboratory study, using an eight fold range of polyphenolic concentrations, we found that polyphenolics had no adverse effects on our wood frog larval growth, development and survival in a range of polyphenolics concentrations that normally occur in natural ponds. Our results indicate that the negative effects of polyphenolics on amphibian species previously reported in other literature are likely a result of an indirect effect of the tadpoles food supplies (phytoplankton and periphyton biomass).

#130 "Rock, Paper, Scissors": An English Translation of Catherine Kalengula's "Pierre, feuille, ciseaux"

Oakland University
Student Authors : Brittany Kelley
Faculty Advisors : Dikka Berven

Abstract : For my independent translation project, I chose Pierre, feuille, ciseaux, a young adult novel written in French by Catherine Kalengula: After the death of her parents in a car crash in France, Alice moves to Oxford, England, to live with her grandmother, and she resigns herself to grieve in silence and solitude. Meanwhile, Shane, adopted by a wealthy English couple as a young boy, is now a rebellious teenager who feels that his Korean heritage sets him apart, as he struggles to fit in. These two tortured teens will find comfort and solace in one another's arms, after fate traps them together in a broken-down elevator. But can they make it work, when all the forces around them threaten to keep them apart? This project proved challenging due to its combination of the French language and British culture, as well as the numerous idioms, slang, and sophisticated diction.

#131 Close Reading for Students

University of Michigan - Dearborn
Student Authors : Zeinab Saad
Faculty Advisors : Michelle Jarenski

Abstract : It has become increasingly interesting in a field of literary research and analysis that close reading provides the opportunity for insightful, careful and creative investigation leading to individual theory. Literary analysis allows for individual agency, which makes room for imagination as the reader speculates each word and what it means to them. However, it is vital to remember that straying too far away from the language can be dangerous when making a valid argument. In this discussion I would like to present the benefits of close reading, how and why this strategy is an excellent tool for becoming a better reader and writer and related concepts dealing with literary criticism. Close reading, also known as "New Criticism," is most definitely a gateway to becoming a successful college student. Here I will talk about what skills and understandings derive from practicing close reading and why. Some find reading "irrelevant" writings to be wasteful and meaningless for a number of reasons, however, close reading can provide genuine meaning through reaching a deeper comprehension, ultimately, exhausting the possibilities of validating arguments. The purpose here is to bring awareness to this process and promote a self-motivated education.

#132 Character Revolution: The Development of Voice and Alternatives to Archetypal Womanhood in Historic and Literary Tradition

University of Michigan - Flint
Student Authors : My Proulx
Faculty Advisors : Jacqueline Zeff

Abstract : Within a relatively recent time span, women have been developed a voice of womanhood that differs from the long-standing portrayals by male authors. This voice is now present in a historical context- its ideas are echoed within fiction. My research is an exploration of the women who shaped and/or influenced this voice and of portrayals of women and women's issues within their works.

#133 Effects of Identification and Fusion on Muslim Americans in Response to a Threat

University of Michigan - Dearborn
Student Authors : Hanan Hashem, Jatia Sylvester
Faculty Advisors : Muniba Saleem

Abstract : In this study, we aim to understand if Muslim Americans, who claim that their identities are fused moderately the same with their Muslim culture and their American culture, will vary in their feelings and actions towards one of their in-group if it transgresses against the other in-group.

#134 Identification and Characterization of Bacterial Isolate Exhibiting Antimicrobial Properties

University of Michigan - Flint
Student Authors : Eric Spilker
Faculty Advisors : Jerry Sanders

Abstract : During a study of normal bacterial flora associated with Vallisneria americana (water celery), a contaminant was noted to exhibit antibacterial activity. Within this study we identified the bacteria by isolating colonies to homogeneity and isolating genomic DNA from the organism. Qualitative analysis of the organism using gram staining, capsule staining, and morphological patterns yielded the bacterium to be a cocci. 16s ribosomal RNA was purified from the organism and sequenced aligned using a BLAST search. The nucleotide sequence rusted in a positive match with Bacillus subtillus. Processes of characterizing the antimicrobial substance by extracting proteins collected through methanol and water based extractions of supernatant taken from cultures of the organism at stationary phase. The extraction were concentrated by vacuum-filtration and antimicrobial activity was assayed. Methanol extractions yielded similar data to control protein aliquots of supernatant, providing evidence that that the antimicrobial possessed hydrophobic attributes and was secreted into the supernatant.

#135 An Examination of Suspensory Postures in Captive and Wild Alouatta

University of Michigan - Dearborn
Student Authors : Amelia Stachowicz
Faculty Advisors : Janet Dunn

Abstract : Much has been made of the prehensile tail that is unique to some New World monkeys; indeed, the “typical monkey” conceived of in the public mind and widely seen in non scientific media is almost always depicted as possessing one. It is hardly surprising, then, that the prehensile tail, along with other aspects of primate locomotion, has been studied in a fair amount of depth, especially among members of the family Atelidae. Most of this research has centered on the genus Ateles, due to their distinctive semibrachiatory patterns, but Alouatta, Lagothrix, and Brachyteles have also been investigated in varying degrees of depth, with studies often comparing various species. However, few published studies have looked at tail usage holistically, examining how prehensile-tailed primates make use of their appendages in concert with one another. This project examines suspensory postures in two populations of howler monkey—one wild, one captive. It is generally known that captive animals are less active than their wild counterparts, but what is less clear are the types of behaviors that are lacking in captive settings. Howler monkeys (Alouatta) are not a commonly held group in U.S. zoos, and are not usually seen as an especially active genus; as a result, little research appears to have been done in this area. The data from the project suggests that captive animals are not only less active than the wild ones, but also seem to have a less varied repertoire of suspensory positions overall.

#136 The ability of a newly identified Paenibacillus species to form endospores.

University of Michigan - Flint
Student Authors : Andrew Wiltz
Faculty Advisors : Jerry Sanders

Abstract : One of the characteristics of the genus Paenibacillus is the ability to form endospores. Within the laboratory, a bacterial isolate has been identified by multiple microbiological, molecular, and biochemical methods to belong within the genus Paenibacillus. However, we have not been able to consistently induce sporulation by this isolate. This may represent a unique isolate that lacks the ability to form endospores or it may have unique triggers for sporulation. This study describes the microbiological methods and results to address those possibilities.

#137 Determination of Cocaine using Gas Chromatography–Mass Spectrometry on Paper Currency Collected in the Metro Detroit Area

University of Michigan - Dearborn
Student Authors : Justin Kandah, Aaron Zhang
Faculty Advisors : Yiwei Deng

Abstract : Cocaine (benzoylmethylecgonine) is one of the most commonly abused illicit drugs in the world. Many cocaine users use a wrapped banknote to inhale this drug. Banknotes become contaminated during the abuse, exchange, and storage of cocaine as well as other illicit drugs. The analysis of cocaine on various denominations of banknotes in the general circulation can provide law enforcement circles and forensic epidemiologists objective and timely information on epidemiology of illicit drug use. In this study, forty two banknotes were collected from seven Districts of the city of Detroit. Cocaine was detected in 67% of the banknotes tested. The results may provide useful information on epidemiology of illicit drug use in the city of Detroit.

#138 Women's Rape Avoidance Behaviors and Surgency: A Correlational Study

University of Michigan - Flint
Student Authors : Jacob Orr
Faculty Advisors : William McKibbin

Abstract : Rape is a fact of life and a behavioral act that has been committed for ages (Ullman, 2007). The act of rape brings detrimental physiological, psychological and genetic costs to the victim, therefore there is a need for more research investigating the prevention of rape in an effort to eliminate the act altogether. The current researcher would like to add to the body of knowledge encapsulating rape, and is seeking to understand a potential relationship between women's rape avoidance behaviors and their self-perceived surgency. This author will utilize an online self-report survey and plans to examine the relationship between women's score on the Rape Avoidance Inventory (McKibbin et al., 2009) and women's rating of surgency on the Trait Specific Dependence Inventory (Ellis et al., 2002). The sample consisted of females only (n = 388). The mean age was 23.16 (SD: 6.38). This researcher plans to examine the results with a Pearson product-moment correlation. It is predicted that there will be a negative correlation between the two aforementioned variables. Limitations and recommendations for future research shall also be discussed.

#139 How Does Birth Order Affect Teamwork? Birth Order, Personality, and Teamwork Behaviors.

University of Michigan - Flint
Student Authors : Noelle Looney
Faculty Advisors : Marianne McGrath

Abstract : We will examine whether birth order and personality had an influence on individuals' behavior on teamwork related tasks. A total of 151 undergraduates (121 women, 30 men) from an upper Midwestern university participated in the study. Participants volunteered to complete three questionnaires assessing their behavior and attitudes toward group work, inquire about family background and upbringing, and examine their personality type. This correlational design will use a Pearson r to analyze the independent subject attribute variables of birth order and personality. The expected outcome is a positive correlation between birth order and teamwork behaviors. Lastly, those who score high in conscientiousness and honesty/humility are expected to show more optimal teamwork behaviors than those scoring high in extraversion and agreeableness.

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