

MEETING OF MINDS XIX

May 13, 2011

This is the nineteenth 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 184 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 XIX



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 19,000 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 516 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 134 baccalaureate programs and 124 graduate degree and certificate programs. Located in suburban northeast Oakland County, OU is easily accessible to millions of Detroit's metropolitan residents.

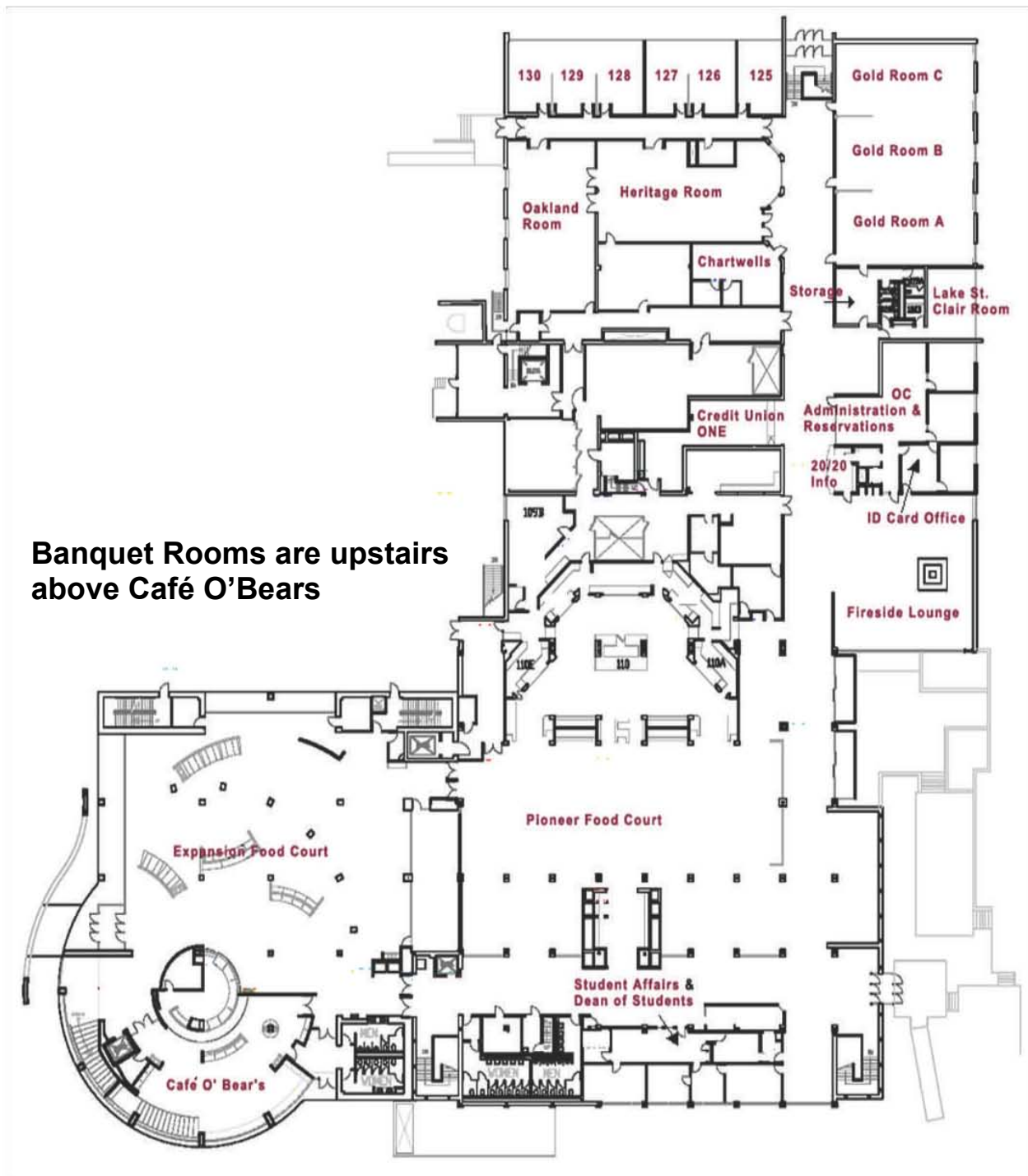


Since its founding in 1959 with a gift of 196 acres from Ford Motor Company, the University of Michigan-Dearborn has been distinguished by its commitment to providing excellent educational opportunities responsive to the needs of southeastern Michigan. Shaped by a history of interaction with business, 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 8,600 enrolled students and 381 full-time instructional faculty, UM-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 UM-Dearborn, our 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 was established in 1956, as the 16th college of the University of Michigan and the first outside of Ann Arbor. Since that time, the campus has grown from 241 students in 1956 to over 8,100 during the 2010-2011 academic year and – for the past four years – boasts one of the highest enrollment increases in the State of Michigan. Currently, the University of Michigan-Flint offers degrees in over 100 undergraduate and 30 graduate areas of study, including a doctor of nursing practice and doctor of physical therapy. The University also offers programs in liberal arts and sciences, elementary or secondary education, health care, and business through its College of Arts and Sciences, School of Management, School of Education and Human Services, and School of Health Professions and Studies. Further, the University is supported by the efforts of over 460 faculty who bring with them years of experience in research and scholarly activity. UM-Flint is quickly becoming recognized as a mid-state regional provider of education, drawing students from over ten countries. At one time being solely a commuter campus, the University of Michigan-Flint opened its first residence hall in 2008, expanding to a 76-acre river front campus deep in the heart of Flint's central city.

OAKLAND CENTER—Main floor



MEETING OF MINDS XIX



8:30-9:30 am	Registration/Continental Breakfast	Banquet Rooms, Oakland Center (OC)
9:30-11:30 am	Poster Session 1	Across from Cafe O'Bears, OC
9:30-10:15 am	Oral Presentations 1 A-I	South Foundation Hall
10:30-11:15 am	Oral Presentations 2 A-I	South Foundation Hall
11:30-11:50 am	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: Amy Banes-Berceli, Assistant Professor of Biological Sciences Oakland University	
1:30-3:30 pm	Poster Session 2	Across from Cafe O'Bears, OC
1:30-2:15 pm	Oral Presentations 3 A-I	South Foundation Hall
2:30-3:15 pm	Oral Presentations 4 A-I	South Foundation Hall

MEETING OF MINDS XIX



Guitar Quartet

Michael Latcha
Kyle Marker
Neal Wright
Curtis Godzisz

Faculty advisor: Bret Hoag
Oakland University

Performing:

Lotus Eaters -- Andrew York b. 1930
Spin -- Andrew York b. 1930

Jazz Group

Neal Wright, guitar
Mark Johnston, bass
Quincy Stewart, piano
Miles Brown, drums
Nathan Zaporski, sax

Faculty advisor: Miles Brown
Oakland University

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 1 9:30 a.m.—10:15 a.m.

Session 1A 163 SFH

#176 A QM/MM study of Myoglobin

University of Michigan - Flint
Student Authors : Michael Stogsdill
Faculty Advisors : Jie Song

#118 Alpha Adrenergic receptor agonists activate the JAK2/STAT intracellular signaling pathway.

Oakland University
Student Authors : Hind Al-Azawi, Dina El-Hout, Sermel Polus, Kristin Totoraitis
Faculty Advisors : Amy Banes-Berceli

#119 Angiotensin II does not use JAK2 to maintain normal blood pressure.

Oakland University
Student Authors : Hind Al-Azawi, Dina El-Hout, Dominic Femminineo, Paola Yumpo-Cardenas
Faculty Advisors : Amy Banes-Berceli

Session 1B 164 SFH

#171 A Mathematical Model of Brain Tumor: miR451 Regulation

University of Michigan - Dearborn
Student Authors : Soyeon Roh
Faculty Advisors : Yangjin Kim

#39 Origametry

University of Michigan - Dearborn
Student Authors : Jacqueline Sisto
Faculty Advisors : Chris Novak

#127 Modeling, simulation and evaluation of teleoperator control systems

Oakland University
Student Authors : Jing Fan
Faculty Advisors : Mohamed Zohdy

Session 1C 165 SFH

#11 Parsing Event Pattern Queries

University of Michigan - Flint
Student Authors : Rajesh Chalikhonda, Jay Koirala, Vinisha Lokesh
Faculty Advisors : Murali Mani

#20 Pressure Drop in Single and multiphase Flow in U-Bends

University of Michigan - Flint
Student Authors : Eric Bailey, James McKinnon, Joseph Wilkinson
Faculty Advisors : Quamrul Mazumder

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 1 9:30 a.m.—10:15 a.m.

#84 Design and Development of a Flow Rate Calibration System

University of Michigan - Flint

Student Authors : Tarek Jarayseh, Jared Kapa

Faculty Advisors : Quamrul Mazumder

Session 1D 166 SFH

#100 Electrophilic Cyclization of Alkynyluridines

Oakland University

Student Authors : Susan Yang

Faculty Advisors : Roman Dembinski

#102 Purification of Amyloid Beta specific antibodies through Surface Plasmon Resonance detection

Oakland University

Student Authors : Adam Yokom

Faculty Advisors : John Finke

#111 A DFT Investigation of the Interaction Between Silver Nanoclusters and HCN

Oakland University

Student Authors : Christopher Powers

Faculty Advisors : Maria Bryant

Session 1E 167 SFH

#28 American Literature and the Penny Press

Oakland University

Student Authors : Shannon Cooley

Faculty Advisors : Jeffrey Insko

#60 Whiteness as Ideological Imagination

Oakland University

Student Authors : Linda Lester

Faculty Advisors : Kellie Hay

#99 The Touch and the Feel of Social Science: How Cotton Shaped the Fabric of U.S. History

University of Michigan - Flint

Student Authors : Cameron Waites

Faculty Advisors : Suzanne Selig, Maureen Thum

Session 1F 168 SFH

#49 The Conceptualization of Contradiction Theory

Oakland University

Student Authors : Kathrine Curran

Faculty Advisors : Jo Reger

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 1 9:30 a.m.—10:15 a.m.

#54 Feminism Lives! Fat Activism on the Internet

Oakland University

Student Authors : Emily Eisele

Faculty Advisors : Jo Reger

#110 Mr. and Mrs. "His-Her" Name: An Examination of Gender Roles and Nontraditional Marital Surnames

Oakland University

Student Authors : Alessa Perkins

Faculty Advisors : Jo Reger

Session 1G

169 SFH

#143 Behind the Curtain: Music in the Age of Stalin

Oakland University

Student Authors : Brian Wigman

Faculty Advisors : Dana Driscoll

#63 Kant, Lies, and Misleading Truths

University of Michigan - Dearborn

Student Authors : Hassan Amad

Faculty Advisors : Paul Hughes

#96 Solipsism, Cartesian Solipsism, and Kant

University of Michigan - Dearborn

Student Authors : Joseph Gardai

Faculty Advisors : Kathleen Wider

Session 1H

170 SFH

#27 Nefertiti: An Amarna Queen

Oakland University

Student Authors : Kendra Fissette

Faculty Advisors : Claude Baillargeon

#36 E. T. A. Hoffmann's Heroines: the Representation of Female Characters in "Der goldne Topf" and "Der Sandmann"

Oakland University

Student Authors : Nolan McClain

Faculty Advisors : Christopher Clason

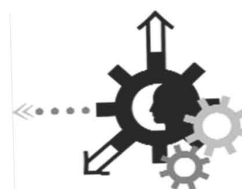
#125 Clothing, Cross-dressing and Class in the City: Early Modern Economic Concerns in Thomas Dekker and Thomas Middleton.

University of Michigan - Dearborn

Student Authors : Paige Hanson

Faculty Advisors : Caitlin Finlayson

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 1 9:30 a.m.—10:15 a.m.

Session 1I 171 SFH

#50 Art of the Third Reich: Enforcing Nazi Ideology

Oakland University

Student Authors : Veronica Litzan

Faculty Advisors : Tamara Jhashi

#78 The Sarrazin Controversy and German Literature after the Fall of the Wall: Uwe Timm's Johannisnacht and Wladimir Kaminer's Russendisko

Oakland University

Student Authors : Jonathan Fouch

Faculty Advisors : Barbara Mabee

#148 Getting a Grasp on the Faith of Young Christians: The Visions Christian Nightclub and the Spiritual Journey of Contemporary American Youth

University of Michigan - Dearborn

Student Authors : Matthew Kerry

Faculty Advisors : Claude Jacobs

Session 1J 172 SFH

#26 False Memories for the Source of Natural and Artificial Words

University of Michigan - Dearborn

Student Authors : Chad Blair

Faculty Advisors : Arlo Clark-Foos

#64 Otto Dix: Wooed by the Great War

Oakland University

Student Authors : Barbara Bauer

Faculty Advisors : Claude Baillargeon

#132 Empirical Investigation of the Collective Unconscious with High School Students

University of Michigan - Flint

Student Authors : Michael Pauldine

Faculty Advisors : Marianne McGrath

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 2 10:30 a.m.—11:15 a.m.

Session 2A 163 SFH

- #92 Angiotensin II (ANGII) requires both Interleukin -6 (IL-6) and Janus Kinase (JAK2) activation to manifest its hypertensive response.**

Oakland University

Student Authors : Hind Al-Azawi, Michael Brands, Marcus Jamil

Faculty Advisors : Amy Banes-Berceli

- #93 Molecular mechanisms of sexual dimorphism in renal injury in spontaneously hypertensive rats (SHR): involvement of Angiotensin II and the JAK/STAT pathways.**

Oakland University

Student Authors : Justin Panzica, Jennifer Sullivan

Faculty Advisors : Amy Banes-Berceli

- #95 JAK2 is not involved in the Central Mechanisms of Blood Pressure Control involving ANG II**

Oakland University

Student Authors : Michael Christofis, Rammy Ishaya, Carrie Northcott, Jeremy Zaluski

Faculty Advisors : Amy Banes-Berceli

Session 2B 164 SFH

- #21 Post-Starburst Quasars: The Missing Link in Galaxy. The Story Continues...**

University of Michigan - Flint

Student Authors : Shonda Townsend

Faculty Advisors : Rajib Ganguly

- #126 Growing the Most Massive Black Holes in the Universe**

University of Michigan—Flint

Student Authors : Justin Robbins

Faculty Advisors : Rajib Ganguly

Session 2C 165 SFH

- #142 University Nursing Students and Public School Health Collaboration**

University of Michigan - Flint

Student Authors : Audra Eller, Jennifer Rugg

Faculty Advisors : Kimberly VanSlyke

- #10 Nutrition Practices For Students Attending Oakland University**

Oakland University

Student Authors : Rachael Reda

Faculty Advisors : Florence Dallo

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 2 10:30 a.m.—11:15 a.m.

#61 Comparison of Reported Physical Activity and Nutrition Practices with Written Wellness Policies

Oakland University

Student Authors : Kate Adams, Andrea Lauhoff, Jessica Pomaranski

Faculty Advisors : Jennifer Lucarelli

Session 2D 166 SFH

#159 Approaches to the Synthesis of LY426965

Oakland University

Student Authors : Eric Salo

Faculty Advisors : Nessan Kerrigan

#9 Separation and Identification of Flavonoids and Phenolic compounds in Juice, Coffee and Tea Samples

University of Michigan - Dearborn

Student Authors : Ameer Al-Assadi, Vikram Shende

Faculty Advisors : Yiwei Deng

#89 Reactions, electrochemical and computational studies of the $(\eta^4\text{-C}_5\text{Ph}_4\text{=O})\text{Fe}(\text{CO})_3$ system

Oakland University

Student Authors : Elizabeth Donovan, Barrett Povirk

Faculty Advisors : Greg Felton

Session 2E 167 SFH

#3 At What Cost

Oakland University

Student Authors : Sarah Lazarescu

Faculty Advisors : Kellie Hay

#35 The L Words: Latina and Lesbian, Lesbian Representation in a Spanish Soap Opera

Oakland University

Student Authors : Alesha Brown

Faculty Advisors : Jo Reger

#108 The Changing Portrayal of HIV/AIDS on Television:

University of Michigan - Flint

Student Authors : Crystal Williams

Faculty Advisors : Marcus Paroske

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 2 10:30 a.m.—11:15 a.m.

Session 2F 168 SFH

#34 War on Crime: The Effect of Public Enemy Number One on the Economy

University of Michigan - Flint
Student Authors : Ellyn Ackerman
Faculty Advisors : Paula Nas

#38 Shaping the Individual: How Skills Influence Wages

University of Michigan - Dearborn
Student Authors : Parul Luthra
Faculty Advisors : Bruce Pietrykowski

#117 "Stuff Happens": An Analysis of the Causes, Strategies, and Consequences of the 2003 U.S.-led Invasion of Iraq

Oakland University
Student Authors : Alex Green
Faculty Advisors : Alan Epstein

Session 2G 169 SFH

#175 Detroit Style Zen

University of Michigan - Dearborn
Student Authors : Laura Burgher
Faculty Advisors : Claude Jacobs

#1 Gustave Le Gray - Brig Upon the Water, c. 1856"

Oakland University
Student Authors : Michelle Lambert
Faculty Advisors : Claude Baillargeon

#37 Glorious Culinary Traditions: The Origins of French Cuisine and its Adaptability in a Global World

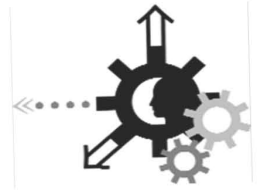
Oakland University
Student Authors : Candice Yono
Faculty Advisors : Dikka Berven

Session 2H 170 SFH

#31 The Bard and the Director: Orson Welles Adapts Shakespeare for the Screen

University of Michigan - Dearborn
Student Authors : Sara Walters
Faculty Advisors : Caitlin Finlayson

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 2 10:30 a.m.—11:15 a.m.

#69 The Man with the Golden Arm (1955) vs. The Production Code Administration

Oakland University

Student Authors : Alexis Nemeth

Faculty Advisors : Kyle Edwards

#113 "Tom Powers: A Menace who Escaped the Chains of the PCA"

Oakland University

Student Authors : Mayuri Munot

Faculty Advisors : Kyle Edwards

Session 2I 171 SFH

#165 Narratives Without Compartments

University of Michigan - Dearborn

Student Authors : Eman Elshaikh

Faculty Advisors : Elias Baumgarten, Maureen Linker

#86 No Rest Here

Oakland University

Student Authors : Allison Graves

Faculty Advisors : Kathleen Pfeiffer

#103 Personal Identity and Moral Responsibility: A Critical Analysis of Hume's Treatise

Oakland University

Student Authors : Jennifer Cepnick

Faculty Advisors : Paul Graves

Session 2J 172 SFH

#145 "Helena and Hermia: Unconventional Women of the Renaissance"

University of Michigan - Flint

Student Authors : Shahd Karrar

Faculty Advisors : Maureen Thum

#24 Geryon's Picture Book: Modes of Self-Definition in Autobiography of Red

Oakland University

Student Authors : Alexandra Allen

Faculty Advisors : Gladys Cardiff

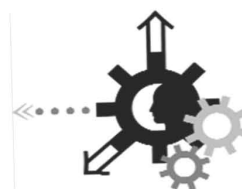
#68 "The dove pursues the griffin": Michael Hoffman's Interpretation of Helena in A Midsummer Night's Dream.

University of Michigan - Flint

Student Authors : Keenan O'Dacre

Faculty Advisors : Maureen Thum

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 2 10:30 a.m.—11:15 a.m.

Session 2K 173SFH

#76 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 1

Oakland University

Student Authors : Nathan Collins

Faculty Advisors : Michael Pytlik, Richard Stamps

#75 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 2

Oakland University

Student Authors : Emily Tissot

Faculty Advisors : Michael Pytlik, Richard Stamps

#74 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 3

Oakland University

Student Authors : Michael Henson

Faculty Advisors : Michael Pytlik, Richard Stamps

#73 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 4

Oakland University

Student Authors : Clayton Saunders

Faculty Advisors : Michael Pytlik, Richard Stamps

MEETING OF MINDS XIX



POSTER PRESENTATIONS

**Morning Session 9:30 a.m.—11:30 a.m.
Across from Café O’Bears—Oakland Center**

#2 Posttraumatic Growth and Perceived Changes in Physical Health: Exploring Events Triggering Lifestyle Change

Oakland University
Student Authors : Jessica Nagorka, Brenton Yanos
Faculty Advisors : Kanako Taku

#4 UVA-induced fluorescence as a possible cataract precursor

Oakland University
Student Authors : Catherine Fick
Faculty Advisors : Frank Giblin, Francis Simpanya

#7 A comparison of special education service among traditional public schools and public school academies

University of Michigan - Dearborn
Student Authors : Athena Kheibari
Faculty Advisors : Joseph Musial

#8 Comparative Ionophoric Studies of the Marine Algal Toxin Azaspiracid

University of Michigan - Dearborn
Student Authors : Andrew Rasky
Faculty Advisors : Mark Hamman, Damaris Meujo, Michael Twiner

#16 Assessing Degress of Growth with the Posttraumatic Growth Inventory: A Literature Review and Analysis

Oakland University
Student Authors : Jessica Nagorka, Lauren Rogers
Faculty Advisors : Kanako Taku

#40 Do children think that psychological mood states affect nutritional choices?

Oakland University
Student Authors : Caitlin Kleist
Faculty Advisors : Lakshmi Raman

#46 The Blame Game: Priming for the Poor Stereotype and the Effects of the Belief in a Just-World on the Assignment of Responsibility

University of Michigan - Flint
Student Authors : Kathryn McAlindon
Faculty Advisors : Hillary Heinze

#47 Apparel Vs. Pharmaceuticals: Comparison of Counterfeit Products Seized in Major Ports of the United States.

University of Michigan - Flint
Student Authors : Juana Francesca Rodriguez
Faculty Advisors : Gregory Deyong

MEETING OF MINDS XIX



POSTER PRESENTATIONS

**Morning Session 9:30 a.m.—11:30 a.m.
Across from Café O'Bears—Oakland Center**

#48 Dimensional Complexity of Love Schemas

University of Michigan - Dearborn

Student Authors : Amanda Bills, Jessica Godfrey, Valerie Smith

Faculty Advisors : Robert Hymes

#51 Mother-Child Interaction

Oakland University

Student Authors : Kaitlyn Grangood, Alessa Perkins

Faculty Advisors : Lakshmi Raman

#58 Bicultural Identity in Arab American College Students and Its Relation to Perceptions of Parenting

University of Michigan - Dearborn

Student Authors : Jing Chen

Faculty Advisors : Jane Sheldon

#70 Quality of Life Changes with Treatment of Eating Disorders: a retrospective chart review

Oakland University

Student Authors : Andrew Madison, Amy Noser

Faculty Advisors : Sylvie Lombardo

#71 Morphological and cytotoxic effects of the marine toxin azaspiracid on human neuroblastoma cells

University of Michigan - Dearborn

Student Authors : Fauzieh Dabaja

Faculty Advisors : Michael Twiner

#77 Can Music Change your Story: Conceptual Priming Through Music

Oakland University

Student Authors : William Fuss, Caitlin Kleist, Candice Lambert, Yvonne Miles, Cherise Zannetti

Faculty Advisors : Cynthia Sifonis

#83 Experimental Comparison of Pressure Differentials across Various 90 Degree Elbows

University of Michigan - Flint

Student Authors : Joseph Berry, Rashaun Phinisee

Faculty Advisors : Quamrul Mazumder

#109 Synthesis and electrochemical analysis of di- μ -oxo bridged dimanganese and diiron water oxidation catalysts

Oakland University

Student Authors : Elizabeth Donovan, Amanda Stahl

Faculty Advisors : Greg Felton

#122 Hybrid Vehicle Control System

Oakland University

Student Authors : Katarzyna Hyjek

Faculty Advisors : Mohamed Zohdy

MEETING OF MINDS XIX



POSTER PRESENTATIONS

**Morning Session 9:30 a.m.—11:30 a.m.
Across from Café O'Bears—Oakland Center**

#130 Humor in Translation: capturing comedic effect in subtitles

Oakland University

Student Authors : Katie Hamilton, Brianne O'Connell

Faculty Advisors : Adolfo Campoy-Cubillo

#135 Non-Traditional Students and College Involvement

Oakland University

Student Authors : Michelle Irvine

Faculty Advisors : Scott Crabill

#137 A Synthesis of the Three Phases of the Pursuit of Happiness Project

Oakland University

Student Authors : James Byrne, Kaitlyn Harding, Emily Olthof

Faculty Advisors : Robert Stewart

#138 Temporal Aspects of Savoring: Implications for Psychological Well-Being and Satisfaction with Life

Oakland University

Student Authors : James Byrnes, Kaitlyn Harding, Emily Olthof

Faculty Advisors : Robert Stewart

#149 Changes in the Interpersonal context of sexual behaviors

Oakland University

Student Authors : , Kristen Castelveter, Aimee Coldren, Rachel Ocker

Faculty Advisors : Sylvie Lombardo

#151 Gender differences in the interpersonal context of sexual encounters of college students

Oakland University

Student Authors : Samantha Heuwagen, Ellen Archey, Kathy Bolton, Oksana Fedorak

Faculty Advisors : Sylvie Lombardo

#152 Test-retest reliability of self-reported interpersonal characteristics of sexual behaviors

Oakland University

Student Authors : Candace Lambert, Andrew Madison, Amy Noser

Faculty Advisors : Sylvie Lombardo

#153 How to Complete a Program or Agency Evaluation

University of Michigan - Flint

Student Authors : Staci Hines

Faculty Advisors : Denise Dedman

#154 Toxic Web-The Movement of Heavy Metals Through Terrestrial Food Webs

University of Michigan - Dearborn

Student Authors : Amneh Awad, Samantha Michaels

Faculty Advisors : Anne Danielson-Francois

MEETING OF MINDS XIX



POSTER PRESENTATIONS

**Morning Session 9:30 a.m.—11:30 a.m.
Across from Café O'Bears—Oakland Center**

#157 The Last Picture Show- Detroit's movie palaces and art house theaters

Oakland University

Student Authors : Kenneth Espejo

Faculty Advisors : Adina Schneeweis

#161 Hormone-Like Effects of BPA on Tumor Suppressor Genes in Breast Cancer Cells

Oakland University

Student Authors : Jayme Jackson, Philemon Tesfazghi, Tabitha Zakar

Faculty Advisors : Sumi Dinda

#162 Alignable and Nonalignable Differences

Oakland University

Student Authors : Andrew Madison

Faculty Advisors : Cynthia Sifonis

#168 Legal Services Corporation Local Website Analysis

University of Michigan - Flint

Student Authors : Dan Burbar, Michael Whalen

Faculty Advisors : Dana Dyson, Kathryn Schellenberg

#178 No such thing as a free lunch

University of Michigan - Dearborn

Student Authors : Yevhen Drobot, Ashim Wadehra

Faculty Advisors : Anne Danielson-Francois

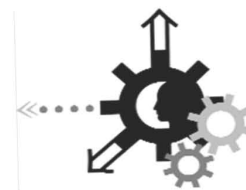
#181 Functionally Graded Piezomagnetic and Piezoelectric Bilayers for Magnetic Field Sensors: Magnetolectric Interactions at Low-Frequencies and at Bending Modes

Oakland University

Student Authors : Sumit Bandekar,

Faculty Advisors : Gopalan Srinivasan

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 3 1:30 p.m.—2:15 p.m.

Session 3A 163 SFH

#94 Altered phenylephrine (PE)-induced vascular contractility and reduced endothelial function during the on set of renal wrap hypertension

Oakland University

Student Authors : Hind Al-Azawi, Rammy Ishaya, Elizabeth Jacobs, Jeremy Zaluski

Faculty Advisors : Amy Banes-Berceli

#120 Molecular mechanisms of the Synergistic Potentiation Effects of Serotonin (5-HT) and Endothelin-1 (ET-1): involvement of the JAK2 and p42/44 MAPK pathways.

Oakland University

Student Authors : Hind Al-Azawi, Subha Bhaskaran, Jennifer Day, Jeremy Zaluski

Faculty Advisors : Amy Banes-Berceli

Session 3B 164 SFH

#180 IREECE Midterm Presentation: Sleep Apnea Project

Oakland University

Student Authors : Christie Bucklin, Sam Lou

Faculty Advisors : Manohar Das, Osamah Rawashdeh

#139 Evaluation of a STD Knowledge Intervention among College Students

Oakland University

Student Authors : Jennifer Dodt, Brandon Elliott, Michael Gerasimovich, Johnna Lozenkovski

Faculty Advisors : Florence Dallo

#140 A Brief, Educational Intervention Increases Sleep Knowledge among College Students

Oakland University

Student Authors : Kate Adams, Niccole Malone, Jessica Pomaranski, Erin Pyykkonen, Stephanie Vogel,

Maria Dopierala, Ashley Sullivan

Faculty Advisors : Florence Dallo

Session 3C 165 SFH

#15 Timing of Sperm Activation in a Funnel-Weaving Spider (Agelenidae)

University of Michigan - Dearborn

Student Authors : Sabah Gagnon, Samaa Lutfi, Salam Neshewa, Bhumi Patel

Faculty Advisors : Anne Danielson-Francois

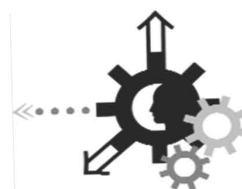
#173 Sperm Competition and Release Patterns in a Funnel-Weaving Spider (Agelenidae)

University of Michigan - Dearborn

Student Authors : Sabah Gagnon, Samaa Lutfi, Salam Neshwait, Bhumi Patel

Faculty Advisors : Anne Danielson-Francois

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 3 1:30 p.m.—2:15 p.m.

Session 3D

166 SFH

#155 New Hampshire's 1st Congressional District

Oakland University

Student Authors : Jordan MacIntosh

Faculty Advisors : David Dulio

#72 Tapping the Political Landscape: The Battle for New Mexico's 2nd Congressional District

Oakland University

Student Authors : Ryan Hundt

Faculty Advisors : David Dulio

#116 Brownfields in Flint, Michigan: A Study of Brownfield Areas using Remote Sensing Techniques

University of Michigan - Flint

Student Authors : Jamie Ward

Faculty Advisors : Maureen Thum

Session 3E

167 SFH

#147 I'm not sure I want to eat... Exploring Juvenile Diabetes and Eating Behavior

University of Michigan - Dearborn

Student Authors : Cassandra Haupt

Faculty Advisors : Diane Oliver

#158 Alcohol Consumption and Drunk Driving Personalized Normative Feedback Intervention Conducted with Freshman College Students

Oakland University

Student Authors : Hillary Bocknek

Faculty Advisors : Michele Purdie

#115 Behavioral Styles & Stress: A Comparison of Behavioral Styles and Stress Over Time

University of Michigan - Dearborn

Student Authors : Sandra Kumm

Faculty Advisors : Roger Loeb

Session 3F

168 SFH

#13 Smoke and Glass: Mirrors, Mystery, and Realism in Dickens's Edwin Drood

University of Michigan - Dearborn

Student Authors : Megan Torti

Faculty Advisors : Erik Bond

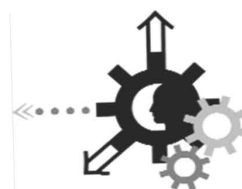
#18 Paratexts in Aphra Behn's Dramatic Works

University of Michigan - Dearborn

Student Authors : Brittany O'Rourke

Faculty Advisors : Erik Bond

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 3 1:30 p.m.—2:15 p.m.

#42 A Partial Translation of Bernard Werber's "Le Rire de cyclope"

Oakland University

Student Authors : Jenna Barnes

Faculty Advisors : Dikka Berven

Session 3G

169 SFH

#79 Un-Christian Christians? Antonio in Richard Rose's vision of Shakespeare's Merchant of Venice.

University of Michigan - Flint

Student Authors : Elizabeth Houbeck

Faculty Advisors : Maureen Thum

#85 The Martin Marprelate Tracts and the Power of Print in Elizabethan England

University of Michigan - Dearborn

Student Authors : Mark Jager

Faculty Advisors : Christopher Petrakos

#129 Willy Shakespeare: Seriously Silly

University of Michigan - Dearborn

Student Authors : Ruthanne Burke

Faculty Advisors : Caitlin Finlayson

Session 3H

170 SFH

#62 Michelangelo in the Margins

Oakland University

Student Authors : M. Joseph Meyer

Faculty Advisors : Sally Tardella

#128 Michael Jackson and the Dance Influence of Bob Fosse

University of Michigan - Flint

Student Authors : Emma Davis

Faculty Advisors : Liz Kattner-Ulrich

#134 "Never to be performed in public": Beethoven's promissory note in the "Quartetto Serioso," op. 95 in f minor, I

Oakland University

Student Authors : Megan Trehwella

Faculty Advisors : Melissa Hoag

Session 3I

171 SFH

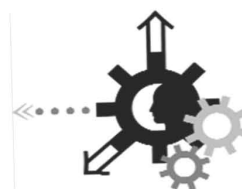
#59 The delusion of stability: Alexander Solzhenitsyn's The Gulag Archipelago.

University of Michigan - Flint

Student Authors : AbdulHaleem Kazmi

Faculty Advisors : Maureen Thum

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 3 1:30 p.m.—2:15 p.m.

#88 The Legacy of a Hero and Legend: King Arthur and British National Identity

University of Michigan - Flint

Student Authors : Desirée Sharland

Faculty Advisors : John Ellis, Maureen Thum

#97 The Ideological Conundrum: The King of Coramantien in Aphra Behn's Oroonoko

Oakland University

Student Authors : Audra Pieknik-Shewell

Faculty Advisors : Brian Connery

Session 3K 173 SFH

#121 Performing Studies an Unending Story...

Oakland University

Student Authors : Matthew Barry, Julie Pete, Alycia Semrau, Matthew Semrau, Tim Williams, Kelly Cain, Ashley

Franso, Nicholas Hooper, Kathleen Lombardo, Eugene Shin. Brian Gassen

Faculty Advisors : Aileen Sundstrom

Session 4 2:30 p.m.—3:15 p.m.

Session 4A 163 SFH

#55 Quality of Life Between African Americans and Caucasians in Flint, Michigan

University of Michigan - Flint

Student Authors : Jessica Sloan

Faculty Advisors : Rie Suzuki

#124 Health and Social Challenges within Tobacco use in Spain

University of Michigan - Dearborn

Student Authors : Kaylyn Stanton

Faculty Advisors : Jorge Gonzalez del Pozo

#133 Usability Profiles at the Urban Health and Wellness Center

University of Michigan - Flint

Student Authors : Tracy Sweeney

Faculty Advisors : Rie Suzuki

Session 4B 164 SFH

#80 Design and Development of a Low Speed Wind Turbine

University of Michigan - Flint

Student Authors : Sam Harwood, Darryl Howard, Ray Kemeer, Don Webber

Faculty Advisors : Quamrul Mazumder

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ORAL PRESENTATIONS

Session 4 2:30 p.m.—3:15 p.m.

#82 Design and Development of a Subsonic Wind Tunnel

University of Michigan - Flint

Student Authors : Saiful Siddique, Aaron Wagel

Faculty Advisors : Quamrul Mazumder

#123 An Oniom Study of the Adsorption of Char Surfaces

University of Michigan - Flint

Student Authors : Kristopher Keipert

Faculty Advisors : Jie Song

Session 4C

165 SFH

#12 Effects of the Marine Algal Toxin Pectenotoxin on the Activity of Various Actin Isoforms

University of Michigan - Dearborn

Student Authors : Suzanne Butler

Faculty Advisors : Michael Twiner

#90 Understanding Variances in Birch Chemical Tolerance between Snowshoe Hare Populations

University of Michigan - Flint

Student Authors : Melissa Babcock

Faculty Advisors : Gerard Paez, Maureen Thum

#101 Interspecies Interaction Between Two Species of New World Monkeys.

University of Michigan - Dearborn

Student Authors : Adam Dewey

Faculty Advisors : Janet Dunn

Session 4D

166 SFH

#172 The Roads of Coba, Quintana Roo, Mexico

University of Michigan - Flint

Student Authors : Taylor Martinez

Faculty Advisors : Beverley Smith

#57 "The price makes almost no sense:" The Effects of Wal-Mart on Labor Conditions and the Environment in Chile

University of Michigan - Flint

Student Authors : Zachary Murphy

Faculty Advisors : Maureen Thum

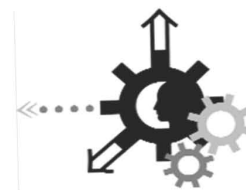
#91 "We are not Myths of the Past": Exploring the Struggle of the Mexican Maya

University of Michigan - Flint

Student Authors : Tara Eason

Faculty Advisors : Maureen Thum

MEETING OF MINDS XIX



ORAL PRESENTATIONS

Session 4 2:30 p.m.—3:15 p.m.

Session 4E 167 SFH

#166 Bankers and Industrialists: A Longitudinal Analysis of Corporate Directors, Network Centrality and Political Contributions between 1983 and 1995.

University of Michigan - Flint

Student Authors : Samantha Honea, Daric Thorne

Faculty Advisors : Roy Barnes

#168 Legal Services Corporation Local Website Analysis

University of Michigan - Flint

Student Authors : Dan Burbar, Michael Whalen Whalen

Faculty Advisors : Dana Dyson, Kathryn Schellenberg

#6 Introducing Lean and Challenging the Status Quo in a University Communications & Marketing Department

Oakland University

Student Authors : Matthew Szczesiul

Faculty Advisors : Mark Doman

Session 4F 168 SFH

#164 Media Portrayal of Detroit

Oakland University

Student Authors : Teresa Dwyer, Bethany Greenhow

Faculty Advisors : Garry Gilbert

#179 A Story To Die For: Mexico's Deadly Triangle of Press, Government, and Drug Cartels

University of Michigan - Flint

Student Authors : Elizabeth LeBlanc

Faculty Advisors : Maureen Thum

#56 Motor City Revival: How Art Can Help Revitalize Detroit

Oakland University

Student Authors : Abby Kalbfleisch

Faculty Advisors : Tamara Jhashi

Session 4G 169 SFH

#53 The Ever-Changing Buddha: Perceptions of Beauty and Their Cultural Influences

Oakland University

Student Authors : Laura Schneider

Faculty Advisors : Claude Baillargeon

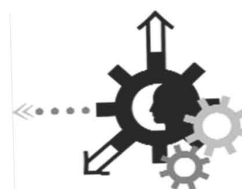
#65 The Spiritual Function of Rock Art in Upper Paleolithic Europe

Oakland University

Student Authors : Jaclyn Kaminski

Faculty Advisors : Claude Baillargeon

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ORAL PRESENTATIONS

Session 4 2:30 p.m.—3:15 p.m.

Session 4H 170 SFH

#41 Texting for the Novelist: The New Genre from Japan

Oakland University

Student Authors : Jenna Barnes

Faculty Advisors : Seigo Nakao

#45 Generational Differences in Facebook Use

University of Michigan - Dearborn

Student Authors : Chris Eggert, Alicia Mattox

Faculty Advisors : Lars Bjorn

#105 "More than Friends": A Content Analysis of Dating Norms in the Media

Oakland University

Student Authors : Marissa Holloman

Faculty Advisors : Jo Reger

Session 4I 171 SFH

#144 Islamic Banking

University of Michigan - Flint

Student Authors : Raghad Rabah

Faculty Advisors : Kenneth Schilling, Maureen Thum

#30 A Year in Academics at Oakland University

Oakland University

Student Authors : Michael Sandula

Faculty Advisors : Holly Gilbert

#114 Perspectives and Opinions on Islam

Oakland University

Student Authors : Samantha Hyrns

Faculty Advisors : Dana Driscoll

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POSTER PRESENTATIONS

Afternoon Session 1:30 p.m.—3:30 p.m.
Across from Café O'Bears—Oakland Center

#5 A Potential Morphological Indicator of Mating System and Sperm Competition in Spiders

University of Michigan - Dearborn

Student Authors : Tina Chaalan

Faculty Advisors : Anne Danielson-Francois

#14 Grammatical Gender in Arabic and English

University of Michigan - Dearborn

Student Authors : Amal Alsamawi

Faculty Advisors : Nitya Sethuraman

#17 Temporal Integration with Dichoptic Stimuli Presentations

University of Michigan - Dearborn

Student Authors : Michelle Evans

Faculty Advisors : Dan Swift

#19 Application of Service Management Techniques to Dining Services at the University of Michigan-Flint

University of Michigan - Flint

Student Authors : Albert Chang

Faculty Advisors : Gregory DeYong

#22 Digging Deeper: Incremental Advances in Divided Attention and Recognition Memory

University of Michigan - Dearborn

Student Authors : Chad Blair, Curtis Dobbs, Jonathan Schick

Faculty Advisors : Arlo Clark-Foos

#23 Accuracy and Confidence in Minimal Groups

University of Michigan - Dearborn

Student Authors : Corina Balan, John McDowell

Faculty Advisors : Robert Hymes

#25 Shut Your Eyes and Sleep

Oakland University

Student Authors : Stephanie Vogel

Faculty Advisors : Florence Dallo

#29 An Introduction to evolutionary psychology and its application to suicide terrorism.

Oakland University

Student Authors : Kim Danner, Shannon McHugh, Tom Size, Nicole Starcher, Jaimie Wall

Faculty Advisors : Todd Shackelford

#32 The Moral Landscape: A Book Review

Oakland University

Student Authors : Jaimie Wall

Faculty Advisors : Todd Shackelford

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POSTER PRESENTATIONS

Afternoon Session 1:30 p.m.—3:30 p.m.
Across from Café O'Bears—Oakland Center

#33 The Interaction of Attachment Insecurity, Alcohol Use, and Depression with Confluence Model Constructs in Sexual Assault Perpetration

Oakland University

Student Authors : David Nguyen, Michele Purdie

Faculty Advisors : Michele Purdie

#43 Should I Stay or Should I Go?

University of Michigan - Dearborn

Student Authors : Patricia Foucher

Faculty Advisors : Ilir Miteza

#44 The Impact Gender Differences have on the Perception of Anorexia Nervosa

University of Michigan - Dearborn

Student Authors : Hanadi Abdallah

Faculty Advisors : Arlo Clark-Foos

#52 Impulsivity and Smoking Initiation

University of Michigan - Flint

Student Authors : Sarah Bond, Toni Dill, Delia Nicholls, Carl Pavlica, Michelle Strickert

Faculty Advisors : Julie Broadbent

#66 Valence in Proverb Interpretation: Are Positive Proverbs Easier to Understand?

Oakland University

Student Authors : Therese Dumas

Faculty Advisors : Deb McGinnis

#67 Identification of AQP9 as selenite and MSA transporter

Oakland University

Student Authors : Thi Bui, Joseph McDermott

Faculty Advisors : Zijuan Liu

#81 Pressure Drop in Single and multiphase Flow in U-Bends

University of Michigan - Flint

Student Authors : Eirc Bailey, James Mckinnon, Joseph Wilkinson

Faculty Advisors : Quamrul Mazumder

#87 Gender Associations in English: A Semantic Priming Study

University of Michigan - Dearborn

Student Authors : Jing Chen

Faculty Advisors : Nitya Sethuraman

#98 Understanding Adolescent Crowd Affiliation: Examining Social Behavior, Relationships, Identity, and the Social Mirror

Oakland University

Student Authors : Jacenta Gabriel

Faculty Advisors : Mary Lewis

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POSTER PRESENTATIONS

Afternoon Session 1:30 p.m.—3:30 p.m.
Across from Café O'Bears—Oakland Center

#104 Red Reality

Oakland University
Student Authors : Alexa Van Vliet
Faculty Advisors : Gladys Cardiff

#106 Undergraduate Epistemological Orientation in Context: Supreme Court Cases

Oakland University
Student Authors : Rachel Long, Veronica Wells, Angela Worrel, Kimberly Zuteck
Faculty Advisors : Deb McGinnis

#107 Effects of Oncology Rehabilitation on Fatigue, Chemobrain, Function, and Pain in Women with Breast Cancer: A Systematic Literature Review

Oakland University
Student Authors : Emilee Bohde
Faculty Advisors : Deb Doherty, Jacqueline Drouin

#112 Hydrogen Production from Organometallic Catalysts: Ligand Substitution of Carbonyls in Cyclopentadienyl dicarbonyl iodide

Oakland University
Student Authors : Sarah Froberg
Faculty Advisors : Greg Felton

#131 Factors Related to Gossip and Verbal Aggression in Females

University of Michigan - Flint
Student Authors : Mike Alnarshi, Andrea Beaulieu
Faculty Advisors : Marianne McGrath

#136 Raman Spectroscopy for Cancer Detection in Frozen Pediatric Tumors: Effects of Freezing/Thawing on Raman Spectra

University of Michigan - Dearborn
Student Authors : Alexander Auner
Faculty Advisors : Ratna Naik, Vaman Naik

#141 The Evaluation of an Education Workshop Designed to Introduce the Elements of Primary Nursing

University of Michigan - Flint
Student Authors : Deborah King
Faculty Advisors : Susan Guzelaydin, Mary Killeen

#146 Are You There God?: Children's Perceptions of Religion and Spirituality

University of Michigan - Dearborn
Student Authors : Fauzieh Dabaja, Alexander Johnson Klein, Sandra Kumm, Vanessa Montemayor, Kristen Nabozny
Faculty Advisors : Diane Graves Oliver

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POSTER PRESENTATIONS

Afternoon Session 1:30 p.m.—3:30 p.m.
Across from Café O'Bears—Oakland Center

#150 How to Read Minds: Improving Interpersonal Reality Monitoring

University of Michigan - Dearborn

Student Authors : Amal Alghami, Michelle Beddow, Curtis, D. Dobbs, Michelle Evans, Eric Wu

Faculty Advisors : Arlo Clark-Foos

#156 Teaching computer networking

University of Michigan - Flint

Student Authors : Takira Powell

Faculty Advisors : Suleyman Uludag

#160 Emergent Theme Analysis of College Student Perceptions of Prosocial Behavior

Oakland University

Student Authors : Hillary Bocknek, Jacenta Gabriel

Faculty Advisors : Mary Lewis

#163 Expression Constructs of Two Ponticulin-Related Genes

Oakland University

Student Authors : Nicholas Collins, Kai Schmidt

Faculty Advisors : Anne Hitt

#167 Perceptions of Geriatric Physical Therapy

University of Michigan - Flint

Student Authors : Christina Sweet

Faculty Advisors : Jennifer Blackwood

#182 The Effects of Body Weight on Sensitivity to Addictive Drugs

University of Michigan - Flint

Student Authors : Delia Nicholls

Faculty Advisors : Julie Broadbent

#183 Design and Development Documents for Locusono iOS Application

University of Michigan - Flint

Student Authors : James Barclay

Faculty Advisors : Joseph Reinsel

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#1 Gustave Le Gray - Brig Upon the Water, c. 1856"

Oakland University

Student Authors : Michelle Lambert

Faculty Advisors : Claude Baillargeon

Abstract : Gustave Le Gray's "Brig Upon the Water" is a fantastic representation of the use of wet collodion negatives to photograph both water and sky at the same time, resulting in a moon-like effect. While the technical efforts underlying the visual success of "Brig Upon the Water" are remarkable, it is the story portrayed in the work that is the most compelling aspect of the photograph. It is a full-sensory, true-to-life respite calling for little interpretation from the perspective of the viewer. Yet, "Brig Upon the Water" also provides a narrative of Le Gray's mindset and life. Le Gray informs the viewer that he is operating at a level far beyond his counterparts. He also offers self-analysis, for just like the Brig operator, he sails the waters of life looking for a less burdensome future, remaining anchored to the turmoil he suffers throughout his career.

#2 Posttraumatic Growth and Perceived Changes in Physical Health: Exploring Events Triggering Lifestyle Change

Oakland University

Student Authors : Jessica Nagorka, Brenton Yanos

Faculty Advisors : Kanako Taku

Abstract : Individuals experiencing trauma may exhibit both positive psychological and physical effects. This positive psychological outcome one experiences after struggling with a traumatic event, also known as posttraumatic growth (PTG), may mediate long-term management of health issues. The present study will be examining the relationships between PTG and perceived changes in physical health. The PTG Inventory is a 21-item scale consisting of five subscales that assess PTG and was given to 443 university students. Items examining physical health were added to assess possible changes in health concerns. It is expected that individuals with the highest scores on the physical health items will have experienced similar traumatic events. The PTGI subscales and physical health items will be used to examine differences in scores between body-related events, such as a serious illness or accident/injury. Possible explanations for varying scores and clinical implications of changes in health perceptions will be discussed.

#3 At What Cost

Oakland University

Student Authors : Sarah Lazarescu

Faculty Advisors : Kellie Hay

Abstract : Scholars of crime television have been working for decades to explain the ways in which it influences audiences. As the most watched medium on commercial television it is reaching thousands of people across the networks, across the country. Of late, terrorism has become one of the most recurring topics within the narratives of shows like 24, Law & Order and CSI and NCIS. As such, controversial policy like the Patriot act are constantly invoked, questioned and legitimized in crime drama. These narratives raise questions such as: what costs are at stake when the public approves of extreme security measures contained within policy like the Patriot Act? Do these shows perpetuate undue anxiety about terrorism and does that anxiety lead us to bypass such critical questions? In the paper that follows I bring together research on crime television, terrorism, and public policy to tease out critical questions about security and civil liberties.

#4 UVA-induced fluorescence as a possible cataract precursor

Oakland University

Student Authors : Catherine Fick

Faculty Advisors : Frank Giblin, Francis Simpanya

Abstract : The role of UVA light in human nuclear cataract formation is not well understood. Irradiation of rabbit eyes in vivo with 365nm light produced a blue fluorescence initially, followed by a yellow fluorescence after one hour. The yellow fluorescence arose mainly from the lens nucleus. Protein analysis of the nucleus via HPLC and SDS-PAGE showed two peaks of yellow fluorescence associated with alpha and lambda crystallins. Peak 1 (alpha) had no significant difference in fluores-

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cence between control and experimental while the experimental was much higher than the control in Peak 2 (λ). UVA-treatment decreased the UVA chromophore NADH by 53% in the nucleus, but by only 13% in the cortex. UVA-induced loss of blue fluorescing NADH may allow yellow fluorescence to be visible, and demonstrates a greater susceptibility of the nucleus to oxidative stress. UVA-induced fluorescence may be a nuclear cataract precursor.

#5 A Potential Morphological Indicator of Mating System and Sperm Competition in Spiders

University of Michigan - Dearborn

Student Authors : Tina Chaalan

Faculty Advisors : Anne Danielson-Francois

Abstract : Sperm competition has been studied in a small fraction of spider species. One indication to see if sperm competition exists among certain spider taxa is to compare the relative sizes of sperm reservoir in males and the sperm storage organs (spermathecae) in females. In our experiment, we collected male and female orb-weaving spiders in the families Araneidae and Tetragnathidae and took various measurements of their body size, patella-tibia ratio, width of the cephalothorax, size of the male palp sperm reservoir, and size of the female spermathecae. To examine the palps of the males, we first expanded the palps with KOH before measuring the width, height, and length of the sperm reservoir. For the females, we dissected the spermathecae and cleared them with 10% KOH making the spermatheca bulb and duct more visible. We compared the size of sperm storage organs in males and females to infer the mating system present: monogamy, polygamy, or polyandry. We controlled for variation in body size across species in our analyses. Spider species with known mating systems and levels of sperm competition were used in the study to determine the effectiveness of the ratio of the palp sperm reservoir and the spermathecae as morphological markers of mating systems and the level of sperm competition present in a species.

#6 Introducing Lean and Challenging the Status Quo in a University Communications & Marketing Department

Oakland University

Student Authors : Matthew Szczesiul

Faculty Advisors : Mark Doman

Abstract : Oakland University's Communications and Marketing Department (OUC&M) serves as the school's in-house advertising agency. This presentation is a case study of the introduction of Lean principles and practices within this University Department. Lean is the performance improvement system developed by Toyota. In November, 2010 OUC&M, with the guidance of an outside consultant, began a "Lean workout". An assessment of work practices was conducted, including the mapping of current work processes, and OUC&M staff defined the Department's "current state". A guiding coalition was selected, Lean production's basic principles were introduced, and the "status quo" challenged while a vision for change was developed. With standardization and a customer-centric focus, a "future state" model was developed, empowering account managers to serve as proactive partners with their clients. This new model reduced steps in the production process by over fifty percent. Metrics were devised to measure progress, including a customer satisfaction tool.

#7 A comparison of special education service among traditional public schools and public school academies

University of Michigan - Dearborn

Student Authors : Athena Kheibari

Faculty Advisors : Joseph Musial

Abstract : A secondary analysis was performed on publicly available data from the Michigan Department of Education. The numbers of school districts serving special education students from 2001 to 2009 were compared among traditional public schools and public school academies within Wayne County, Michigan. The unit of analysis was the school district and five domains were analyzed using a 2x2 chi-square analysis. The five domains were cognitive impairment, emotional impairment, learning disabled, autistic impairment, and speech/language impairment. χ^2 was performed on 41 possible comparisons of which 29 were statistically significant, $p < 0.05$, $df = 1$. Of the statistically significant comparisons, the percentage of traditional public schools that serviced special education students ranged from 88%-100%, while the percentage of public school academies ranged from 15%-86%, respectively. In conclusion, traditional public school districts were more likely to service special education students than public school academies. Further analysis will include mapping the data using geographical information systems.

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#8 Comparative Ionophoric Studies of the Marine Algal Toxin Azaspiracid

University of Michigan - Dearborn

Student Authors : Andrew Rasky

Faculty Advisors : Mark Hamman, Damaris Meujo, Michael Twiner

Abstract : Azaspiracids (AZA), produced by the dinoflagellate *Azadinium spinosum*, are a group of harmful algal bloom toxins that are notable for contaminating seafood. Our interests have focused on determining AZA's mechanism of action. One possible mechanism is that it acts like an ionophore, a molecule that uncontrollably transports ions across the lipid bilayer. In parallel with AZA1, one of the many known AZA analogs, we have performed comparative assays against three known ionophores; gramicidin, monensin, and nigericin. We observed that all four toxins caused time- and concentration-dependent cytotoxicity towards Jurkat lymphocyte T cells. Effective concentrations that induced a half maximal response (EC50) ranged between 1.3-35.5nM for AZA1, 618-3550nM for gramicidin, 816-13100nM for monensin, and 66.5-2220nM for nigericin, when tested at 24h intervals over 72h. Ongoing studies are documenting the morphological effects of these toxins on lymphocyte T cells and future studies will assess the antibacterial properties of these toxins.

#9 Separation and Identification of Flavonoids and Phenolic compounds in Juice, Coffee and Tea Samples

University of Michigan - Dearborn

Student Authors : Ameer Al-Assadi, Vikram Shende

Faculty Advisors : Yiwei Deng

Abstract : In recent years, antioxidants have gained public attention as compounds that neutralize free radicals in human metabolisms as well as aid in the treatments of certain common ailments such as urinary tract infections. They have also gained consumer interest for impeding mutagenesis and carcinogenesis in the metabolism. A common source of anti-oxidants to consumers can be found in commercial fruit juices such as cranberry, pomegranate, apple, and grape juices as well as wine samples. It has also been touted that coffee and tea are rich sources of anti-oxidants when consumed in moderation. In this study, levels of antioxidants, more specifically flavonoids (quercetin, myricetin, Kaempferol, *trans*-Resveratrol, Epicatechin and kaempferol) and phenolic compounds (benzoic acid, salicylic acid, *p*-coumaric acid, gallic acid) in commercially available fruit juices, coffee and tea samples have been studied using High Performance Liquid Chromatography. The identity of each antioxidant was then established and verified using High Performance Liquid Chromatography – Mass Spectrometry.

#10 Nutrition Practices For Students Attending Oakland University

Oakland University

Student Authors : Rachael Reda

Faculty Advisors : Florence Dallo

Abstract : Objectives: The transition from high school to college presents students with many challenges, such as maintaining a healthy diet. The objectives of the current study were to: 1) examine differences in eating behaviors by sex, body mass index, class standing, and living situation, and 2) assess whether students nutritional practices paralleled the food pyramid guidelines. Methods: Using random selection, twenty-two instructors were contacted seeking permission to survey their students prior to the start of class. Two-hundred and ninety-two Oakland University students completed a self-administered questionnaire reporting their eating behaviors during a typical day/week. Results: Thirty-five percent of the sample was male and 61% were lower class. While preliminary studies show no significant differences in eating behaviors between upper and lower class students, the sample overall lacks healthful nutritional practices. Conclusions: After further analysis, we expect to find eating behavior differences by sex, body mass index and living situation.

#11 Parsing Event Pattern Queries

University of Michigan - Flint

Student Authors : Rajesh Chalikonda, Jay Koirala, Vinisha Lokesh

Faculty Advisors : Murali Mani

Abstract : In our project, we investigate techniques for efficient event stream processing, where we detect patterns on incoming streams. There are two challenges in event stream processing which are discussed: ambiguous events and patterns with negation. Ambiguous events are where an event can match multiple query symbols in a pattern. Negation is used in event

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stream processing patterns to specify the non-occurrence of a pattern. Using our techniques, we can construct an efficient deterministic finite state automaton for detecting patterns with any complex nesting of negations over an event stream, which may have ambiguous events. In our research we use JavaCC to read in a user pattern query, and compile it into our internal pattern representation, which is then converted into a deterministic finite state automaton. JavaCC allows us to build a compiler in a short time frame.

#12 Effects of the Marine Algal Toxin Pectenotoxin on the Activity of Various Actin Isoforms

University of Michigan - Dearborn

Student Authors : Suzanne Butler

Faculty Advisors : Michael Twiner

Abstract : Pectenotoxins (PTX) are marine toxins produced by dinoflagellates that accumulate in shellfish, leading to human intoxication. Since preliminary studies have shown that the parent PTX compound targets actin, we have been studying the effects of two analogs of pectenotoxin, PTX-2 and PTX-2 seco acid, on the polymerization and depolymerization of skeletal muscle actin, smooth muscle actin, cardiac muscle actin, and non-muscle actin. An optimized assay based on fluorescently labeled skeletal muscle actin and SDS-PAGE was used to determine the relative amounts of filamentous and globular actin formed during polymerization and depolymerization experiments. Our findings suggest that PTX-2 causes a dose-dependent decrease in both the rate and yield of skeletal muscle actin polymerization, with no significant effects on depolymerization. The inhibitory effects of PTX-2 appear to be conserved towards all other actin isoforms. Inhibitory effects of PTX-2 seco acid on actin polymerization were not observed, suggesting a preliminary structure-activity relationship.

#13 Smoke and Glass: Mirrors, Mystery, and Realism in Dickens's Edwin Drood

University of Michigan - Dearborn

Student Authors : Megan Torti

Faculty Advisors : Erik Bond

Abstract : Mystery itself takes center stage in Charles Dickens's final, unfinished work *The Mystery of Edwin Drood* (1870), a novel often regarded as one of the key examples of the burgeoning genre of detective fiction. Mystery, as I will discuss, is not merely a textual phenomenon disbanded by a novel's denouement, but deeply connected to theories of vision and the ways "reality" often cannot be perceived. At once obsessed with the representation of past events and haunted by the dark, hidden, and often unknowable side of human nature, *Edwin Drood*, irrespective of its fragmented state, is thus a novel which continually eludes the very certainties it seeks to find. Focusing on visuality, especially the mirror, I will argue that the eye is often an anti-visual tool, and that ultimately Dickens' final exploration of mystery within the detective genre forges connections between ideas of uncertainty and Victorian literary realism.

#14 Grammatical Gender in Arabic and English

University of Michigan - Dearborn

Student Authors : Amal Alsamawi

Faculty Advisors : Nitya Sethuraman

Abstract : Research suggests that grammatical gender may influence the way speakers think about nouns. In this experiment we are examining whether native speakers of Arabic are also influenced by the grammatical gender of the noun. Participants are shown pictures of objects, half of which have masculine gender and the other half have feminine gender. Each object is next to a picture of male or female persons. Participants are then asked to rate how similar the object and male or female persons are to see whether there is an association between feminine gender and female persons and vice versa. After completing this portion of the study, participants are asked to look at the pictures of the objects once more and classify each picture as either male or female. Finally, participants are asked to explain why they decided the object was male or female.

#15 Timing of Sperm Activation in a Funnel-Weaving Spider (Agelenidae)

University of Michigan - Dearborn

Student Authors : Sabah Gagnon, Samaa Lutfi, Salam Neshewa, Bhumi Patel

Faculty Advisors : Anne Danielson-Francois

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Abstract : Spiders have an unusual reproductive system in the sense that male sperm remains immobile until activated in the female spermathecae. We examined the timing of sperm activation in the species *Agelenidae pennsylvanica* collected from the University of Michigan-Dearborn. To observe the timing of sperm activation, staged matings were conducted in the laboratory and females were frozen at different time increments after mating. The sperm inside the spermathecae was found to be in several different morphological states including encysted, flagellated, and coiled. We found that females frozen immediately after mating had higher percentages of encysted sperm compared to females frozen at later days. We will also conduct histological sections of the female reproductive organ to localize areas of sperm activation for each time point in the series. This research will be the first to demonstrate the location of activated sperm within the female spider's reproductive tract. A more thorough understanding of sperm activation will help shed light on the unique and understudied reproductive system of spiders

#16 Assessing Degree of Growth with the Posttraumatic Growth Inventory: A Literature Review and Analysis Oakland University

Student Authors : Jessica Nagorka, Lauren Rogers
Faculty Advisors : Kanako Taku

Abstract : The Posttraumatic Growth Inventory (PTGI) is a measure used to assess posttraumatic growth (PTG) defined as positive psychological change experienced as the result of the struggle with major life crises or traumatic events. It is a 21-item scale ranging from 0 to 5. There appears to be discrepancies as to what total PTGI mean score ranges indicate small, moderate and large levels of growth in the existing literature. This study reviews 94 PTGI total mean scores across 86 PTG articles in order to establish whether the criterion for moderate growth reported by other researchers is accurate. Measures of central tendencies for these published mean scores are analyzed using SPSS. Results are discussed to offer guidelines and promote the use of consistent descriptions by researchers and clinicians when reporting degrees of growth achieved by individuals dealing with traumatic events.

#17 Temporal Integration with Dichoptic Stimuli Presentations University of Michigan - Dearborn

Student Authors : Michelle Evans
Faculty Advisors : Dan Swift

Abstract : Di Lollo (1980) found two visual stimuli, separated in time, are temporally integrated, when proportions of overlap of the neural response between the first and second stimulus set are higher than proportions of non-overlap between the two sets. This study examines the degree to which temporal integration occurs at an early level of processing (retinal) versus a later stage (visual primary cortex). Participants completed form part integration tasks that required identification of missing locations, while wearing Liquid Crystal Shutter glasses. While additional data will be analyzed, the current data indicates partial reduction in performance with dichoptic conditions, with notable individual differences. Since integration still occurs in the dichoptic condition, a purely retinal locus can be ruled out. However, since there may be some reduction in performance with dichoptic presentations, contributions of the early visual system cannot be ruled out either, suggesting that temporal integration may occur at multiple loci in the visual system. References Di Lollo, V. (1980). Temporal integration in visual memory. *Journal of Experimental Psychology: General*, 109(1), 75-97.

#18 Paratexts in Aphra Behn's Dramatic Works University of Michigan - Dearborn

Student Authors : Brittany O'Rourke
Faculty Advisors : Erik Bond

Abstract : This paper addresses the dramatic works of Restoration author Aphra Behn, specifically focusing on the function of prologues, epilogues, notes to the reader, and other paratexts associated with her published plays. It responds to previous literary critics that have argued that these texts serve a very limited function in the understanding of Restoration drama, while addressing the current trend of readers and scholars to marginalize these aspects of the texts. My paper will argue, through the close reading of the paratexts associated to Behn's plays, specifically those tied to *Sir Patient Fancy*, *The Dutch Lover*, and *The Rover*, that these texts serve as a means to reveal authorship and literary criticism in the genre, both for audience members are readers of the published text.

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#19 Application of Service Management Techniques to Dining Services at the University of Michigan-Flint University of Michigan - Flint

Student Authors : Albert Chang
Faculty Advisors : Gregory DeYong

Abstract : Due to the student comments, the need to evaluate Dining Services at the University of Michigan-Flint has become apparent. As a student and member of the Dining Services Advisory Committee, I have taken the initiative to apply classroom knowledge to benefit the campus community. The goal of this project is to use service management techniques such as service blueprinting, SERVQUAL, and GAPM to determine the areas that need improvement and make recommendations that will be implemented to benefit both the Dining Services and the Students at the University of Michigan-Flint.

#20 Pressure Drop in Single and multiphase Flow in U-Bends University of Michigan - Flint

Student Authors : Eric Bailey, James McKinnon, Joseph Wilkinson
Faculty Advisors : Quamrul Mazumder

Abstract : The pressure drop in a 180 degree radial U-bend with 12.7, 9.5, and 6.3 mm pipe with radius to inner diameter (r/D) of 1.5 and 3.0 were investigated. The test section consists of clear PVC pipe, a 25 gallon per minute (GPM) pump, differential pressure gauge, and a compressor. To assure fully developed flow, 1.5 meters of pipe section was used upstream of the U-Bend. Effect of pipe diameters and r/D ratios on pressure drops were compared to calculated values and empirical data available in the literature. With smaller r/D ratios increase in frictional loss is expected to create a larger pressure drop due to the secondary flow induced by the centrifugal force.

#21 Post-Starburst Quasars: The Missing Link in Galaxy. The Story Continues... University of Michigan - Flint

Student Authors : Shonda Townsend
Faculty Advisors : Rajib Ganguly

Abstract : Over the past two decades, astronomers have discovered that every massive galaxy in the universe harbors a black hole at their cores that are millions to billions times the mass of our Sun. These beasts must be grown, and that growth process appears to be linked to the evolution of the host galaxy. In the story of this co-evolution, we are studying objects – called post-starburst quasars - that show simultaneously active growth of the supermassive black hole, and massive amounts of star-formation. We have gathered data on these objects from the ultraviolet to the infrared using data from the Sloan Digital Sky Survey, the Galaxy Evolution Explorer, and the 2 Micron All Sky Survey. With this data set, we are using models to investigate the relationships between the growth process and the star-formation process, and the role these objects play in the story of galaxy evolution.

#22 Digging Deeper: Incremental Advances in Divided Attention and Recognition Memory University of Michigan - Dearborn

Student Authors : Chad Blair, Curtis Dobbs, Jonathan Schick
Faculty Advisors : Arlo Clark-Foos

Abstract : In one experiment we further examined the relationship between attention and recognition memory (Craig, Govoni, Naveh-Benjamin, & Anderson, 1996). In particular, we were interested in how source monitoring and inferred recognition measures would be affected by division of attention by Random Number Generation (RNG). Participants studied forty words visually and also heard the words spoken over speakers by a male or female. Source recognition tests revealed a dramatic effect of divided attention, evidenced by a large reduction in both inferred recognition and source memory for participants engaging in RNG during study. We will discuss the impact of our results on existing models of memory (e.g., Search of Associative Memory model; Raaijmakers & Shiffrin, 1981) as well as offer suggestions for improving study habits.

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#23 Accuracy and Confidence in Minimal Groups

University of Michigan - Dearborn

Student Authors : Corina Balan, John McDowell

Faculty Advisors : Robert Hymes

Abstract : This study combines the social cognition paradigm developed by Ickes et al. (1986) with a minimal group's procedure to examine individuals' confidence and accuracy in responses among in-group versus out-group association. Participants completed a dot-estimation task, in which same sex dyads were categorized into one of three conditions: over-estimator/over-estimator, over-estimator/under-estimator, or non-categorized. After rating their initial impressions of over-estimators and under-estimators, participants were asked to converse for three minutes while being video recorded. Participants then watched the video and wrote down five thoughts and feelings they had during the conversation. Afterwards, participants viewed the video a second time as it was paused at the time of their partner's thoughts/feelings. Each time the video was paused participants were asked to make inferences about the specific thought/feeling their partner had as well as their own confidence in their inferences. It is anticipated that in-group members will be more confident and accurate in their inferences than out-group members.

#24 Geryon's Picture Book: Modes of Self-Definition in Autobiography of Red

Oakland University

Student Authors : Alexandra Allen

Faculty Advisors : Gladys Cardiff

Abstract : "Geryon's Picture Book: Modes of Self-Definition in Autobiography of Red" explores the meta-textual relationship between Stesichoros' Geryoneis, his palinode to Helen of Troy, and Carson's Autobiography of Red. Androcentric Greek texts have historically framed Helen and the Greek monster Geryon as threats to society. The appendices to Carson's narrative reference the original degradation of both characters and their similar evocation of Julia Kristeva's theory of abjection. In my essay, I examine Geryon's transition from mythic beast to anthropomorphized artist and Helen's transition from whore to female authority figure. Carson empowers the abject position by allowing Geryon's subjective perceptions, as a homosexual autobiographer, to disturb both classical and contemporary assumptions about his identity. Ultimately, the autobiography subsumes both Stesichoros' and Carson's authorial status by inventing the possibility of Geryon's life beyond their texts.

#25 Shut Your Eyes and Sleep

Oakland University

Student Authors : Stephanie Vogel

Faculty Advisors : Florence Dallo

Abstract : **Objective:** To assess whether there is a significant difference in sleep patterns between working adults who are care givers versus administration employees and to increase their knowledge on the harmful effects of sleep deprivation.

Methods: Employees (N = 57) at a nursing home facility in southeast Michigan completed a pre-test and short survey describing their sleep patterns. Then a fifteen minute informational presentation was given. Lastly, the employees completed a post-test. **Results:** Eighty-two percent of the population was female, with an average age between 36 and 45 years. The average amount of sleep participants reported to receive is less than the recommended amount of sleep by 30 minutes.

Conclusions: Based on these preliminary results, it is anticipated that participants will increase their knowledge on the negative effects of sleep deprivation.

#26 False Memories for the Source of Natural and Artificial Words

University of Michigan - Dearborn

Student Authors : Chad Blair

Faculty Advisors : Arlo Clark-Foos

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Abstract : Abstract : We investigated the influence of linguistic biases on memory for the source of words. Nouns from natural (e.g., *tree*) and artificial (e.g., *building*) categories were spoken by either a male or female. Our goal was to see whether participants would falsely remember new items as having been spoken by a male or female, consistent with the bias for their semantic category. It was for this reason that we also included a divided attention condition (i.e., Random Number Generation) to reduce learning to floor levels where participants may be more inclined to falsely recognize a word as old or falsely attribute the source of that word. Our data support this hypothesis insofar as when new items are falsely called old, they are more often attributed to the source that would be consistent with their semantic category.

#27 Nefertiti: An Amarna Queen Oakland University

Student Authors : Kendra Fissette
Faculty Advisors : Claude Baillargeon

Abstract : Nefertiti: An Amarna Queen The Egyptian Queen Nefertiti played a crucial role in religious, domestic, and political positions during her husband's reign of the Amarna period (ca. 1352-1336 B.C.). Her husband, Akhenaten, changed Egypt's polytheistic religion to a monotheistic religion. The new religion provides a glimpse into Nefertiti's important role alongside Akhenaten. In the religious realm, Nefertiti held a unique role in the worship of the new god. The most revealing are the examples of Nefertiti as the main worshiper of Aten. For centuries, worship of the gods was a king's role. By assuming this role, Nefertiti established herself as an equal counterpart to Akhenaten. In addition, family representations indicate that Nefertiti was more than an average queen. The family scenes provide an intimate look into the life of the royal family. Lastly, in a political scene of Nefertiti smiting an enemy, she again acts in the role of pharaoh.

#28 American Literature and the Penny Press Oakland University

Student Authors : Shannon Cooley
Faculty Advisors : Jeffrey Insko

Abstract : My presentation will focus on a form of journalism popular in the mid-19th century, which is commonly referred to as the penny press. The term penny press refers to a type of newspaper targeted at middle and lower class Americans, who could not afford the more expensive papers. The papers categorized as the penny press featured stories that would interest the lower class workers, featuring topics regarding crime, tragedy, and neighborhood gossip. My project explores the sensational stories featured in the penny press, and the relations between this sort of mass media publication and what we now consider fine literature. I plan to also take into account the societal changes that brought about the penny press newspapers, as well as discuss why their stories were influential to authors such as Walt Whitman and Herman Melville.

#29 An Introduction to evolutionary psychology and its application to suicide terrorism. Oakland University

Student Authors : Kim Danner, Shannon McHugh, Tom Size, Nicole Starcher, Jaimie Wall
Faculty Advisors : Todd Shackelford

Abstract : This article introduces evolutionary psychology to a general readership, with the purpose of applying evolutionary psychology to suicide terrorism. Some of the key concepts related to evolutionary psychology are discussed, as well as several misconceptions associated with this approach to psychology. We argue that one of the primary, but insufficient, motivating factors for suicide terrorism is strong religious belief. Evolutionary psychological theories related to religious belief, and supporting empirical work, are described, laying a foundation for examining suicide terrorism. Several promising directions for future research on suicide terrorism from an evolutionary psychological perspective are highlighted, particularly within the theoretical framework of kin selection, and the implications of applying evolutionary psychology to suicide terrorism are discussed.

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#30 A Year in Academics at Oakland University

Oakland University

Student Authors : Michael Sandula

Faculty Advisors : Holly Gilbert

Abstract : My presentation asks, What happens in an academic year at Oakland University? My main two topics are grades and money. What is the average grade at OU, and what does that grade represent? How many students graduate? How many withdraw from classes, and how much money is spent on W grades? Those are examples of a few of the questions I will answer. The report will have been published in The Oakland Post, and, in line with an independent study I am taking on investigative journalism, I will also explain my research methods and how I investigated the story.

#31 The Bard and the Director: Orson Welles Adapts Shakespeare for the Screen

University of Michigan - Dearborn

Student Authors : Sara Walters

Faculty Advisors : Caitlin Finlayson

Abstract : Orson Welles, acclaimed film director, producer and actor, tackles the works of Shakespeare, drastically adapting "The Tragedy of Macbeth" and "Othello, the Moor of Venice" for the silver screen. Welles takes many liberties, rearranging dialogue and scenes, and reducing or creating characters, to draw attention to the psychological breakdown of the antagonistic anti-heroes Macbeth and Othello. This paper will introduce Welles's intentions for film adaptation, primarily to introduce Shakespeare to the masses in an inexpensive and easily accessible format. Welles, however, also considered both films "experiments," and attempted to prove with each production that quality films could be made with limited budgets. Though each film was a grand undertaking by Welles, both productions suffer from a lack of cohesive vision by a distracted, over-worked director.

#32 The Moral Landscape: A Book Review

Oakland University

Student Authors : Jaimie Wall

Faculty Advisors : Todd Shackelford

Abstract : In his 2010 book *The Moral Landscape*, Sam Harris asks: Can science determine morality? Harris takes an axe to the argument that one cannot make moral claims derived from a scientific understanding of human and animal well-being. He clearly demonstrates how a better understanding of science can bridge the gap between human values, moral questions, and scientific answers. Harris postulates that moral relativism is not just false, it is dangerous. By explaining how human actions are rooted in something much deeper than culture—our evolved psychology and neurobiology—we can answer questions about how to maximize human and animal well-being. Where to begin? Harris says, "Only a rational understanding of human well-being will allow billions of us to coexist peacefully... A science of human flourishing may seem a long way off, but to achieve it, we must first acknowledge that the intellectual terrain actually exists"

#33 The Interaction of Attachment Insecurity, Alcohol Use, and Depression with Confluence Model Constructs in Sexual Assault Perpetration

Oakland University

Student Authors : David Nguyen, Michele Purdie

Faculty Advisors : Michele Purdie

Abstract : Sexual aggression is a widespread problem across college campuses, with some studies finding rates as high as 61% (Wheeler et al., 2002). The Confluence Model is currently the most widely used model for predicting sexual assault (Malamuth et al., 1991). The model hypothesizes that men who experience childhood abuse tend to display higher degrees of hostile masculinity and impersonal sex, which lead to an increased propensity to perpetrate sexual assault. Recent evidence indicates that attachment insecurity may also be a predictor of perpetration (Smallbone & Dadds, 2001); however, little

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research has investigated attachment in the context of the Confluence Model. Using a sample of over 125 men, the current study examined the role of attachment avoidance, alcohol use, and history of depression in sexual aggression, as each has demonstrated relationships with more traditional Confluence Model constructs. Conclusions drawn from this assessment may be used to inform prevention and intervention programs.

#34 War on Crime: The Effect of Public Enemy Number One on the Economy

University of Michigan - Flint

Student Authors : Ellyn Ackerman

Faculty Advisors : Paula Nas

Abstract : Although the Great Depression was the major influence of the 1930s, there were many events that shaped economic thought. One of these events was Franklin D. Roosevelt's War on Crime, which swept across the nation from early 1933 to mid 1934. Spearheaded by John Edgar Hoover and a little known branch of the Justice Department, which later became known as the Federal Bureau of Investigation, the War on Crime was a symbolic war against the forces that had imperiled the American economy. Although well known for the cultural effects, the War on Crime has not often been investigated for what economic effects it had on the United States. In addition to evaluating the effect of outlaws on the economy, a closer look must be taken at the Chicago Mob and gangster style crime. This paper allows an investigation into the larger implications of the criminal aspect of the Great Depression.

#35 The L Words: Latina and Lesbian, Lesbian Representation in a Spanish Soap Opera

Oakland University

Student Authors : Alesha Brown

Faculty Advisors : Jo Reger

Abstract : Drawing on the concept of intersectionality, I investigate how the media conveys the experiences of Latina lesbian women. My research is based on a content analysis of the internationally known, long-running Spanish language television series, Hospital Central. This study contributes to our understanding of the images of lesbians portrayed to a Spanish speaking population.

#36 E. T. A. Hoffmann's Heroines: the Representation of Female Characters in "Der goldne Topf" and "Der Sandmann"

Oakland University

Student Authors : Nolan McClain

Faculty Advisors : Christopher Clason

Abstract : Through an analysis of women in E.T.A. Hoffmann's works, "Der goldne Topf" and "Der Sandmann", the role of Hoffmann's female character is defined by her instrumentality in either promoting or hindering the male artist's work. Parallels are present between the functionality of female characters in "Der goldne Topf" and "Der Sandmann", specifically, between the realm of that character's existence, either reality or fantasy, and her contribution to or impediment of the hero's art. The above themes, among others, will be discussed in my analysis of these two Romantic works.

#37 Glorious Culinary Traditions: The Origins of French Cuisine and its Adaptability in a Global World

Oakland University

Student Authors : Candice Yono

Faculty Advisors : Dikka Berven

Abstract : France has long had a reputation as the cuisine capital of the world, renowned for its delectable dishes, scrumptious sweets, and excellent wines. As early as the seventeenth-century, France had acquired fame for its food along with its fashion, luxury living, and culture. Today, the French still bask in their culinary glory, enjoying lengthy meals composed of fresh foods from local markets. Yet France was not always the home of fine feasts. Like many glorious reputations, French cuisine had its own humble beginnings that developed throughout the ages. In today's global world, however, French cuisine and its many rituals may be in decline. Fast food chains and fast-paced lifestyles abound in an increasingly globalized world,

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even in countries with a rich culinary history. This paper aims to investigate how French cuisine earned its reputation, and the problems it may face from an expanding fast food industry.

#38 Shaping the Individual: How Skills Influence Wages

University of Michigan - Dearborn

Student Authors : Parul Luthra

Faculty Advisors : Bruce Pietrykowski

Abstract : A key issue on agendas all over the nation has been employment opportunity and job quality. The issue has existed for years by attempting to investigate methods in which we can reach full employment, while recently it has focused on reducing high rates of unemployment. As a result, a new light has been shed on education, and further down the tunnel- job retraining programs, for which the success is not well known. Thus, before we set out to make policies that are pro-education or pro-job training, it is important to indicate the skills characteristics of jobs. This study will do so by performing statistical and econometric tests on wages and skill composition of various jobs to understand how skills influence employment decisions, which in this case wages are used to gauge the impact

#39 Origametry

University of Michigan - Dearborn

Student Authors : Jacqueline Sisto

Faculty Advisors : Chris Novak

Abstract : The ancient art of folding paper is much more than just art. Recently, people have begun to look at the mathematical theory behind the folding. There are seven origami axioms that account for every fold possible. Some of these axioms can be directly tied to the Euclidean axioms used for straight edge and compass constructions. However, there are constructions that are possible from folding paper that cannot be achieved using straight edge and compass. For example, it is impossible to trisect an angle using a straight edge and compass, but this is extremely easy to achieve using origami. The mathematical theory of origami can be applied not only to art, but also to industrial design and more. Origami can provide extremely efficient and relatively simple solutions to the real world.

#40 Do children think that psychological mood states affect nutritional choices?

Oakland University

Student Authors : Caitlin Kleist

Faculty Advisors : Lakshmi Raman

Abstract : The goal of this study was to determine whether children believe that psychological mood states affect food choice and consumption. Preschoolers, second, fourth, and sixth graders and adults were read vignettes that described two characters-- one in a positive mood and the other in a negative mood. Participants were asked which character would eat more or if they would eat the same. Participants were asked to justify their responses and asked if the character would choose healthy and/or unhealthy foods. Results demonstrated that preschoolers and second graders believed that having a positive mood states were significantly related to food choice. Fourth and sixth graders believed that both positive and negative mood states influenced how much the person ate. Interestingly, adults thought that negative mood states greatly impacted the amount of food the person would eat. This suggests a cross-domain interaction between the psychological and biological domains.

#41 Texting for the Novelist: The New Genre from Japan

Oakland University

Student Authors : Jenna Barnes

Faculty Advisors : Seigo Nakao

Abstract : Japan has recently added a new twist to literature called the cell phone novel. Websites have developed which allow people to upload novel installments via text-messaging. The messages are compiled into long stories with even 300

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pages. Once submitted, they are available for instant viewing by readers through websites and text messages, and some stories are popular enough to be published as a physical novel. In 2009 this literary style came to America along with new opportunities for aspiring authors. Text-novels are also redefining literature because of the nature of their creation, where this style of writing is more spontaneous, and because of a change in writing format. The writing medium encourages the use of abbreviations and the incorporation of mobile phone conventions such as emoticons.

#42 A Partial Translation of Bernard Werber's "Le Rire de cyclope" Oakland University

Student Authors : Jenna Barnes
Faculty Advisors : Dikka Berven

Abstract : "Why do we laugh? ... And so he read the sentence, burst out laughing and died!" As part of the translation requirements for an independent French translation course, I have translated part of the novel "Le Rire du Cyclope" or "The Laugh of the Cyclops" from French into English. In working on this translation, I came across a number of interesting difficulties with the text that needed to be managed and a number of choices that needed to be made. Even the title is such an example as there are the differences in "The Laugh of the Cyclops" and "The Cyclops' Laugh," which need to be compared. This submission is a translation work in progress of a very humorous and rich text, which is otherwise currently inaccessible to non-French speakers. The source work was written by Bernard Werber and published by Albin Michel in 2010.

#43 Should I Stay or Should I Go? University of Michigan - Dearborn

Student Authors : Patricia Foucher
Faculty Advisors : Ilir Miteza

Abstract : The recent sovereign debt crisis in the Euro area has created questions about the sustainability of the European Monetary Union. Of all the so called "PIIGS" of Europe (Portugal, Italy, Ireland, Greece and Spain), Greece has the highest debt burden as well as astronomical deficits in both the trade balance and government finance. How then, does a country escape such a mess? Is an escape from the euro a viable means of shifting the balance of trade and perhaps regaining a handle on the debt, or do the benefits of staying in the euro outweigh the costs? This paper carefully examines the likely consequences of either decision, examining the research and making the case that leaving the euro isn't a perfect solution, and that, in fact, Greece is better off remaining a member of the European Monetary Union after all.

#44 The Impact Gender Differences have on the Perception of Anorexia Nervosa University of Michigan - Dearborn

Student Authors : Hanadi Abdallah
Faculty Advisors : Arlo Clark-Foos

Abstract : The present study examined whether gender had an effect on classifying an individual with Anorexia Nervosa. Thirty participants were presented with pictures of a male and female of similar weight and appearance, and were asked which of the two they would classify as having an eating disorder. We found a nonsignificant crossover interaction in the data such that male participants classified females as more likely to have the eating disorder and female participants classified males as more likely to have the eating disorder, and they did at equivalent rates. A Pearson Chi-Square was conducted to analyze for differences in classification but the result was nonsignificant, $\chi^2 = 1.2$, $p > .05$. We are confident with more participants our obtained difference may have been statistically significant. These findings along with previous research suggest that while males are more likely to deem females as Anorexic, the reverse is true for female participants.

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#45 Generational Differences in Facebook Use

University of Michigan - Dearborn

Student Authors : Chris Eggert, Alicia Mattox

Faculty Advisors : Lars Bjorn

Abstract : The increased prevalence of social networking sites, or SNS, has led to a changing social landscape, with the average individual having a greater number of social contacts but fewer close relationships. While many studies have been done on the impact of internet usage in the general population, and on how young adults and adolescents use SNS, little has been done to explore the generational differences between users. This study aims to examine these differences by analyzing Facebook users. Participants from four generations took part in open-ended interviews. Questions included why different generational groups join social networking sites and how their usage differs based on age. The implications of this research suggest that older adults are more likely to have fewer but closer relationships, while younger users are more likely to have a larger network of casual acquaintances.

#46 The Blame Game: Priming for the Poor Stereotype and the Effects of the Belief in a Just-World on the Assignment of Responsibility

University of Michigan - Flint

Student Authors : Kathryn McAlindon

Faculty Advisors : Hillary Heinze

Abstract : The purpose of the following study was to assess whether the activation of a prime associated with the poverty class would influence the application of a just-world belief. M.J. Lerner (1966) proposed that people need to feel as though the world around them is fair and just by means such as labeling those in a misfortunate situation accountable for their own suffering. Participants in this study were either primed with a stereotype of the poor or not primed at all and then instructed to rate two ambiguous photos depicting people in misfortunate situations. They were asked to determine to what degree each person deserved to be in that situation. It was predicted that those in the poor prime group would be more likely to label the targets as deserving of his or her situation. In this study, the analyzed data displayed significant results and the prediction was supported.

#47 Apparel Vs. Pharmaceuticals: Comparison of Counterfeit Products Seized in Major Ports of the United States.

University of Michigan - Flint

Student Authors : Juana Francesca Rodriguez

Faculty Advisors : Gregory Deyong

Abstract : The manufacture and sales of counterfeit products is an increasingly serious concern in international trade markets. More than six hundred billion dollars worth of counterfeited goods are sold each year worldwide. In 2009, US Customs confiscated more than 260 million dollars worth of counterfeited products trying to enter the country. Clothing and pharmaceutical industries are two industries in the US that are highly affected by these counterfeited goods. This study will compare and contrast the amount of clothing and pharmaceutical goods entering at major ports/ states in the country.

#48 Dimensional Complexity of Love Schemas

University of Michigan - Dearborn

Student Authors : Amanda Bills, Jessica Godfrey, Valerie Smith

Faculty Advisors : Robert Hymes

Abstract : This study examines the dimensional complexity with which individuals conceptualize love, with an emphasis on gender differences. Dimensional complexity is the number of dimensions that are needed to encompass a concept; in this case, the concept of love. Participants are asked to categorize various dimensions of love according to their own schemas of love, using a card-sorting task. Participants receive a set of cards with one statement from the Love Attitudes Scale (Hendrick & Hendrick, 1986) on each card, and are asked to sort these cards into groups that belong together. Participants

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are also asked to sort the cards the way they think most males and females would. The number of cards placed in each category indicates the dimensional complexity of each person's schema. In particular, the research aims to uncover any differences in complexity based upon gender or adherence to traditional gender roles.

#49 The Conceptualization of Contradiction Theory

Oakland University

Student Authors : Kathrine Curran
Faculty Advisors : Jo Reger

Abstract : This presentation develops the contemporary feminist theory of contradiction. I explore how contradiction emerges in various social theories, and how through analysis of third wave anthologies three specific patterns of contradiction emerge: contradiction of identity, contradiction of emotion, and contradiction of behavior. These types of contradictions reveal the complexity of human identity, and challenge identity politics that are over simplified. Contradiction theory argues that we are never one thing rather we are a constant flux of contradicting identities, ideas and emotions.

#50 Art of the Third Reich: Enforcing Nazi Ideology

Oakland University

Student Authors : Veronica Litzan
Faculty Advisors : Tamara Jhashi

Abstract : The totalitarian control of the Nazi party, along with the purification of the German people, is a topic often discussed in history, but this topic also extends to the art world. The Nazi Party found the artistic movements that preceded WWII, including German expressionism and Dada, dangerous to the ideologies surrounding the Party. If these artistic movements undermined the beliefs behind National Socialism, then the political movement could not thrive and succeed. Therefore, the Third Reich found it imperative to include the purification of the arts in their control of Nazi Germany. The art they chose to present to Germans reflected the fundamental aspects of Third Reich society: beauty, heroism, community over the individual, and racial purity.

#51 Mother-Child Interaction

Oakland University

Student Authors : Kaitlyn Grangood, Alessa Perkins
Faculty Advisors : Lakshmi Raman

Abstract : This study investigates the kind of input mothers give their children about eating a variety of healthy and unhealthy foods. Thirteen mother-child pairs were audio taped while reading and discussing a short story about eating healthy and unhealthy foods on a short-term and long-term basis. Throughout the story, children were asked by their mothers if they thought certain foods were healthy or unhealthy for them and why they thought they were healthy or unhealthy. The entire testing session took about thirty minutes to complete. Findings from this study will help us understand where and what types of input children get from their mothers about the impact of eating healthy and unhealthy foods.

#52 Impulsivity and Smoking Initiation

University of Michigan - Flint

Student Authors : Sarah Bond, Toni Dill, Delia Nicholls, Carl Pavlica, Michelle Strickert
Faculty Advisors : Julie Broadbent

Abstract : This study was conducted to test the hypothesis that participants scoring higher in trait impulsivity would also have higher correlation with smoking initiation. Current literature on nicotine dependence has focused primarily on cessation and relapse. Present study aims to investigate the mechanism of nicotine initiation and its possible connection to individuals who are found to show more impulsive behaviors. One hundred students from the Principles of Psychology class at the University of Michigan-Flint were surveyed to determine their impulsivity traits and smoking behaviors. The Barratt Impulsivity Scale was used to measure impulsivity traits. The self-report smoking inventory was created specifically for this research and was

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used to obtain smoking behavior demographics such as age, gender, and ethnicity. The data obtained was analyzed using SPSS and cross-examined to demonstrate the strength of any correlation. Our findings indicate a necessity for extensive nicotine prevention programs.

#53 The Ever-Changing Buddha: Perceptions of Beauty and Their Cultural Influences

Oakland University

Student Authors : Laura Schneider

Faculty Advisors : Claude Baillargeon

Abstract : The Silk Road, which began approximately 206 B.C.E., carried culture as well as goods, specifically the Greek Hellenistic style, which influenced Indian cultural perceptions of beauty. This is seen when comparing the Mathuran and Gandharan statues of Buddha. These statues are a fascinating reflection of the influence that cultures have upon each other, for their history begins prior to the opening of the Silk Road. What was changed in the statues because of the Silk Road? The Indian style of Mathuran art drew heavily from ancient yogic models and ideals emphasizing spiritual beauty. As Greek thoughts of beauty merged with Indian ideals, the style of Gandharan was created, emphasizing physical beauty. By merging these two ideals, this new art was able to achieve a beauty of the whole entity. This was made possible only by the meeting and mingling of people and their ideals along the Silk Road.

#54 Feminism Lives! Fat Activism on the Internet

Oakland University

Student Authors : Emily Eisele

Faculty Advisors : Jo Reger

Abstract : Despite frequent declarations that feminism is dead, it is in fact alive and well—especially in the fight against sizeism. All over the internet, bloggers are resisting patriarchal taboos against living comfortably in a body that does not fit the thin and white beauty ideal. They are making fat a feminist issue. How does this translate to feminist activism? How does this translate to real world change for women and girls? This presentation will give an overview of the various goals and focuses of the contemporary feminist movement, and identify the lively community of feminist activists working in the fat acceptance movement on the internet.

#55 Quality of Life Between African Americans and Caucasians in Flint, Michigan

University of Michigan - Flint

Student Authors : Jessica Sloan

Faculty Advisors : Rie Suzuki

Abstract : Older adults evaluate themselves as having a low quality of life, which can be attributed to the increase risk of chronic disease. The experience of chronic disease can be reduced by physical activity. The adoption and maintenance of physical activity is closely related to self-efficacy. The purpose of this study is to identify possible contributors to quality of life in the older population between African Americans and Caucasians. Survey were given at senior centers in Flint and responses were analyzed using descriptive statistics. The 66 participants ranged from 56-93 with a mean age of 72.52. The majority was retired (91%) African American (53%) female (68%) graduated from high school or less (31%), lived alone (55%) and used SSDI (29 %). Mean differences in quality of life will be examined by the analysis of covariance and the proportion will be assessed by chi-squares. Findings can be used in future program development.

#56 Motor City Revival: How Art Can Help Revitalize Detroit

Oakland University

Student Authors : Abby Kalbfleisch

Faculty Advisors : Tamara Jhashi

Abstract : Detroit is a city with endless possibilities. A strong sense of art and entrepreneurship has characterized the Detroit community. The spirit of entrepreneurship and opportunity help to make the city an ideal location for artists to take up resi-

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dence and work in Detroit. Through the support and promotion of art and through community efforts Detroit can be revitalized and prosper once again. How can art revitalized Detroit? It provides new industry, jobs, patrons, and tourism; all of which contribute not only economically also but culturally as well to provide a better sense of well being within the community. Artists, community members, patrons, institutions, museums and galleries can help revitalize a declining city. A societal investment in the arts will produce an increase in the social-economic well being of the Detroit community and the greater metropolitan area. Detroit, the great post-industrial city, has the opportunity and the potential to reinvent itself.

#57 "The price makes almost no sense:" The Effects of Wal-Mart on Labor Conditions and the Environment in Chile

University of Michigan - Flint

Student Authors : Zachary Murphy

Faculty Advisors : Maureen Thum

Abstract : In America, most issues of labor and environmental regulations have been dealt with. However, this has not happened in every country, such Chile. Although it is a modern country, the industrial workers as well as the environment have been put into a dire situation caused by the entrance and proliferation of foreign corporations into the country's export sector, such as the Atlantic salmon farming industry. The dramatic emergence of the salmon industry is caused by large international corporations, such as Wal-Mart, purchasing large quantities of salmon. These companies gain enormous power over the Chilean companies and demand continual price cuts. These reductions in prices most often come from the Chilean workers through reductions in labor standards and environmental standards. This violation of worker's rights and environmental standards by Chilean companies can be stopped by consumers putting pressure on the companies like Wal-Mart to encourage decent working standards and environmental protections.

#58 Bicultural Identity in Arab American College Students and Its Relation to Perceptions of Parenting

University of Michigan - Dearborn

Student Authors : Jing Chen

Faculty Advisors : Jane Sheldon

Abstract : Biculturalism refers to individuals' sense of dual or even multiple cultural identities, which includes their values, beliefs, and knowledge related to their minority status, personal experiences, and family connections. The present study concerns Arab-American students' bicultural identity formation and how it relates to their perceptions of parenting. This study utilizes two methods: 1) a series of validated questionnaires to obtain subjective self-reports of bicultural identity and perceived parental control; and 2) an objective measure of bicultural identity using the implicit association task. We expect to find that Arab-American students who have a stronger identification with American culture will perceive the type of parental control that they receive from their parents as unfavorable, whereas the Arab-American students who have a stronger identification with Arab culture will perceive the type of parental control from their parents as favorable. Of additional interest is the relation between objective and subjective measures of bicultural identity.

#59 The delusion of stability: Alexander Solzhenitsyn's The Gulag Archipelago.

University of Michigan - Flint

Student Authors : AbdulHaleem Kazmi

Faculty Advisors : Maureen Thum

Abstract : "Imagine a weak little calf butting his head against a huge, immovable oak tree, naïvely thinking he could knock it down" (Ericson). Realizing his weakness as a single man against a giant world power, Alexander Solzhenitsyn took a different route than the normal revolutionary leaders. He utilized his talents with the pen and began to expose the hollow interior of the world's greatest superpower. And perhaps his most phenomenal work that impacted the course of history was "The Gulag Archipelago" published in 1973 in the West. The book based on the factual elements of his life spent in the Soviet labor camps outlines the initiation, and the development of soviet camps known as Gulags, along with their living conditions. The publication of this book in the west caused a serious blow to the image of the Soviet Union, subsequently questioning the entire moral standing of the socialist system. The book instigated opinions as to whether the Soviet Union could actually operate without the forced labor camps. The text further questioned the legacy of the great socialist leader Lenin and his system of governance, further nullifying the economic and political ideology of many communist parties of the west.

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#60 Whiteness as Ideological Imagination

Oakland University

Student Authors : Linda Lester

Faculty Advisors : Kellie Hay

Abstract : In this essay, I examine the concept whiteness in a range of literatures. Originally this concept emerged in history and critical race theory. The purpose is to trace it through communication and sociology, questioning the ways in which white supremacy became part of the colonial discourse. As a discourse corroborated in journalism, science, travel writing, trade, and literature, I analyze the racial hierarchies of the 19th century and link them to current forms of institutional racism. In other words, I move from overt ideological racism to more subtle forms of racism that are masked in policy and everyday language.

#61 Comparison of Reported Physical Activity and Nutrition Practices with Written Wellness Policies

Oakland University

Student Authors : Kate Adams, Andrea Lauhoff, Jessica Pomaranski

Faculty Advisors : Jennifer Lucarelli

Abstract : There has been a rapid rise in childhood obesity within the last three decades. The Child Nutrition and WIC Reauthorization Act of 2004 required schools to implement a wellness policy by the 2006-2007 school year to outline health and wellness initiatives. This research study qualitatively assessed the comprehensiveness and strength of these policies for 60 randomly selected Michigan school districts. Written policies were scored using the School Wellness Policy Evaluation Tool. To assess actual school health-related practices, surveys were mailed to one administrator, physical education teacher and food service director of each district. The purpose of the survey was to receive feedback on the implementation of their written wellness policies. The results comparing written wellness policies and school-reported health practices will be shared.

#62 Michelangelo in the Margins

Oakland University

Student Authors : M. Joseph Meyer

Faculty Advisors : Sally Tardella

Abstract : Michelangelo was a great contributor to the Renaissance, and a major influence to the art community as a whole. Although Michelangelo is one of the most well-known artists of all time, a unique perspective of his personality can be seen in the marginalia that he made on his many drawings and sketches during the preparation of his works. This paper seeks to demonstrate and analyze these marginalia, and shows how they shed a light on Michelangelo's personal life, thoughts, and insecurities. This self-critiquing is seen in his sketches, poetry, and notes about the statue David, the Sistine Chapel ceiling, and various other works.

#63 Kant, Lies, and Misleading Truths

University of Michigan - Dearborn

Student Authors : Hassan Amad

Faculty Advisors : Paul Hughes

Abstract : Contention on the issue of lying, within the Kantian moral system, is widespread due to Kant's rigid stance on the irreconcilability of personal autonomy and categorically rejected maxims. Michael J. Sandel attempts to reconcile Kant's stance on the issue by employing a distinction between lies and misleading truths. Sandel shows that avoiding lies, even in situations where we are intuitively inclined to do so, by misleading others without the use of false information, does show, however so slightly, respect for ones moral duties. I shall contend this view by showing that some misleading truths can't be clearly distinguished from out right lies, because they rely on an unjustifiable assumption about the level or nature of knowledge pertaining to ones audience. This problem for Sandel's distinction leads to the conclusion that some misleading truths function in the same way as an outright lie within the scope of Kantian ethics.

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#64 Otto Dix: Wooed by the Great War

Oakland University

Student Authors : Barbara Bauer

Faculty Advisors : Claude Baillargeon

Abstract : For many people war is something devastating, horrifying, and traumatizing. However, for Otto Dix (1891–1969), war was something he wanted to experience. *Der Krieg*, his print series from 1924, depicts the Great War like no one had ever seen before. As I argue in this paper, *Der Krieg* was neither a judgment of humankind, nor an anti-war artwork; he merely wanted to represent war truthfully. Despite frequent comparison with Goya's *Disasters of War* or Friedrich's *War Against War!* Dix did not share their intentions to horrify the public so that future wars could be prevented. Although it is reasonable to say that Dix created *Der Krieg* from a pacifist standpoint to enlighten the naïve or that he used his art as a cathartic experience, it is much more appropriate to point out that Dix was truly fascinated by the Great War.

#65 The Spiritual Function of Rock Art in Upper Paleolithic Europe

Oakland University

Student Authors : Jaclyn Kaminski

Faculty Advisors : Claude Baillargeon

Abstract : Early Europeans practiced cave art as part of shamanistic rituals. As this presentation argues, cave paintings depict the visions these shamans experienced after entering into a trance that led them on a journey to the supernatural world. From anthropological studies of other hunting-gathering societies it can be determined that, among humans living before the implementation of agriculture, shamanism was the most widely practiced form of religion. A comparison of the art found in areas near cave entrances and art found in deeper recesses implies that a sacred quality was attributed to deep cave paintings. Although the journey to the inner chambers could be dangerous, these sites were returned to repeatedly over many generations. Research on the effects of sensory deprivation on the nervous system provides reason to believe that the geometric patterns decorating deep caves are depictions of mild hallucinations experienced by Paleolithic painters as a result of sensory deprivation.

#66 Valence in Proverb Interpretation: Are Positive Proverbs Easier to Understand?

Oakland University

Student Authors : Therese Dumas

Faculty Advisors : Deb McGinnis

Abstract : Proverbs having a positive valence may be easier to understand than proverbs having a negative valence. Oakland University undergraduates (N = 215) participated in a proverb comprehension study. In this study, aphorism and non-aphorism proverbs were included, with aphorisms more likely to have clever and cynical aspects. For each proverb, participants rated four definition options (specific, generalized, concrete, and irrelevant) on a 1-7 scale (poor to excellent). Participants also rated the valence, enabling the identification of positive and negative proverbs. Specific definitions for both types of positive proverbs were rated significantly higher than specific definitions for negative proverbs. Participants also rated concrete definitions highest when presented with positive aphorisms. These results suggest that positive proverbs are easier to comprehend than negative proverbs, and that people may favor concrete definitions when comprehension is challenging. Further effects of valence, proverb type, and age group will be discussed in the final paper.

#67 Identification of AQP9 as selenite and MSA transporter

Oakland University

Student Authors : Thi Bui, Joseph McDermott

Faculty Advisors : Zijuan Liu

Abstract : Selenium is an essential micronutrient in mammals. Many selenium compounds including inorganic selenite (SeIV) and organic methylseleninic acid (MSA) are beneficial in the prevention of cancer, inflammatory diseases, and viral infection. Due to toxicity at high concentration, controlling the intracellular level of selenium is critical and is determined by the expression of transport proteins in plasma membrane. Despite the importance of transporters in overall selenium function, the mam-

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malian transporter for selenite has still not been reported. Preliminary data shows that uptake of selenium is facilitated by the mammalian aquaglyceroporin, AQP9, expressed in oocytes of *Xenopus laevis*. To verify this function in mammalian cells, AQP9 will be cloned into a mammalian virus expression vector and transfected into prostate epithelial cell line CRL-2221. The expression of AQP9 will be traced by a fluorescent GFP protein and its function to facilitate selenite uptake in these mammalian cells will be studied by transport assay.

#68 “The dove pursues the griffin”: Michael Hoffman’s Interpretation of Helena in A Midsummer Night’s Dream.
University of Michigan - Flint

Student Authors : Keenan O’Dacre
Faculty Advisors : Maureen Thum

Abstract : In the text of Shakespeare’s *A Midsummer Night’s Dream*, Helena is arguably the most intelligent character, being the only Athenian youth that understands love. Director Michael Hoffman saw her differently in his 1999 film, a portrayal that diverts towards the role of a traditional woman. Instead of being a mature woman who recognizes she is a victim of love’s snare, Helena is portrayed as little more than ignorant and desperate. Many lines that served to display her intelligence regarding love have been omitted. She seems to be taking the brunt of hardships, often coming across as broken, beaten and inferior. It is through various scenes that Hoffman is able to depict her as such: the high and low angle shots with Demetrius, the pitiable state she is in before and during her dialogue with Hermia and Lysander, her lamentation through the rain and her following of Demetrius into the forest.

#69 The Man with the Golden Arm (1955) vs. The Production Code Administration
Oakland University

Student Authors : Alexis Nemeth
Faculty Advisors : Kyle Edwards

Abstract : This presentation analyzes the manner in which the Production Code Administration (PCA), the organization charged with policing the content of films prior to their commercial release, attempted to influence potentially controversial elements in *The Man with the Golden Arm* (1955), a film that starkly portrays one man’s struggle against drug addiction and other dangerous influences as he attempts to reintegrate himself into society following his release from prison. I utilize documents from the actual PCA file to ground the facts, including direct communications between the PCA director, Geoffrey Shurlock, and the film’s director, Otto Preminger. My analysis shows what kind of influence the PCA had on the film in response to its depiction of narcotics and, in turn, how the film influenced the PCA, leading to its first major revision and eventual eradication.

#70 Quality of Life Changes with Treatment of Eating Disorders: a retrospective chart review
Oakland University

Student Authors : Andrew Madison, Amy Noser
Faculty Advisors : Sylvie Lombardo

Abstract : The goal of the present retrospective chart review study is to present correlates of and changes in quality of life across a seven-week treatment program among twenty-two women, sixteen to fifty-five, who suffer from eating disorders (e.g. anorexia nervosa, bulimia nervosa). A widely used measure in treating eating disorder patients, the modified MOS-36 (Medical Outcomes Study short-form, Ware & Sherbourne, 1992) examined quality of life (i.e. impact of medical condition on emotional and physical well-being). All patients were medically stable and enrolled in a partial hospitalization treatment program in Michigan (where first author conducted field experience placement) that incorporates the philosophy of yoga and mindfulness with traditional cognitive-based treatment to eating disorder therapy. In discussing results the authors will highlight advantages and disadvantages of retrospective chart review research and how it may add to understanding the gap between evidence based research and factors that may impact treatment in the field.

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#71 Morphological and cytotoxic effects of the marine toxin azaspiracid on human neuroblastoma cells

University of Michigan - Dearborn

Student Authors : Fauzieh Dabaja

Faculty Advisors : Michael Twiner

Abstract : Azaspiracids (AZA) are a class of polyether marine biotoxins that are produced by microalgal dinoflagellates and accumulate in shellfish. Human consumption of contaminated shellfish typically results in extreme vomiting and gastrointestinal imbalance. Previous studies have shown that AZA is potentially more dangerous than other known classes of shellfish toxins because it causes serious tissue injury with slow recovery time and has been shown in laboratory animals to be a carcinogen and teratogen. We were interested in examining the morphological and cytotoxicity effects of various AZA analogs (AZA1, -2, and -3) towards a neuronal cell line, BE(2)-M17. Cytotoxicity, as evaluated through the use of a metabolically based dye (i.e., MTS), indicated that AZA-1, AZA-2, and AZA -3 each exhibited both concentration- and time- dependent effects on cell viability. Across three time points (24, 48, and 72 h), the effective concentrations (EC_{50} ; in nM) that result in a half maximal response range between 0.6 and 8.4, 2.2 and 38.9, and 0.87 and 7.8 for AZA1, -2, and -3, respectively. Based on EC_{50} comparisons, the order of potency of AZA analogs on neuronal cells are as follows: AZA1 > AZA3 > AZA2. Ongoing studies are examining the morphological effects of these AZA analogs.

#72 Tapping the Political Landscape: The Battle for New Mexico's 2nd Congressional District

Oakland University

Student Authors : Ryan Hundt

Faculty Advisors : David Dulio

Abstract : Traditionally known for its alleged UFO sightings and nuclear weapons testing facilities, the political landscape in New Mexico's 2nd District during the 2010 midterm election cycle was equally as intriguing as its unique history. Fresh off a victory in 2008, incumbent Democrat Harry Teague faced the daunting task of defending his seat against former Republican Congressman Steve Pearce, who had previously represented the district from 2002-2008. After an embarrassing loss in the 2008 elections to Democratic Senator Tom Udall, Pearce hoped to use his political experience and popular name recognition to reclaim his role in the United States House of Representatives. Macropolitical factors, such as an economy in turmoil and strong opposition to the Democratic Party as a whole made the situation even more difficult for the freshman Congressman.

#73 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 4

Oakland University

Student Authors : Clayton Saunders

Faculty Advisors : Michael Pytlik, Richard Stamps

Abstract : Evidence for fortified settlements in Israel dates back to the 10th century BCE, with a notable example of Khirbet Qeiyafa. This site is not only special for its early fortification, but also the presence of two Iron Age gates. Due to this unique feature, along with its location, Khirbet Qeiyafa has been discussed as the Biblical site Sha'arayim. This link is important because it creates a connection to the Biblical figure of David, who is hotly contested in modern scholarship. Interestingly, his son Solomon was credited as a great builder and three of the sites credited to his work share structural similarities to the walls and gate structure at Khirbet Qeiyafa. This research demonstrates these shared connections, while discussing the significance of the structures to defensive purposes and daily living.

#74 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 3

Oakland University

Student Authors : Michael Henson

Faculty Advisors : Michael Pytlik, Richard Stamps

Abstract : My presentation will be on the material culture found at Khirbet Qeiyafa, and how it is used to give insight into the people who once inhabited the site. I will focus on the finds that are unique to Khirbet Qeiyafa. In particular I will discuss Qeiyafa

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yafa handles, and how they are used to show the site was a part of a large organized state with a single centralized power. Also I will cover the ostrakon found at the site in 2008, discussing the interpretations of the text and how it suggests that the people who lived at Khirbet Qeiyafa had a developed and complex written language. Finally, I will talk about the yet to be published artifacts from the cultic center found in the 2010 dig season that were presented at the 2010 ASOR annual conference in Atlanta.

#75 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 2

Oakland University

Student Authors : Emily Tissot

Faculty Advisors : Michael Pytlik, Richard Stamps

Abstract : I will be presenting a basic timeline of Khirbet Qeiyafa. This will precede 2 other students who intend to discuss specific aspects of the site. My general overview will provide an understanding of the basic evidence that has led to the theories of this site. I will discuss the implications of carbon dating of material objects, as well as discuss a general theme of the pottery that has been left behind. These are two important indicators that the site was primarily a Jewish military site. I will give evidence for Khirbet Qeiyafa's biblical implications. Why it is being called biblical Sha'arayim and how these factors all contribute to the theory that David existed as a King of Israel during that time period. I desire that my audience gain a sense of how historically important this site is to the world, and why it is important to continue investigating it.

#76 Oakland University's Excavations at Iron Age Sha'arayim, Israel. A Fortress From the Time of King David part 1

Oakland University

Student Authors : Nathan Collins

Faculty Advisors : Michael Pytlik, Richard Stamps

Abstract : This presentation is 1 of a 4 part series on an Israeli Archeological excavation that OU students took part in this past summer. My presentation will serve as an introduction for my colleagues. I will introduce Khirbet Qeiyafa, and basic concepts about archeology in Israel. Included in this will be information on what carbon dating is, how pottery is used to date surroundings, and why Khirbet Qeiyafa was chosen for a dig. This will allow my colleagues to dive deeper into the questions that archeologists are trying to answer with this site. These questions include; did Biblical king David actually exist, when, and what role did he play in the development of the Israelites?

#77 Can Music Change your Story: Conceptual Priming Through Music

Oakland University

Student Authors : William Fuss, Caitlin Kleist, Candice Lambert, Yvonne Miles, Cherise Zannetti

Faculty Advisors : Cynthia Sifonis

Abstract : The goal of this study is to determine whether music can lead to conceptual priming and subsequently affect performance in a generative task. Pilot testing was used to identify two, ninety second music clips that consistently primed a particular concept across individuals. These sound clips were then used as stimuli in the current study which manipulated the type of concept primed (concept 1, concept 2) with the time the sound clip was presented (before or after generative task). For the generative task, the participants were asked to write a short story. The stories were subsequently coded for presence of the features associated with the concepts primed by the music clips. It was hypothesized that participants would be more likely to write stories that included the concepts known to be primed by a song clip when the clip was played prior to the generation task rather than after it.

#78 The Sarrazin Controversy and German Literature after the Fall of the Wall: Uwe Timm's Johannisnacht and Wladimir Kaminer's Russendisko

Oakland University

Student Authors : Jonathan Fouch

Faculty Advisors : Barbara Mabee

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Abstract : Last year, Thilo Sarrazin, formerly a top member of Germany's federal bank, published a book entitled "Deutschland schafft sich ab" (German does away with itself), which alleged that German multiculturalism was a failure and that the high birth rate of Germany's immigrant population was thus "dumbing down" the country. This book consequently elicited a strong national debate on xenophobia, racism, and the limits of multiculturalism in post-reunification Germany. This present work, a literature paper, seeks to examine perceptions of immigrants and minorities in the works of two popular post-reunification authors: Uwe Timm's *Johannisnacht* and Wladimir Kaminer's *Russendisko*. Are the Germans in these two works portrayed as xenophobic, racist people? Are immigrants and minorities shown to be lazy and unwilling to integrate as Sarrazin has portrayed them? This work will answer these questions show that while German multiculturalism is not perfect, at least through literary perceptions, it appears to be working.

#79 Un-Christian Christians? Antonio in Richard Rose's vision of Shakespeare's Merchant of Venice.

University of Michigan - Flint

Student Authors : Elizabeth Houbeck

Faculty Advisors : Maureen Thum

Abstract : In his 2007 production of the Merchant of Venice at the Stratford Festival Theater in Stratford, Canada, director Richard Rose creates a new image of the main Christian characters. In the past Antonio especially has frequently appeared as a model Christian. In Rose's vision, by contrast, actions performed by most of the Christian characters clearly expressed the deep prejudice they held toward Jewish people. Throughout the play, the Christian characters behave toward the Jewish minority with an obvious air of superiority. Especially in the scenes between Shylock and Antonio and in the relationship between Lorenzo and Jessica, Rose shows the Christian prejudice characteristic of the Renaissance. He also employs symbols and stage business to underline the hypocritical attitude of the Christians, demonstrating that they are by no means the idealized characters so often seen in traditional stage productions.

#80 Design and Development of a Low Speed Wind Turbine

University of Michigan - Flint

Student Authors : Sam Harwood, Darryl Howard, Ray Kemeer, Don Webber

Faculty Advisors : Quamrul Mazumder

Abstract : To decrease dependency on fossil fuels, many alternative sources of energy are being explored. Wind energy is essentially limitless, and is cost effective in many geographical regions. The wind velocity in Flint and surrounding areas is approximately 16.4 km per hour. This paper presents the design and development of a 1.22 meter diameter prototype wind turbine that is also capable of operating at low speed. The availability of computerized numeric controlled (CNC) machinery allowed for the creation of the blade utilizing advanced technologies. The wind turbine was tested at different wind speeds for efficiency. The experimental data and calculated results showed reasonable agreement.

#81 Pressure Drop in Single and multiphase Flow in U-Bends

University of Michigan - Flint

Student Authors : Eirc Bailey, James Mckinnon, Joseph Wilkinson

Faculty Advisors : Quamrul Mazumder

Abstract : The pressure drop in a 180 degree radial U-bend with 12.7, 9.5, and 6.3 mm pipe with radius to inner diameter (r/D) of 1.5 and 3.0 were investigated. The test section consists of clear PVC pipe, a 25 gallon per minute (GPM) pump, differential pressure gauge, and a compressor. To assure fully developed flow, 1.5 meters of pipe section was used upstream of the U-Bend. Effect of pipe diameters and r/D ratios on pressure drops were compared to calculated values and empirical data available in the literature. With smaller r/D ratios increase in frictional loss is expected to create a larger pressure drop due to the secondary flow induced by the centrifugal force.

#82 Design and Development of a Subsonic Wind Tunnel

University of Michigan - Flint

Student Authors : Saiful Siddique, Aaron Wager

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Faculty Advisors : Quamrul Mazumder

Abstract : To perform compressible flow and aerodynamic experiments a subsonic wind tunnel has been designed and manufactured. The wind tunnel is capable of producing up to 140 km/hr velocity in the 200mm x 200mm test chamber. Data will be collected using a transverse Pitot tube, 24 tube inclined manometer bank, a static pressure ring, and pressure tapped models. A full chamber width horizontal airfoil, half-width horizontal airfoil, long cylinder, ground, and flight models have been designed and tested in the wind tunnel. The experimental results were compared with theoretical results showing reasonable agreement. A smoke generator, illumination device, and string grids were also incorporated for flow visualization in the test chamber.

#83 Experimental Comparison of Pressure Differentials across Various 90 Degree Elbows

University of Michigan - Flint

Student Authors : Joseph Berry, Rashaun Phinisee

Faculty Advisors : Quamrul Mazumder

Abstract : Multiphase flow phenomenon occurs in various industrial applications with fluid handling equipment. Elbows are commonly used in piping systems and due to unavailability of classical equations for calculation of pressure drop; a test section has been designed and developed. The test section consists of two different pipe sizes of 6.35 and 12.70 mm with elbow radius to diameter ratios of 1.5 and 3.0. Clear polyvinyl chloride pipes were used to allow for visual observation of the flow conditions. The test section is capable of handling both single and multi-phase flow conditions. The experimental results were compared with calculations performed using available equations in literatures. Comparison of pressure drops in different elbows will also be presented to evaluate effect of elbow radius and diameter on pressure drop.

#84 Design and Development of a Flow Rate Calibration System

University of Michigan - Flint

Student Authors : Tarek Jarayseh, Jared Kapa

Faculty Advisors : Quamrul Mazumder

Abstract : Controlling flow in piping systems is important in all process industries. A flow Calibration system has been designed and developed using a venturi meter and an orifice meter. Both venturi meters and orifice meters use Bernoulli's principle to calculate the flow rate by measuring the differential pressure drop. The test section consists of a 2.54 cm diameter galvanized pipe, a pump with a 40 liter/min flow rate and a rotameter for calibration. Differential pressure gauges were used to measure the pressure drop from which flow rates were calculated. The calculated flow rates were then compared with the measured flow rates through the venturi and orifice meters. Coefficients of discharge for the venturi and orifice meters were developed.

#85 The Martin Marprelate Tracts and the Power of Print in Elizabethan England

University of Michigan - Dearborn

Student Authors : Mark Jager

Faculty Advisors : Christopher Petrakos

Abstract : Between 1588 and 1589, anonymous Protestant critics of the Church of England secretly printed and distributed a series of pamphlets known as The Martin Marprelate Tracts. These tracts argued for the dismantling of the Elizabethan hierarchy of bishops and the establishment of a "Puritan" system of church government. The reform agenda of the tracts was radical and the style of the text unprecedented. On the basis of a new modernized edition of the text my research examines how the authors relied on literary conventions of early militant Protestants. Through these conventions I will show how the writers of the tracts castigated what they considered the "popish" aspects of the Elizabethan Church. This study, therefore, seeks to analyze the Martin Marprelate Tracts within the context of Elizabethan print culture.

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#86 No Rest Here

Oakland University

Student Authors : Allison Graves

Faculty Advisors : Kathleen Pfeiffer

Abstract : "No Rest Here" exposes the horrid infantilizing and sexual qualities surrounding Dr. S. Weir Mitchell and his Rest Cure, a prominent treatment for neurasthenia in nineteenth century America. In my paper, I discuss the history behind the Rest Cure and Mitchell, revealing the issues with the treatment at the time. I then progress to show how Charlotte Perkins Gilman, an author who underwent Mitchell's treatment, exposes the terrible treatment of women through her short story "The Yellow Wallpaper." By analyzing the diction and images present in "The Yellow Wallpaper," I show how the male-dominated society during this time abused women and took advantage of them, rendering them helpless in their suffocating roles as wives.

#87 Gender Associations in English: A Semantic Priming Study

University of Michigan - Dearborn

Student Authors : Jing Chen

Faculty Advisors : Nitya Sethuraman

Abstract : Languages like Spanish and German have a grammatical gender system, where they mark words into various gender systems like masculine and feminine. Studies found that this gender system influence the way its speakers conceptualize these words (Boroditsky, et al., 2003). The present study utilizes a semantic priming approach (Blair & Banaji, 1996) to investigate whether native speakers make a similar type of gender association to common nouns despite English being a "genderless" language (see Viglicco, et al. 2005, sex and gender theory). It is expected that participants will respond faster 1) when the gender of the prime and the target are gender congruent (i.e., Kate and Skirt) than the gender incongruent pairing of prime and the target (i.e., John and Skirt), 2) when the gender of the prime and target match the participants' own gender, and 3) that participants associate femininity with natural objects (e.g., tree) and masculinity with artificial objects (e.g., car), corresponding to results from previous studies (Sera et al., 2002).

#88 The Legacy of a Hero and Legend: King Arthur and British National Identity

University of Michigan - Flint

Student Authors : Desirée Sharland

Faculty Advisors : John Ellis, Maureen Thum

Abstract : King Arthur and Arthurian themes have occurred frequently in history, literature, and popular culture, especially in England, Scotland, and Wales. This frequency reflects not only an interest in his legend or history, but also the role he has played in the formation of national identity in these three countries. King Arthur has been present in Welsh literature for centuries while the English have used Arthur politically to legitimize their power. The Scots as well have adopted this figure as part of their national heritage. In order to understand his role in the formation of national identity in England, Scotland, and Wales, it is important first to look at the figure of King Arthur according to literature and historical documents as well as the known sites associated with Arthurian legend. This paper will then discuss his role in the formation of national identity in each of these British nations in turn.

#89 Reactions, electrochemical and computational studies of the $(\eta^4\text{-C}_5\text{Ph}_4\text{=O})\text{Fe}(\text{CO})_3$ system

Oakland University

Student Authors : Elizabeth Donovan, Barrett Povirk

Faculty Advisors : Greg Felton

Abstract : It has been shown that $[\text{FeFe}]$ hydrogenase active site mimics such as $[(\eta^5\text{-C}_5\text{H}_5)\text{Fe}(\text{CO})_2]_2$ will act as an electrocatalyst in the production of hydrogen from weak acids. In order to gain a greater understanding of the catalytic properties of these type of complexes, the series $(\eta^4\text{-C}_5\text{Ph}_4\text{=O})\text{Fe}(\text{CO})_2\text{L}$ ($\text{L}=\text{PR}_3$, $\text{P}(\text{OR})_3$) was synthesized and the electrochemical properties were studied. $(\eta^4\text{-C}_5\text{Ph}_4\text{=O})\text{Fe}(\text{CO})_3$ was synthesized from the photochemical reaction of 1,2,3,4-tetraphenylcyclopentadienone and iron pentacarbonyl. $(\eta^4\text{-C}_5\text{Ph}_4\text{=O})\text{Fe}(\text{CO})_3$ was then derivatized by replacement of a CO

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ligand with a phosphine/phosphite ligand. Computational investigation has been used to rationalize the observed structures. Electrochemical studies were carried out in acetonitrile utilizing Bu_4NPF_6 as the supporting electrolyte. These studies show that $(\eta^4\text{-C}_5\text{Ph}_4\text{=O})\text{Fe}(\text{CO})_3$ is able to catalyze the formation of H_2 from weak acid sources.

#90 Understanding Variances in Birch Chemical Tolerance between Snowshoe Hare Populations

University of Michigan - Flint

Student Authors : Melissa Babcock

Faculty Advisors : Gerard Paez, Maureen Thum

Abstract : Papyriferic acid (PA) is a chemical in the resin produced by some species of birch trees that interferes with the metabolism of herbivores and acts as an anti-feedant. The concentration of the resin varies among species. Most of this resin can be found on the new growth of the tree, the part herbivores, like snowshoe hares, prefer to eat. Snowshoe hares exposed to higher concentrations of the resin have a higher tolerance to PA than hares exposed to lower concentrations. One proposed mechanism for why the populations exposed to higher resin concentrations has higher tolerance is the method of metabolism and absorption. An efflux transporter like P-glycoprotein (P-gp) and metabolizing enzymes like the Cytochrome P450s (CYPs) may be used by the animals to keep the toxin from being absorbed. Multiple experiments must be done to see if these proteins are the mechanism of tolerance to the chemical.

#91 “We are not Myths of the Past”: Exploring the Struggle of the Mexican Maya

University of Michigan - Flint

Student Authors : Tara Eason

Faculty Advisors : Maureen Thum

Abstract : The culture of the Maya has a strong and longstanding reputation in historical documents and textbooks. While it may seem that the Mayan population along with its culture has been eradicated, these native peoples still exist and still desire to be recognized as representing a valid culture. In Mexico, the indigenous Mayan population still thrives today. They are linguistically Mayan people, using native languages that belong to the Maya language family. Like many indigenous peoples they are attempting to express their concerns in order to find a voice in the government of the country in which they reside. In order to better understand the Maya civilization and the challenges they face today, we will look at the history and background of this relatively neglected culture. By exploring the past of the Maya and their cultural identifying characteristics, we can better understand their place in today's society.

#92 Angiotensin II (ANGII) requires both Interleukin -6 (IL-6) and Janus Kinase (JAK2) activation to manifest its hypertensive response.

Oakland University

Student Authors : Hind Al-Azawi, Michael Brands, Marcus Jamil

Faculty Advisors : Amy Banes-Berceli

Abstract : ANGII is an established controller of blood and there is convincing evidence that ANGII-induced hypertension has an inflammatory link, specifically with IL-6. However, the molecular mechanisms of that connection are also not elucidated. There is data to suggest that both ANGII and IL-6 require activation of the JAK2/STAT3 pathway to mediate their effects. Therefore, we tested the hypothesis that ANGII and IL-6 are linked through activation of the JAK2/STAT3 pathway. In male Wild-type (WT) mice we found that ANGII-infusion increased JAK2 activation as well as blood pressure. In the IL-6 knock-out (KO) mice infusion of ANGII failed to cause hypertension and did not increase activation of JAK2 or STAT3. Furthermore, we found that IL-6 stimulates serine phosphorylation and inactivation of the phosphatase SHP-1, the known “off-switch” for JAK2. These data suggest that ANGII is linked to IL-6 and JAK2 activation as part of its molecular mechanisms to cause hypertension.

#93 Molecular mechanisms of sexual dimorphism in renal injury in spontaneously hypertensive rats (SHR): involvement of Angiotensin II and the JAK/STAT pathways.

Oakland University

Student Authors : Justin Panzica, Jennifer Sullivan

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Faculty Advisors : Amy Banes-Berceli

Abstract : Male SHR experience rapid progression of renal injury compared to female SHR. The molecular mechanism(s) responsible for the sexual dimorphism in renal injury, however, is unknown. We hypothesized that altered angiotensin II receptor 1 (AT1) signaling to the Janus Kinase (JAK)/signal transducers and activators of transcription (STAT) pathway in the renal cortex from male and female SHR promotes renal injury and reno-protection in male and female SHR respectively. Male and female SHR were used in all studies, and kidneys isolated for Western blot analysis. Activated JAK1 and JAK2 levels in renal cortex from female SHR were significantly higher compared to male SHR. Male SHR had significantly higher levels of STAT6 and STAT1 activation in the renal cortex, while female SHR had significantly higher levels of STAT5 activation. These data suggest differential activation of AT1/JAK/STAT pathways may be involved in promoting renal injury in male SHR and reno-protection in female SHR.

#94 Altered phenylephrine (PE)-induced vascular contractility and reduced endothelial function during the onset of renal wrap hypertension

Oakland University

Student Authors : Hind Al-Azawi, Rammy Ishaya, Elizabeth Jacobs, Jeremy Zaluski

Faculty Advisors : Amy Banes-Berceli

Abstract : The rat one-kidney, figure-8 renal wrap model of hypertension is salt-sensitive, Ang II dependent and closely mimics human glomerulosclerosis. However, a dearth of information on vascular changes associated with this model exists. We hypothesized that similar to other hypertension models there would be enhanced PE-induced contraction and reduced acetylcholine (ACh) –mediated relaxation, indicating endothelial dysfunction. 7 days post-surgery male Sprague Dawley wrap rats had significantly greater blood pressure compared to sham rats (106 + 3 vs. 133 + 5 mm Hg). Using DMT myograph for contractility measures, we observed in the aortic rings a significantly decreased maximal contractile response to PE (143 + 8 % vs. 109 + 12 % KCl contraction). In addition, there was significant endothelial dysfunction indicated by impairment to ACh-induced relaxation (100% vs. 70% of initial PE contraction). In conclusion, in the thoracic aorta there are significant vascular changes which potentially contribute to the development of hypertension.

#95 JAK2 is not involved in the Central Mechanisms of Blood Pressure Control involving ANG II

Oakland University

Student Authors : Michael Christofis, Rammy Ishaya, Carrie Northcott, Jeremy Zaluski

Faculty Advisors : Amy Banes-Berceli

Abstract : Angiotensin II (ANGII) is a mitogen and vasoconstrictor. It is established that inhibiting ANGII reduces blood pressure (BP) and prevents end organ damage in diabetes and hypertension. In vascular smooth muscle cells, ANGII activates the Janus kinase/signal transducer of activated transcription (JAK2/STAT) signaling pathway. ANGII activates JAK2 in peripheral blood vessels and kidney cortex and is critical in increasing BP. There is no information elucidating the role of JAK2/STAT pathway in central nervous system (CNS) control of BP. Therefore, we hypothesize that ANGII activates JAK2 in the CNS to regulate BP. To test this we instrumented rats with telemetry to measure BP used intracerebroventricular canula to administer AG490 (JAK2 inhibitor), and mini pumps for ANGII administration peripherally. There was no significant effect of AG490 treatment on mean arterial pressure. The animals administered ANGII were all hypertensive. We concluded that JAK2 is not involved in the CNS blood pressure control mechanisms.

#96 Solipsism, Cartesian Solipsism, and Kant

University of Michigan - Dearborn

Student Authors : Joseph Gardai

Faculty Advisors : Kathleen Wider

Abstract : Solipsism (the philosophical conundrum in which I can only prove that my own mind exists) crops up in many philosophical theories. Both Immanuel Kant and Rene Descartes argue against solipsism, but Kant's argument is much more robust and well reasoned than Descartes'. Yet, Kant's theory still does not rule out solipsism due to his idea that humans have a fundamental inability to know the world as it is in itself and to know our own consciousnesses as they are in themselves.

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#97 The Ideological Conundrum: The King of Coramantien in Aphra Behn's Oroonoko

Oakland University

Student Authors : Audra Pieknik-Shewell

Faculty Advisors : Brian Connery

Abstract : Beginning with a plot overview, this paper addresses the contradictions of kingship in Aphra Behn's Oroonoko, focusing on the title character and his grandfather, the King of Coramantien. The narrative appears to support Oroonoko's innate royal nature while depicting his grandfather as an unjust King. An attempt to determine how strong Behn's Royalist political leanings influence the narrator starts the analysis. Initial parallels are made regarding the nature of kingship using the primary sources of Thomas Hobbes' Leviathan and Sir Robert Filmer's Patriarcha. The Bible draws additional parallels reflective of 17th century politics and the dynamics in Behn's narrative. Consultation of current scholarship of Michael McKeon's The Origin of the English Novel provides further insight to the aristocratic ideology of the period.

#98 Understanding Adolescent Crowd Affiliation: Examining Social Behavior, Relationships, Identity, and the Social Mirror

Oakland University

Student Authors : Jacenta Gabriel

Faculty Advisors : Mary Lewis

Abstract : The present investigation examined the way in which identity strength and perceptions of how their peers classify adolescents into a particular crowd predicted self-rated crowd affiliation after controlling for social skills and quality of peer relationships. High school and college students (n = 48 boys; n = 180 girls) completed the Inventory of Parent and Peer Attachment – peer subscale, the Texas Social Skills Inventory, and the Psychosocial Inventory of Ego Strength. Subjects also reported on their affiliation with different crowds and the way that their peers classify them into crowds (Athletes, Brains, Deviants, Elites, Non-conformists, and Normals). Results revealed that what youth believed about peers' classifications significantly predicted their own sense of affiliation with different crowds. Higher levels of social skills were predictive of self-identification with Athletes and Elites; whereas friendship quality and ego strength was characteristics of Brains, Normals, and Nonconformists. Discussion focuses on the skills and strengths required to be members of different peer groups.

#99 The Touch and the Feel of Social Science: How Cotton Shaped the Fabric of U.S. History

University of Michigan - Flint

Student Authors : Cameron Waites

Faculty Advisors : Suzanne Selig, Maureen Thum

Abstract : In a modern democratic society, such as a representative form of government, it is to the benefit of the individual that the society is educated. Such are the aims of a liberal arts education and, specifically, the social sciences are a means to this end. When thinking of social science, one does not necessarily think of cotton; nor, perhaps, when thinking of cotton does one intuitively think of Karl Marx. However, Karl Marx is commonly cited as being one of the founders of the modern social sciences (Kim, 2008, para.1). As such, these two topics are related and reveal a connection between the social sciences and the functioning of individual thought and its impact on the larger society. The following brief examination of the history of cotton and its influences on American life will serve to illustrate the value of the social sciences in educating individuals within our democracy.

#100 Electrophilic Cyclization of Alkynyluridines

Oakland University

Student Authors : Susan Yang

Faculty Advisors : Roman Dembinski

Abstract : Pyrimidine nucleosides and their bicyclic derivatives have been shown to exhibit high antiviral activity and selectivity against viruses. In this work, 5-alkynyl-2'-deoxyuridines were reacted with N-iodosuccinimide (NIS) or N-bromosuccinimide (NBS) in attempt to synthesize bicyclic halofuoropyrimidine nucleosides having 1-hydroxycyclohexanol (c-C₆H₁₀OH) and p-pentylphenyl (p-CH₃(CH₂)₄C₆H₄) substituents. The alkynyluridine with the side chain of p-pentylphenyl

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was cyclized using both reagents, although in the bromo derivative, cleavage of the N-glycosidic bond was observed. In the iodo- and bromocyclizations of the c-hydroxycyclohexyl substituted alkynyluridine, neither halofuopyrimidine was obtained, perhaps due to steric hindrance of the side chain or a change in electron distribution resulting from the hydroxyl substituent.

#101 Interspecies Interaction Between Two Species of New World Monkeys.

University of Michigan - Dearborn

Student Authors : Adam Dewey

Faculty Advisors : Janet Dunn

Abstract : Inter-species interactions and relationships between spider monkeys and howler monkeys are poorly understood despite the amount of research that has been compiled for both species. This study analyzes the interactions between a solo, free-ranging, female spider monkey (*Ateles geoffroyi*) and her interactions with a howler monkey troop (*Alouatta palliata*) in order to better understand the reasons for the inter-species interactions witnessed. A ten-day intensive study of the number of howler monkeys sharing a tree with the spider monkey and the proximity of the spider monkey to the howler monkeys was conducted in the La Suerte Biological Field Station, Costa Rica. These observations, in addition to the month-long recording of opportunistic data at La Suerte, provided valuable data about the activities and feeding patterns of the spider monkey as well as the interactions between the two species.

#102 Purification of Amyloid Beta specific antibodies through Surface Plasmon Resonance detection

Oakland University

Student Authors : Adam Yokom

Faculty Advisors : John Finke

Abstract : Amyloid Beta ($A\beta$) is a prominent peptide contributing to Alzheimer's disease. Oligomeric conformers show a higher neurotoxicity than the monomeric form. Finding a way to remove this peptide from the brain could counteract the debilitating symptoms of this disease. These oligomeric forms have expressed both stable and unstable folding patterns. Surface Plasmon Resonance can be used to detect binding affinities of analyte and ligands in real time. Human Intravenous immunoglobulin (Ivlg) contains a variety of antibodies that form a complex immune system in our bodies. The binding of Ivlg to $A\beta$ has shown selectivity to oligomeric forms over monomeric samples. Using the BIAcore X can allow collection of the antibodies that show a significant affinity towards $A\beta$. Along with the real time binding, SPR technique can provide additional information on the stability of $A\beta$ conformers.

#103 Personal Identity and Moral Responsibility: A Critical Analysis of Hume's Treatise

Oakland University

Student Authors : Jennifer Cepnick

Faculty Advisors : Paul Graves

Abstract : David Hume, in the appendix of the Treatise, expressed concerns with his personal identity theory as he put forth and has found himself in 'a labyrinth'; unable to work out the inconsistencies. I argue that his commitment to empirical knowledge limits his theory of personal identity for a broader application of moral responsibility. A more complete theory of personal identity ought to include a distinction between objective and subjective knowledge making moral agency applicable to a 'self'. Contemporary research in philosophy of consciousness will shed light on the importance of the object/subject distinction necessary for a more robust theory.

#104 Red Reality

Oakland University

Student Authors : Alexa Van Vliet

Faculty Advisors : Gladys Cardiff

Abstract : The Autobiography of RED by Anne Carson, a novel in verse, is the story of Geryon. Carson presents Reality as

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experiences legitimized by the individual who challenges the ways Reality can be represented and replicated. Geryon is RED. He is a socially awkward, obsessive, and gay little monster with wings who starts out as a writer, becomes a passionate photographer, and falls obsessively in love with Herakles, who introduces him to volcanoes. Geryon's perception of the Reality of his life has many lenses. His contemplations about time, eternity and immortality pervade the many other paradigms through which he operates in his red world. Necessity drives Geryon to explore modes of representation; conditions of synesthesia; and the costs of obsession and captivity as he follows the lure of a beautiful lover and of seductive volcanoes. This paper will sort through his complicated and poignant growth toward an autonomous selfhood.

#105 "More than Friends": A Content Analysis of Dating Norms in the Media

Oakland University

Student Authors : Marissa Holloman

Faculty Advisors : Jo Reger

Abstract : Based on a content analysis of the popular sitcom *Friends*, I examined how dating norms are being portrayed in the media. Social learning and social construction theories shape this research by suggesting that people can be shaped by what they are viewing on television. I examine *Friends* to see dating norms in the different levels of dating situations. This research contributes to our understanding of gender equality as seen through the different dating norms in our society today.

#106 Undergraduate Epistemological Orientation in Context: Supreme Court Cases

Oakland University

Student Authors : Rachel Long, Veronica Wells, Angela Worrel, Kimberly Zuteck

Faculty Advisors : Deb McGinnis

Abstract : When people draw conclusions in unstructured reasoning scenarios, they draw on a variety of reasoning dispositions. Among these reasoning dispositions are ideas about the nature of knowledge (absolute or self-constructed); the origin of knowledge (e.g., knowledgeable others); and the role of evidence. Together, a person's reasoning dispositions comprise her Epistemological Orientation (EO). Study 1 data validated the reliability of three Supreme Court Inventory (SCI) subscales (absolutism, multiplism, and evaluatism) developed to examine EO when people consider Supreme Court cases. For Study 2, approximately 150 participants are reading an actual Supreme Court case and responding to SCI questions. The goals of study 2 are to statistically examine the relationships among context-specific EO, global EO, education level, methodology course completion and SCI scores. We hypothesize that context-specific EO and global EO will differ because presenting these ideas in a context may make them less salient.

#107 Effects of Oncology Rehabilitation on Fatigue, Chemobrain, Function, and Pain in Women with Breast Cancer: A Systematic Literature Review

Oakland University

Student Authors : Emilee Bohde

Faculty Advisors : Deb Doherty, Jacqueline Drouin

Abstract : Survivors of breast cancer experience a variety of side effects from cancer and its treatments that include fatigue, pain, loss of function, and cognitive deficits or "chemo-brain". Current evidence is beginning to suggest that physical therapists can improve cancer survivors overall quality of life through Comprehensive Oncology Rehabilitation (COR). This study reviews current literature to determine what is currently known about the effects of COR for improving fatigue, pain, loss of function, and cognitive deficits in women during or following treatment for breast cancer. 62 pertinent articles were initially found; 26 articles met the final inclusion criteria. Data collected in this review suggests that the overall effects of COR were beneficial in decreasing fatigue (90%) and improving function (92.9%) in women with breast cancer. Future studies are required on the effects of Comprehensive Oncology Rehabilitation particularly for improving pain and cognitive function.

#108 The Changing Portrayal of HIV/AIDS on Television:

University of Michigan - Flint

Student Authors : Crystal Williams

Faculty Advisors : Marcus Paroske

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Abstract : This study was completed as part of an off-campus experience in Hollywood California, under the direction of Dr. Joanna Grant, Professor of Communication at the University of California, San Bernardino. The study will evaluate and discuss the different sides of human immunodeficiency virus/ acquired immune deficiency syndrome (HIV/AIDS) portrayed in of media, with its focus on television shows. It will explore the effects television portrayals have on individuals' beliefs and morals through the cultivation theory. Individuals are often shunned, discriminated against, and even physically hurt because of their condition. This study will analyze the different aspects of the media and the affects it has upon real life situations and beliefs. In order to assess the changing portrayal of HIV/AIDs on television a total of 18 shows, 9 from one time period (before 2000) and the remaining from a second time period (?2000). Coded episodes were drawn from online sources, personal collections, and the Paley Media Center in Hollywood California. A specific codebook and codesheet was developed and content analysis was conducted over about a two week span. Subsequently, working with Dr. Joanna Grant, the results were analyzed and a written report was developed. The data was analyzed in the Statistical Package of Social Sciences (SPSS) system.

#109 Synthesis and electrochemical analysis of di- μ -oxo bridged dimanganese and diiron water oxidation catalysts

Oakland University

Student Authors : Elizabeth Donovan, Amanda Stahl

Faculty Advisors : Greg Felton

Abstract : In nature, plants effectively use a manganese-centered catalyst to produce oxygen and eventually hydrogen from water and solar light (water oxidation). Reproducing this catalyst synthetically would open up exciting possibilities for clean and renewable alternative energy sources. Using inspiration from the naturally occurring catalyst, we synthesized di- μ -oxo bridged dimanganese compounds. The compounds $[(L)_2MO]_2(ClO_4)_3 \cdot 2H_2O$ (where M is Manganese or Iron) were then analyzed by $--^1H$ -NMR, FT-IR, UV/Vis, and computational techniques. The ligands (L) were varied, from electron donating ligands such as 5,5,-dimethyl-2,2-dipyridyl and 4,4-di-tert-butyl-2,2-dipyridyl to electron withdrawing ligands, such as 5-nitro-1,10-phenanthroline and 5-chloro-1,10-phenanthroline. Electrochemical studies (cyclic voltammetry and chronoamperometry) of these compounds were performed in acetonitrile, with slightly basic and acidic solutions, and water additions, for further analysis.

#110 Mr. and Mrs. "His-Her" Name: An Examination of Gender Roles and Nontraditional Marital Surnames

Oakland University

Student Authors : Alessa Perkins

Faculty Advisors : Jo Reger

Abstract : Drawing on social constructionist theory, I investigate the relationship between people's views about gender roles and their overall likelihood of choosing a nontraditional surname. Eighty-two men and women in a Sociology 100 class were surveyed about their perceptions of nontraditional marital surnames and rated their agreement with statements measuring their views regarding gender roles. I find that the majority of men and women had nontraditional gender role views. However, 91 percent of females and 95 percent of males still said they would choose a traditional surname. I conclude that while ideas of gender norms have changed in theory, traditional name changing practices are still common.

#111 A DFT Investigation of the Interaction Between Silver Nanoclusters and HCN

Oakland University

Student Authors : Christopher Powers

Faculty Advisors : Maria Bryant

Abstract : Nanoclusters of group thirteen metals exhibit properties that differ from those of their bulk counterparts. Clusters of Silver atoms in particular have received much attention recently for their nano-electronic, catalytic, biomedical, and antimicrobial applications. This investigation has served to examine the unique properties of Ag_n nanoclusters (For n=1 through 5) by examining the nature of Ag_n-NCH bonding. In each case, the interaction between the Silver cluster and the Hydrogen Cyanide molecule was found to behave as a Lewis acid-Lewis base interaction. Using the chemistry software program Gaussian 09, the equilibrium geometries were calculated for Ag_n-NCH complexes by using both the wB97x and wB97xD functionals. In

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both cases, the aug-cc-pVTZ basis set was used for both Ag and NCH. To simplify the electron many body problem, an effective core potential (ECP) was used in the basis set of Ag to approximate the inner 28 core electrons. Once the equilibrium geometries were found, the interaction energies, vibrational frequencies, and molecular orbital diagrams were generated to examine the complexes further. Because of its computational advantages, Density Functional Theory (DFT) was applied in these calculations. Additionally, this investigation has served to assess the validity of various DFT methods by comparing the results with experimental data from literature. Future calculations on complexes with a similar electronic structure may then be carried out using the same methodology. This use of theoretical calculations will allow for the predictions of the properties of complexes for which there are no available literature data.

#112 Hydrogen Production from Organometallic Catalysts: Ligand Substitution of Carbonyls in Cyclopentadienyl dicarbonyl iodide

Oakland University

Student Authors : Sarah Froberg

Faculty Advisors : Greg Felton

Abstract : Current methods of hydrogen production as an energy source are both expensive and inefficient. Creating an inorganic catalyst that mimics natural enzymes would solve these problems. In order to improve currently produced catalysts we are synthesizing different versions of cyclopentadienyl dicarbonyl iodide. These complexes undergo substitution reactions where one or more carbonyl groups are removed and replaced by various phosphine, alkyne, or phosphite ligands. The method used to create the varied compounds is an unheated reaction using a decarbonylation agent. H-NMR and IR spectroscopy are used to characterize the compounds. The compounds are then tested using cyclic voltammetry and a computational program to better understand how they work as a catalyst for producing hydrogen from weak acid. The compounds are then compared to see a pattern of increased efficiency based on the various ligands that are attached.

#113 "Tom Powers: A Menace who Escaped the Chains of the PCA"

Oakland University

Student Authors : Mayuri Munot

Faculty Advisors : Kyle Edwards

Abstract : This presentation, "Tom Powers: A Menace who Escaped the Chains of the PCA", explores the manner in which The Public Enemy was shaped by the Hollywood Production Code. The film was released during the pre-code era of Hollywood. During this time, the code was not effectively enforced and administration of certain laws was very poor. This presentation explains how what was shown on screen in the final version of the film contradicted the PCA's values and interests during the pre-code era. The particular facet of the code that was violated was to make sure that no film lowered the moral standards of those who saw it. James Cagney plays the role of Tom Powers, in which he portrays a gangster who uses violence to carry out his actions. This presentation explores how the PCA overlooked the violence from Tom's character as well as the criminal activities displayed in the film.

#114 Perspectives and Opinions on Islam

Oakland University

Student Authors : Samantha Hyrns

Faculty Advisors : Dana Driscoll

Abstract : This study was conducted to gauge opinions of Islam and to attempt to determine and examine how much general knowledge and acceptance or tolerance of Islam in America. Very little has been done to examine this outside of the Pew Research Center. Their study focused solely on the construction of the mosque – community center near the site of Ground Zero in New York City. This study consisted of a survey, conducted on the campus of Oakland University in Rochester, Michigan, of a total of 106 voluntary participants across gender and generational gaps. It was expected that the study would produce a majority of neutral responses with some respondents having some general knowledge about the religion of Islam. The hope was that this study would provide some sort of idea as to what should be done about the lack of knowledge and the negativity towards the religion of Islam.

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#115 Behavioral Styles & Stress: A Comparison of Behavioral Styles and Stress Over Time

University of Michigan - Dearborn

Student Authors : Sandra Kumm

Faculty Advisors : Roger Loeb

Abstract : This study investigated the relationship between behavioral styles, life events, and symptoms of strain. The research is a replication of Cooke and Rousseau (1983) with current stressors and strain measures. Four self-report questionnaires were used: The Life Styles Inventory™ 1 (Lafferty, 1973), a 13-item medical symptom checklist, a shortened Social Readjustment Rating Scale (Holmes & Rahe, 1967) and a shortened Global Measure of Perceived Stress Scale (Cohen et al., 1983). The primary hypothesis for this study was that certain behavioral styles act as protective factors against strain symptoms when exposed to stressful life events. Consistent with the original study, a direct relationship was revealed between behavioral styles and symptoms of strain as well as perceived stress levels. The results suggest that specific behavioral styles may provide a protective factor against stress and strain. Behavioral style modification could provide methodology for the prevention of stress and strain symptoms.

#116 Brownfields in Flint, Michigan: A Study of Brownfield Areas using Remote Sensing Techniques

University of Michigan - Flint

Student Authors : Jamie Ward

Faculty Advisors : Maureen Thum

Abstract : With the implementation of CERCLA, RCRA, TSCA, and SARA, environmentalists have discovered the existence of brownfields in urban settings that existed prior to environmental legislation. Brownfields are sites that are believed to be or are contaminated. In Genesee County (particularly metropolitan Flint; see figure 1), the abundance of brownfields is a significant problem that requires more attention. Once identified and then characterized, many of these sites can be remediated and redeveloped through land use control and cleanup processes as appropriate. In order to begin to understand the extent of the brownfield problem in the Flint metropolitan area, an inventory of brownfield acreage needs to be conducted. This research, using both aerial imagery and database statistics, as well as on the subsurface material and geologic structure of the site, will develop estimates of the extent of brownfields.

#117 "Stuff Happens": An Analysis of the Causes, Strategies, and Consequences of the 2003 U.S.-led Invasion of Iraq

Oakland University

Student Authors : Alex Green

Faculty Advisors : Alan Epstein

Abstract : On March 20, 2003, the United States of America commenced what amounted to a unilateral invasion, and subsequent occupation, of Saddam Hussein's Iraq. The question is, what was the motivation? While there have been many ostensible reasons put forward, this paper argues that the guiding force behind the U.S. decision to overthrow an old ally of convenience and spend seven long years reconstituting and then guarding the institutions of state was not a single, overall incentive, but an irresistible plethora of ideological, economic, and strategic motives. Iraq was invaded, and Saddam hung from the gallows, not to defend universal human values, unearth concealed Weapons of Mass Destruction, or liberate the oppressed, brutalized Iraqi people, but to propagate the free market system, strengthen the strategic position of America and its allies in the Middle East, and attempt to grant a measure of authenticity to the U.S. practice of democratization.

#118 Alpha Adrenergic receptor agonists activate the JAK2/STAT intracellular signaling pathway.

Oakland University

Student Authors : Hind Al-Azawi, Dina El-Hout, Sermed Polus, Kristin Totoraitis

Faculty Advisors : Amy Banes-Berceli

Abstract : Alpha adrenergic receptor agonists, Norepinephrine (NE) and Phenylephrine (PE) are mediators of vascular responsiveness and hypertension. Previous research shows angiotensin II (ANGII), a vasoconstrictor, utilizes the Janus Kinase/Signal Transducers of Activated Transcription (JAK/STAT) pathway to increase blood pressure. We tested the hy-

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pothesis that NE also utilizes JAK2 activation to mediate its physiological responses. We used growth responses of vascular smooth muscle cell cultures, aortic contraction through myograph technology and blood pressure of male Sprague-Dawley rats with NE-infusion with and without AG490. AG490 is a JAK2 inhibitor. We also used Western blot experiments to measure protein activation and expression. We found that NE and PE do activate JAK2 in vitro and NE does use JAK2 to mediate contraction ex vivo and to raise blood pressure in vivo. Furthermore, PE also utilizes JAK2 to cause contraction ex vivo. These data suggest that PE and NE may activate the JAK/STAT pathway.

#119 Angiotensin II does not use JAK2 to maintain normal blood pressure.

Oakland University

Student Authors : Hind Al-Azawi , Dina El-Hout, Dominic Femminineo, Paola Yumpo-Cardenas

Faculty Advisors : Amy Banes-Berceli

Abstract : Angiotensin II (ANGII) is a hormone that is implicated in many diseases including diabetes and hypertension. Hypertension affects millions of patients and leads to complications including stroke, heart attack and kidney failure. Previous studies show that ANGII activates the Janus kinase 2 (JAK2) intracellular signaling pathway to cause high blood pressure in a rat model. It is unknown whether ANGII activates JAK2 for physiological actions. Therefore, we tested the hypothesis that ANGII activates JAK2 to maintain normal blood pressure under a physiological challenge. We placed rats on a low salt diet and measured their blood pressure, kidney function and tissue activation levels of JAK2 with and without the JAK2 inhibitor, AG490. Inhibiting JAK2 had no effect on ANGII's ability to maintain blood pressure and kidney function in the face of a physiological challenge. These data suggest that ANGII does not use JAK2 in physiological blood pressure responses only pathological ones.

#120 Molecular mechanisms of the Synergistic Potentiation Effects of Serotonin (5-HT) and Endothelin-1 (ET-1): involvement of the JAK2 and p42/44 MAPK pathways.

Oakland University

Student Authors : Hind Al-Azawi, Subha Bhaskaran, Jennifer Day, Jeremy Zaluski

Faculty Advisors : Amy Banes-Berceli

Abstract : We investigated the molecular mechanisms of 5-HT's ability to potentiate ET-1 stimulated contraction. Previous data suggests the potentiation mechanism involves activation of the p42/44 MAPK pathway. No data exists for involvement of the JAK2 pathway in this mechanism or whether this is a synergistic process. We tested the hypothesis that both the JAK2 and p42/44 MAPK pathways were involved in the potentiation. Using isolated vessel studies (thoracic rat aorta) in a myograph we measured the isometric tension generation. We found 1 nM 5-HT pre-incubation leftward shifted the EC50 value of the ET-1 concentration response curve and significantly increased the maximal response. These changes were inhibited by the JAK2 inhibitor AG490 and the p42/44 MAPK kinase inhibitor UO126. These data suggest that both pathways are involved in these potentiation mechanisms. Furthermore, we found that pre-incubation with ET-1 (10⁻¹² M) increased the maximal response to 5-HT; suggesting that this is a synergistic response.

#121 Performing Studies an Unending Story...

Oakland University

Student Authors : Matthew Barry, Julie Pete, Alycia Semrau, Matthew Semrau, Tim Williams, Kelly Cain, Ashley Franso, Nicholas Hooper, Kathleen Lombardo, Eugene Shin. Brian Gassen

Faculty Advisors : Aileen Sundstrom

Abstract : Performing Studies an Unending Story... From the enchanting performances of the Singers and Rhapsodes from Ancient Greece to the current changes and advances in Performance Studies we celebrate our future.

#122 Hybrid Vehicle Control System

Oakland University

Student Authors : Katarzyna Hyjek

Faculty Advisors : Mohamed Zohdy

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Abstract : Control system plays a very important role in hybrid cars. There is a need for communication and control of the two separate engines in a hybrid vehicle, among hundreds of other components. The purpose of a control system in a hybrid car is to keep the whole system stable, and it will be shown in this report how engineers use controls to keep the hybrid system stable.

#123 An Oniom Study of the Adsorption of Char Surfaces

University of Michigan - Flint

Student Authors : Kristopher Keipert

Faculty Advisors : Jie Song

Abstract : The shortage of fossil fuels has motivated scientists to investigate alternative fuels, especially from renewable biomass. Generating the fuel gas efficiently is a challenge. Technological advancement has developed the High Temperature Air Gasification (HTAG) method, which uses highly preheated oxidizing agents like air, oxygen, steam, or their decomposed components to produce fuel gas with high calorific values. Although it has been proven practical, the mechanism is still unclear. Theoretical investigations have been applied. Previous studies have used either zigzag or armchair models to simulate the interactions between neutral molecules or radicals and the edge of char, where the gasification itself occurs. This study extends previous work to include molecules between two edge models, which cannot be done using full ab initio approaches. The hybrid QM/MM approach is used to appropriate accurate treatment of interactions between the adsorbed molecule and two edges at an affordable computational cost. All calculations were done using Gaussian 09 and Gaussview 04 was used for visualization.

#124 Health and Social Challenges within Tobacco use in Spain

University of Michigan - Dearborn

Student Authors : Kaylyn Stanton

Faculty Advisors : Jorge Gonzalez del Pozo

Abstract : The history of tobacco use in Spain began in the middle of the sixteenth Century. It was first introduced as an herbal medicine to cure many illnesses and eventually it became a socially integrated drug, originally understood as pleasure and pain, in Spanish culture. This integration resulted in health problems within the population and has since contributed to the difficulty of stopping the growth of tobacco use. In addition to the cultural component, it has a social presence; tobacco use is related to smoking advertisements, is widely accepted and it represents a potential threat to the individual. Therefore, an important part of decreasing tobacco use in Spain involves a better understanding of the cultural beliefs about smoking, social tobacco acceptance patterns and the risk factors for those living in Spain. A thorough understanding of these combined influences within Spain will allow for the creation of effective cessation programs to reduce the negative health effects of smoking in the population.

#125 Clothing, Cross-dressing and Class in the City: Early Modern Economic Concerns in Thomas Dekker and Thomas Middleton.

University of Michigan - Dearborn

Student Authors : Paige Hanson

Faculty Advisors : Caitlin Finlayson

Abstract : Thomas Middleton and Thomas Dekker's joint work *The Roaring Girl* is centered around the contemporary London infamous personality Moll Cutpurse. The real-life Moll was known for her cross dressing, and much of action of the play's Moll is likewise concerned with this and the reaction of the characters around her. It is not just her cross dressing that creates fears and anxieties in this play. Middleton and Dekker also raise concerns about class distinctions and moving class boundaries, as well as concern about the changing face of the London economy. These issues also appear in Dekker's *The Shoemaker's Holiday*, both of these plays being city comedies that give the playwrights' views on London and reflect the social and economic concerns of the day through demonstration of proper economics and class movements.

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#126 Growing the Most Massive Black Holes in the Universe

University of Michigan—Flint

Student Authors : Justin Robbins

Faculty Advisors : Rajib Ganguly

Abstract : The growth of supermassive black holes in a “quasar” phase is a crucial ingredient in the evolution of massive galaxies. The growth process is observed to involve not only slow accretion of matter, but also the summary ejection of large quantities of matter from the black hole environment. These outflows potentially play a key role in the story of black hole growth and the evolution of their host galaxies, helping regulate the accretion process, and the star-formation rate and mass of the host galaxy. We are investigating a sample of 10000 quasars to characterize and describe how the structure and properties of quasar outflows changes from object to object, and to test potential drivers of outflows. We have defined our quasar sample spanning several orders of magnitude in intrinsic brightness using the data archives from Sloan Digital Sky Survey, The 2-Micron All-Sky Survey, and The Galaxy Evolution Explorer.

#127 Modeling, simulation and evaluation of teleoperator control systems

Oakland University

Student Authors : Jing Fan

Faculty Advisors : Mohamed Zohdy

Abstract : Teleoperation systems are used to perform remote and/or hazardous tasks by human operators. They are usually hampered by poor communication, delays and other difficulties stemming from the environment. Effective and new control systems are therefore desired to surmount any encountered obstacles, reject disturbances, and have wide flexibility. A lot of design and model methods related to overcoming time delay have been provided during the last few decades. I am going to work on these methods, summarize the disadvantages result in poor communication and environmental affects existing in teleoperation systems and simulate one of the control systems that are proved to be able to eliminate time delay. Finally, I will obtain delay models and method to overcome delay, obtain dynamics of teleoperation systems and ways to achieve system robustness. Simulations will be built to demonstrate the control system and prove that it really eliminate time delay.

#128 Michael Jackson and the Dance Influence of Bob Fosse

University of Michigan - Flint

Student Authors : Emma Davis

Faculty Advisors : Liz Kattner-Ulrich

Abstract : Before his death, Michael Jackson revolutionized his own dance style through many signature movements. But how original was his dancing? Almost 30 years before Jackson's fame, legendary choreographer Bob Fosse revolutionized a style of his own as well. Through research and analysis of text and videos, we can see the inherent similarities between Jackson and Fosse's dance styles, leading us to ask the question: Was Jackson's dancing influenced by the style of Bob Fosse?

#129 Willy Shakespeare: Seriously Silly

University of Michigan - Dearborn

Student Authors : Ruthanne Burke

Faculty Advisors : Caitlin Finlayson

Abstract : Willy Shakespeare's Flying Circus is a short film, a silly reinterpretation of a scene from William Shakespeare's Macbeth. However, just because it is silly does not mean it is mindless. In the true fashion of Monty Python's Flying Circus, which inspired Willy Shakespeare, messages don't fall by the wayside of comedy. The dialogue of the video, the prop choices, even the very premise of the characters meant a lot when it came to Shakespeare and Macbeth. I really enjoyed writing and directing this video and I believe that it has shown not only me, but the actors and those that viewed it that Shakespeare can be more than just a hum drum English topic, it can be fun!

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#130 Humor in Translation: capturing comedic effect in subtitles

Oakland University

Student Authors : Katie Hamilton, Brianne O'Connell

Faculty Advisors : Adolfo Campoy-Cubillo

Abstract : Abstract: When subtitling audiovisuals from one language to another, culturally specific content always presents interesting challenges for the translator. Humor is one of the areas where cultural differences often manifest themselves. The already demanding task of transculturating humor is complicated in the case of subtitling by the limited space the translator has to work with. This article presents the results of a study on how elements of humor from T.V. series and movies travel across languages, cultures and the different methods of subtitling. The focus is on the difficulties in successfully subtitling and dubbing Spanish audiovisual into the English language. The analysis is students report sleeping less than seven hours each night. Sleep deprivation is associated with poor academic performance, physical and mental health. One way to potentially alleviate the negative consequences of poor sleep among college students is through educational interventions. However, very few interventions have been conducted to disseminate knowledge on the importance of sleep quantity and quality. The overall objective of the study is to improve sleep knowledge among college students. To fulfill the objective, Oakland University students attended an interactive and educational session on the importance of sleep. They completed a general survey and a pre and post knowledge survey. Approximately 60% of students reported poor sleep quality. Sleep knowledge increased from pre to post intervention. Similar studies should be conducted to improve sleep among college students.

#131 Factors Related to Gossip and Verbal Aggression in Females

University of Michigan - Flint

Student Authors : Mike Alnarshi, Andrea Beaulieu

Faculty Advisors : Marianne McGrath

Abstract : Relational aggression is a ubiquitous part of social behavior. It is defined as a behavior that is meant to hurt others by damaging their reputation, friendships, and inclusion into social groups. Prior literature on the topic has generally supported the idea that females are more relationally aggressive than males. Gender role theory suggests that females who identify with a traditional feminine gender identity are more likely to use relational aggression in order to avoid using overt acts of aggression and to maintain social harmony. However, previous research involving relational aggression and gender roles have yielded inconsistent results. This article discusses the potential effects of social desirability on self-report measures of femininity and relationally aggressive behavior. Then, we propose a study that aims to measure relational aggression, gender role identity, depression, and childhood maltreatment in terms of social desirability to see how these variables interact with each other.

#132 Empirical Investigation of the Collective Unconscious with High School Students

University of Michigan - Flint

Student Authors : Michael Pauldine

Faculty Advisors : Marianne McGrath

Abstract : Carl Jung believed that the collective unconscious and its contents, the archetypes, were an inherited, innate, and universal phenomenon that represents a shared memory. Formative causation, a theory proposed by Rupert Sheldrake, has often been compared to the collective unconscious but takes a more naturalistic rather than a psychological stance. In order to test the universality of the collective unconscious across development, one hundred and seventy-nine high school students participated in a task that used correctly matched and mismatched symbol-word pairs from the Archetypal Symbol Inventory (ASI). Participants were asked to recall the word that was previously paired with a symbol when shown only the symbol. A highly significant difference was found between correctly recalled matched vs. mismatched symbol-word pairs, which supports Jung's theory of the collective unconscious, while the hypothesis testing Sheldrake's formative causation did not reach statistical significance. Integration with existing theory and the current literature is discussed.

#133 Usability Profiles at the Urban Health and Wellness Center

University of Michigan - Flint

Student Authors : Tracy Sweeney

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Faculty Advisors : Rie Suzuki

Abstract : People with disabilities have been less likely to obtain primary preventive clinical services because of the physical inaccessibility of equipment and buildings, and providers' lack of knowledge about these issues. Therefore, the purpose of this study is to examine physical accessibility and usability of outpatient clinics in the Genesee county area for people with disabilities (PWD). The Urban Health and Wellness Center at the University of Michigan- Flint was assessed during the fall semester of 2009 and reassessed during the spring of 2010. The rater independently used the Outpatient Health Care Usability Profile and the Kentucky Cabinet Survey to calculate the score, indicating that the higher % represented the usable. The results indicated that 100 percent of walks curbs and ramps were usable, along with 100 percent of passageways, water fountains, and emergency egress. On the other hand, signage (67 percent), telephones (63 percent), counters (50 percent), and ramps (zero percent) were less usable. The implications include the availability of ramps, re-designed signage, greater accessibility of counters, and adequately placed telephones in future modifications.

#134 "Never to be performed in public": Beethoven's promissory note in the "Quartetto Serioso," op. 95 in f minor, I

Oakland University

Student Authors : Megan Trehwella

Faculty Advisors : Melissa Hoag

Abstract : Beethoven warned his friend George Smart in a letter: "The Quartet (op. 95) is written for a small circle of connoisseurs and is never to be performed in public." I propose that Beethoven's reluctance to share the "Quartetto Serioso" in a public sphere may be due to the unusual presentation and resolution of the Neapolitan and related chromatic relationships throughout the Quartet's first movement. This essay will use motivic and voice-leading analysis to demonstrate how the Neapolitan and similar chromatic relationships are treated throughout the movement, taking Edward Cone's concept of the "promissory note" as a point of departure in structuring the analytical narrative. Cone's "promissory note" refers to a kind of musical "unfinished business" that is typically implied and then realized as a piece of music unfolds. Exactly to what extent, and through what means, Beethoven's promissory note finds resolution forms a central part of the analysis.

#135 Non-Traditional Students and College Involvement

Oakland University

Student Authors : Michelle Irvine

Faculty Advisors : Scott Crabill

Abstract : The purpose of this paper is to examine the problem of non-traditional students and their lack of involvement in college activities outside of the classroom. To effectively research this complex problem an interdisciplinary approach was taken, exploring the disciplines of psychology and communication for theories relevant to the problem. This research concluded that the complicated communication channels of the college often inhibit the non-traditional student's ability to comprehend the numerous messages being direct toward them as they are simultaneously focusing on the co-construction of their personal identities. Both the college institution and the non-traditional student share the responsibility of ensuring that social as well as academic needs are met while at college. To effectively address this problem the creation of the Non-Traditional Student Organization (NTSO) is recommended.

#136 Raman Spectroscopy for Cancer Detection in Frozen Pediatric Tumors: Effects of Freezing/Thawing on Raman Spectra

University of Michigan - Dearborn

Student Authors : Alexander Auner

Faculty Advisors : Ratna Naik, Vaman Naik

Abstract : There are currently thousands of frozen tissue samples available for analysis. The ability to rapidly investigate and diagnose these tissues is critical to advancements in cancer diagnosis. This study investigates the effect of freezing and thawing tissue samples on the Raman spectra and the ability of Raman spectroscopy to classify the cancerous tissue. Raman spectroscopy, an optical technique which measures the change in energy of the inelastic scattering of photons by molecules, can be used to identify discrete changes in tissue composition and has the potential to diagnose differences between

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benign and cancerous tumors. This study will examine our findings when malignant tumor samples were frozen and analyzed over the course of a month, as we took a detailed spectrum every week to look for the effect freezing the tissue had on the data result over time.

#137 A Synthesis of the Three Phases of the Pursuit of Happiness Project Oakland University

Student Authors : James Byrne, Kaitlyn Harding, Emily Olthof
Faculty Advisors : Robert Stewart

Abstract : The Pursuit of Happiness Project was initiated in 2008. The first phase investigated the impact of savoring on psychological well-being (PWB) and satisfaction with life (SWL). Savoring the moment and anticipating the future had significant impacts on PWB and SWL even though reminiscing about the past was the predominant form of savoring. Savoring the moment was the best predictor of each subdomain of PWB, and self-acceptance was the subdomain of PWB having the most pronounced impact on SWL. The second phase tested the effectiveness and subjective appeal of happiness-enhancing exercises. Significant increases in happiness, SWL and four subdomains of PWB were obtained across the 12-week intervention. The third phase assessed a shorter intervention comprised of the most effective exercises identified in the previous study. Significant increases in savoring the moment and anticipating the future were obtained, as well as in happiness, SWL and two subdomains of PWB.

#138 Temporal Aspects of Savoring: Implications for Psychological Well-Being and Satisfaction with Life Oakland University

Student Authors : James Byrnes, Kaitlyn Harding, Emily Olthof
Faculty Advisors : Robert Stewart

Abstract : Although Bryant and Veroff (2007) identified three distinct patterns of savoring relative to time (reminiscing about the past, savoring the moment, anticipating the future), little is known about how these capacities characterize patterns of behavior or influence PWB and SWL from a typological perspective. Four distinct clusters of individuals were identified via k-means clustering: savoring highly in all three time frames, savoring the present or past but not the future, savoring the past or future but not the present, and not savoring highly in any time frame ($\chi^2_{(df=9)} = 741.24, p < .001, N = 328$ undergraduate students). Between group differences, with each cluster being different from the others, were revealed with the six subdomains of PWB and with SWL. Highest levels of PWB and SWL were found with those who savor in all three time frames, with lower levels observed the present/past, past/future, and low in all time frame groups respectively.

#139 Evaluation of a STD Knowledge Intervention among College Students Oakland University

Student Authors : Jennifer Dodt, Brandon Elliott, Michael Gerasimovich, Johnna Lozenkovski
Faculty Advisors : Florence Dallo

Abstract : The objective of the study was to evaluate pre- and post- STD knowledge after an educational intervention among 113 Oakland University students. Students completed a survey that included demographic, health behavior, and 16 true/false knowledge questions. The intervention was delivered as a Jeopardy style game. The post survey included only the 16 knowledge questions. We used t-tests to examine whether there were differences in knowledge between pre and post tests. Then, we specified a Fisher's exact test to test the significance of the variables from the t-test. Of the 16 knowledge questions, 5 statistically and significantly changed from pre- to post-intervention. Individuals > 20 years of age, female, white, and who had never been tested for an STD showed significant changes in improved knowledge from pre to post intervention ($p < .05$). A brief interactive intervention among college students is an effective way to begin a conversation about STDs.

#140 A Brief, Educational Intervention Increases Sleep Knowledge among College Students Oakland University

Student Authors : Kate Adams, Niccole Malone, Jessica Pomaranski, Erin Pyykkonen, Stephanie Vogel, Maria Dopierala, Ashley Sullivan
Faculty Advisors : Florence Dallo

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Abstract : In the US, 25% of Americans are sleep deprived. Of this population, college students are highly affected. In fact, 70% of college students report sleeping less than seven hours each night. Sleep deprivation is associated with poor academic performance, physical and mental health. One way to potentially alleviate the negative consequences of poor sleep among college students is through educational interventions. However, very few interventions have been conducted to disseminate knowledge on the importance of sleep quantity and quality. The overall objective of the study is to improve sleep knowledge among college students. To fulfill the objective, Oakland University students attended an interactive and educational session on the importance of sleep. They completed a general survey and a pre and post knowledge survey. Approximately 60% of students reported poor sleep quality. Sleep knowledge increased from pre to post intervention. Similar studies should be conducted to improve sleep among college students.

#141 The Evaluation of an Education Workshop Designed to Introduce the Elements of Primary Nursing

University of Michigan - Flint

Student Authors : Deborah King

Faculty Advisors : Susan Guzelaydin, Mary Killeen

Abstract : The Evaluation of an Educational Workshop Designed to Introduce the Elements of Primary Nursing This poster presentation represents the evaluation of an educational workshop designed to introduce the elements of primary nursing. Crittenton Hospital Medical Center, located in Rochester Michigan, began a journey in Relationship Based Care in 2005. The organization is committed to providing patient centered care. Recently, nursing leadership decided to implement a Primary Nursing model of care delivery. The appraised literature related to patient centered care provides strong evidence to support the implementation of this care model. This evidence-based project evaluates the workshop designed by the organization's Innovation Team to introduce Primary Nursing. Upon completion of the workshop will the participants be able to identify the four elements of Primary Care Nursing and demonstrate the ability to develop a plan of care based on these elements? The outcomes will be evaluated by comparing a pre and post evaluation using a five point Likert Scale. This systematic, evidence-based project assisted the clinical setting in meeting organizational goals.

#142 University Nursing Students and Public School Health Collaboration

University of Michigan - Flint

Student Authors : Audra Eller, Jennifer Rugg

Faculty Advisors : Kimberly VanSlyke

Abstract : Through a community assesment project, a collaborative was created between a university nursing program and a public school district to link nursing students and alternative high school students for the purpose of providing health education, community resource access, health screenings and clinical experience. The program was designed by university nursing students and high school faculty after critical health disparities were identified in the assessed school district. A community health nursing clinical was created placing eight to 10 student nurses in the school district to address these disparities. Some education topics include substance abuse, domestic violence and bullying/anger management. Further plans have been developed to include placing nursing students in all district buildings to help address identified health issues specific to individual building student populations.

#143 Behind the Curtain: Music in the Age of Stalin

Oakland University

Student Authors : Brian Wigman

Faculty Advisors : Dana Driscoll

Abstract : When Joseph Stalin died on March 5, 1953, millions poured into Red Square to pay tribute to a man who was then hailed as a hero of the Soviet Union. However, another man who lived near the square also died that day, largely forgotten in the massive celebrations for Stalin. That man was Sergey Prokofiev, one of the greatest composers of the 20th century. Yet even for the musical world, the death of the tyrant may have been more important than that of the musician. The death of Stalin began a slow change in Soviet music that allowed for art to be expressed more freely. This project will examine the role of music as propaganda during the Stalin era, and will attempt to demonstrate the power of art in a dictatorship.

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#144 Islamic Banking

University of Michigan - Flint

Student Authors : Raghad Rabah

Faculty Advisors : Kenneth Schilling, Maureen Thum

Abstract : The Islamic Sharia law encompasses all aspects of living for Muslims in this world. It covers everything from what to eat, what to wear, marriage, and even economy. In the book of Islam, Quran, Muslims have been prohibited from using interest, whether borrowing or lending. It has been previously prohibited in other religions too. In Judaism, Jews are prohibited from lending other Jews with interest. In Christianity, it was prohibited but now widely accepted and the basis of Western Banking. Because borrowing with interest has been forbidden, Muslims have created Islamic banks to cope with the consumer-driven world. Islamic banks are interest free banks that charge fees instead of interest. They have several loans a consumer may take out. The first is called murabaha, the second is mudaraba, and the third, musharaka. Some Western banks have found that Islamic banking is successful, and have pursued it partially.

#145 "Helena and Hermia: Unconventional Women of the Renaissance"

University of Michigan - Flint

Student Authors : Shahd Karrar

Faculty Advisors : Maureen Thum

Abstract : In Shakespeare's time women were expected to behave in conventional ways, and to be chaste, silent, and obedient. They were not expected to act unexpectedly or to take a leading role in their relationships with men. In a Midsummer Night's Dream, Shakespeare challenges their social norms by portraying two female characters, Hermia and Helena, who step outside expected female roles but who are not punished for their transgressions. Helena and Hermia challenged their era's customs and values by disobeying the rules of marriage imposed on them, pursuing their lovers instead of being pursued, venturing off into unknown darkness with unrelated males without consent, and having public arguments which presented them in an open and outspoken manner. In the four way love story Shakespeare has created, Hermia greatly defies the most important womanly rule which was to respect and obey the regulations of marriage set down by the head male figure of her household. Helena and Hermia challenge another social norm by running away into the forest to pursue their lovers without the consent and approval of their fathers. While in the forest chasing after Demetrius, Helena displays another transgressive behavior by pursuing a man for his love and affection instead of being pursued. In a time when women were never to engage in public arguments and disputes, Hermia and Helena repeatedly disregarded this prohibition throughout the play. In a time where men were dominant and women were symbols of modesty, Shakespeare stepped across untouchable lines and ventured into a plot where women's roles emerged as deviant from those of its time period.

#146 Are You There God?: Children's Perceptions of Religion and Spirituality

University of Michigan - Dearborn

Student Authors : Fauzieh Dabaja, Alexander Johnson Klein, Sandra Kumm, Vanessa Montemayor, Kristen Nabozny

Faculty Advisors : Diane Graves Oliver

Abstract : Religious and spiritual beliefs play a significant role in the lives of American adolescents as evidenced by estimates that over 85% of teenagers affiliate with an organized religion, 80% pray, 40% pray daily, and more than half attend religious services at least monthly. Religiosity in adolescents has been linked positively to healthier diets, exercise, and self-esteem, and negatively to alcohol and drug use, early sexual behavior, delinquency, depression and suicide. Despite the known association between adolescent religiosity and health risk behaviors, little research exists on how religiosity develops in children. This study investigated children's perceptions of religion and spirituality, as well gathered information regarding methods to measure these perceptions. Participants represented a community-based sample of school-age children and their parents from diverse religious traditions. Families participated in small focus group discussions. Content from the focus groups was analyzed to identify salient themes, vocabulary, and target areas of future research inquiry.

#147 I'm not sure I want to eat... Exploring Juvenile Diabetes and Eating Behavior

University of Michigan - Dearborn

Student Authors : Cassandra Haupt

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Faculty Advisors : Diane Oliver

Abstract : The prevalence of diabetes mellitus in children and adolescents is increasing at a significant rate. In 2007, the number of children nationwide with diabetes was 186,300 or .2% of the population. The annual rate of new type 1 diabetes diagnosis was 19 per 100,000 (2007 National Diabetes Fact Sheet, 2008). Management of this chronic illness requires patience, perseverance, time and dietary restrictions. These key adjustment factors may prove particularly challenging for children. This study examines key links between type 1 diabetes and its treatment, and adolescents' psychosocial well-being. Special emphasis is placed on examining links between chronic illness and depression, self-esteem, and disordered eating behaviors. This project serves as the foundation for an empirical study of the relationships between a new diagnosis of type 1 diabetes and these factors as well as links with peer relations, children's and parents reactions to diagnosis and perceived and actual dietary restrictions.

#148 Getting a Grasp on the Faith of Young Christians: The Visions Christian Nightclub and the Spiritual Journey of Contemporary American Youth

University of Michigan - Dearborn

Student Authors : Matthew Kerry

Faculty Advisors : Claude Jacobs

Abstract : Recent findings of the PEW Forum reveal that Nondenominational Christianity is on the rise and 44% of Americans do not remain in the denomination or religion of their youth. Among contemporary American youth, nondenominational Christianity has taken on new forms. This paper examines one of these new forms: the weekly worship at Visions Nightclub in Lansing Michigan. In order to appeal to young people, the worship is filled with rock music and technology. Survey results of young people at Visions and an on campus Intervarsity Christian Fellowship illustrate the spiritual journey of these youths. The results of this survey are compared to those of recent larger surveys. Many of these young people prefer a more personal relationship with God and believe that the rules and traditions of mainstream Christianity take away from this bond and what is important for them: the Gospels and teachings of Jesus.

#149 Changes in the Interpersonal context of sexual behaviors

Oakland University

Student Authors : , Kristen Castelveter, Aimee Coldren, Rachel Ocker

Faculty Advisors : Sylvie Lombardo

Abstract : Partnered sexual activity occurs within a specific interpersonal context which may or may not be conducive to healthy sexual decision making. The goal of the current research is to compare the relationship contexts associated with sexual and reproductive health behaviors among college students. Eighty-two heterosexual male and female college students (age 19-21; 69% females) attending a 4-year college in the Midwest participated in the study. All participants were enrolled in psychology classes and received class credit for their participation. A paper-pencil questionnaire was administered in a classroom setting and results focus on comparing the interpersonal context of the 1st and last sexual encounters. Interpersonal dimensions relevant to sexual decision making such as communication, relationship status, demographic characteristics of partners, assumptions about physical and emotional faithfulness, as well as attitudes towards contraceptive methods are reported.

#150 How to Read Minds: Improving Interpersonal Reality Monitoring

University of Michigan - Dearborn

Student Authors : Amal Alghami, Michelle Beddow, Curtis, D. Dobbs, Michelle Evans, Eric Wu

Faculty Advisors : Arlo Clark-Foos

Abstract : In past research from our lab, participants decided whether other people's descriptions were either of imagined or real events (Interpersonal Reality Monitoring). We demonstrated that people can make this decision above chance and they can improve with either training or feedback. We did not, at the time, understand the nature of this improvement. To wit, a highly detailed, qualitative analysis of participants' written memories was the goal of the current research. Several trained researchers subjected the original memories to a memory characteristics questionnaire (MCQ; Johnson, Foley, Suengas, & Raye, 1988). Preliminary analyses suggest that although our participants' descriptions of real and imagined events do not

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differ in most ways, they do begin to depart in their quantity of retrieved memories for spatial information, with memories of real events containing more references to spatial locations of objects. Applications of these data to eyewitness testimony and deception will be discussed.

#151 Gender differences in the interpersonal context of sexual encounters of college students

Oakland University

Student Authors : Samantha Heuwagen, Ellen Archey, Kathy Bolton, Oksana Fedorak
Faculty Advisors : Sylvie Lombardo

Abstract : Several factors such as the casual or committed nature of the relationship, the length of the relationship, and the age difference among partners have been identified as important factors contributing to decisions and attitudes towards HIV-preventive behaviors. In addition, metaanalytic evidence suggests that the impact of these factors seems to be moderated by gender. Thus the goal of the current research is to report gender differences in the interpersonal contexts of sexual behaviors among college students. Eighty-two heterosexual male and female college students (age 19-21; 69% females) attending a 4-year college in the Midwest participated in the study. All participants were enrolled in psychology classes and received class credit for their participation. A paper-pencil questionnaire was administered in a classroom setting and results focus on comparing the interpersonal context of the 1st and last sexual encounters across gender.

#152 Test-retest reliability of self-reported interpersonal characteristics of sexual behaviors

Oakland University

Student Authors : Candace Lambert, Andrew Madison, Amy Noser
Faculty Advisors : Sylvie Lombardo

Abstract : Sexual health researchers typically rely on self-reports to assess the prevalence of sexual behaviors. Biases due to incorrect recall and desirable responding can introduce errors in predicting individual risk. In addition, test-retest studies are rarely partner specific and rather focus on sexual behaviors occurring within a specific time period. Thus, the goal of the present study is to assess the reliability of self-reported sexual history using partner referent methods. Eighty-two heterosexual male and female college students (age 19-21; 69% females) attending a 4-year college in the Midwest participated in the study. All participants were enrolled in psychology classes and received class credit for their participation. A paper-pencil questionnaire was administered in a classroom setting and results focus on the reliability of self-reported sexual and contraceptive behaviors occurring in the specific interpersonal context of the 1st and last sexual encounters.

#153 How to Complete a Program or Agency Evaluation

University of Michigan - Flint

Student Authors : Staci Hines
Faculty Advisors : Denise Dedman

Abstract : To conduct and complete a program or agency evaluation, that is accurate and concise there are multiple steps in the process that need to be taken and evaluations of the process at each step. It is beneficial to have multiple participants in the process so that much of the related literature is being reviewed, while the researchers are looking at the tangibles within the agency, including the data regarding the population the agency serves, the mission or desired outcome of the agency, the employees and in the best circumstances individuals being serviced by the agency whenever possible. The information being presented here contains data directly related to a recently conducted agency evaluation by the University of Michigan-Flint, Social Work Department.

#154 Toxic Web-The Movement of Heavy Metals Through Terrestrial Food Webs

University of Michigan - Dearborn

Student Authors : Amneh Awad, Samantha Michaels
Faculty Advisors : Anne Danielson-Francois

Abstract : Spiders are top invertebrate predators in terrestrial food webs and yet little is known about whether they bio-accumulate significant levels of anthropogenic pollutants such as heavy metals. In this study we collected orb-weaving and

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terrestrial spiders, prey items, soil and water samples from 10 sites along the lower branch of the Rouge River as well as from two more pristine sites near the start of the middle Rouge River: Johnson Creek in Northville and the Huron River in Pinckney. Rouge River sites were sampled from June to August to observe any short and long-term changes in the soil and water quality. The spiders, prey items and soil samples will then be analyzed for toxic heavy metals using the recently acquired departmental ion coupled plasma mass spectrometer. Our analysis of the data will be based on data collected, as well as spider size and maturity. Using this data, we will compare the levels of toxic heavy metals in spiders based on location, spider species, sex and size. Our results will show how pervasive toxic heavy metals are in the food web, and which pose the most significant threat to spider species. This is a ground-breaking study as it will be the first longitudinal study of heavy metal accumulation in any spider.

#155 New Hampshire's 1st Congressional District

Oakland University

Student Authors : Jordan MacIntosh

Faculty Advisors : David Dulio

Abstract : A case study of the Congressional race in New Hampshire's 1st congressional district between the Republican Frank Guinta and the Democrat Carol Shea-Porter. I discuss the district itself, including its demographics, major industries, and its past election and how these factors played in the 2010 election. The paper analyzes the election from the party primaries through the general election in November, as well as an analysis of the results. Within the analyses I look at polls, newspaper articles, campaign commercials, debates and other sources. The paper also discusses the issues that were focused on during the campaign, both national and local. I analyze all of these issues and attempt to draw conclusions about the results of the election, and why it turned out the way it did.

#156 Teaching computer networking

University of Michigan - Flint

Student Authors : Takira Powell

Faculty Advisors : Suleyman Uludag

Abstract : Computer networking courses are being challenged by the industry to produce a workforce that is capable of handling the dynamic and fast pace of the industry. Educators are reevaluating their approaches and curricula in order to meet the industry's demand. This spring board effect is not just limited to networking but to all aspects of the computing industry. Since being faced by this challenge, a number of views have been posited in the literature. This paper has two parts. Part one evaluates the literature on the techniques used in teaching computer networking courses to create a taxonomy. The second evaluates these approaches under the light of the ever-evolving skill set demanded by the industry and provides a discussion of future directions and promising areas to take the networking courses to the next level.

#157 The Last Picture Show- Detroit's movie palaces and art house theaters

Oakland University

Student Authors : Kenneth Espejo

Faculty Advisors : Adina Schneeweis

Abstract : My project is a photo exploration on three different cinemas in the Detroit area. The Redford Theater, Main Art Theater, and the Detroit Film Theater are a rare breed in an age of multiplexes and home entertainment.

#158 Alcohol Consumption and Drunk Driving Personalized Normative Feedback Intervention Conducted with Freshman College Students

Oakland University

Student Authors : Hillary Bocknek

Faculty Advisors : Michele Purdie

Abstract : Recent research suggests that college students often overestimate both the frequency and quantity of alcohol that other students consume (Lewis et al., 2007). Although ample research on drunk driving exists, very little research has exam-

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ined the effects of normative perceptions on drunk driving. The present study examined Oakland University freshmen students' normative perceptions of upperclassmen's alcohol consumption, drunk driving, and alcohol-related consequences. To establish drinking and driving norms, 246 upperclassmen were surveyed. Following this, 104 freshman students were surveyed to examine perceptions of college students' normative drinking behaviors. Results showed that both male and female freshman students overestimated the frequency of alcohol consumption, the frequency of binge drinking, and the average number of drinks consumed. Freshman students also showed inflated perceptions of the number of times students have been a passenger in car driven by a drunk driver and the number of times students have driven drunk.

#159 Approaches to the Synthesis of LY426965

Oakland University

Student Authors : Eric Salo

Faculty Advisors : Nesson Kerrigan

Abstract : β -Lactones have proven to be versatile compounds in the synthesis of complex molecules of interest to the pharmaceutical industry. Our group has targeted the synthesis of LY426965 for study as it is a serotonin 1A receptor antagonist with interesting biological activity. We discovered that ring-opening reactions of β -lactones with organolithiums give rise to an enolate intermediate that can be trapped with a variety of electrophiles. Previously we had found that using *n*-BuLi as a ring-opening nucleophile, with propionyl chloride added as an electrophile, gave rise to an enol ester. Such a molecule has potential as an intermediate for the synthesis of LY426965. Therefore current studies have been directed towards using *c*-hexyllithium for the ring-opening and then trapping the enolate intermediate with either an oxaziridine or propionyl chloride (as the electrophile). Future work will involve optimizing the ring-opening reaction conditions as well as continuing the synthesis of the LY426965 molecule.

#160 Emergent Theme Analysis of College Student Perceptions of Prosocial Behavior

Oakland University

Student Authors : Hillary Bocknek, Jacenta Gabriel, Mary Lewis

Faculty Advisors : Mary Lewis

Abstract : The present study examined whether the type and frequency of prosocial behavior provided to a beneficiary is linked to closeness in relationships. Participants ($n = 97$; 50 females and 47 males) were asked to list examples of prosocial behavior they provided in close relationships (e.g. family) and in non-close relationships (e.g. with strangers or acquaintances). Using an emergent theme procedure, participants' examples were coded. Themes, such as providing assistance, showing affection, and intervening in disputes among others have been identified. Results show the emergent themes, frequency of occurrence and the resulting questionnaire, Opportunities for Prosocial Action (OPA). In a second study, we investigated the ways in which college students' reports of prosocial behavior using the newly developed questionnaire, OPA, were associated with personal tendencies for behaving prosocially and interpersonal perceptions (including empathy and perspective taking). The discussion focuses on the future applications of the OPA questionnaire.

#161 Hormone-Like Effects of BPA on Tumor Suppressor Genes in Breast Cancer Cells

Oakland University

Student Authors : Jayme Jackson, Philemon Tesfazghi, Tabitha Zakar

Faculty Advisors : Sumi Dinda

Abstract : Bisphenol A (BPA) is an organic compound used in the production of polycarbonate plastics and epoxy resins. Increased use of BPA has been associated with possible health hazards. Numerous studies have shown that rats exposed early in life to BPA have an increased susceptibility to mammary tumorigenesis, leading to concerns about its ability to cause breast cancer in humans. We have previously shown that presence of estradiol (E2) in growth medium causes a) proliferation of T47D breast cancer cells, b) elevation of p53 levels, and c) hyperphosphorylation of retinoblastoma protein (pRb). Inactivated p53 and pRb can influence transformation of a normal cell to its malignant state. In the present studies, we have examined the expression of p53, phosphorylation state of pRb and proliferation of T47D cells in the presence of BPA. Our observation suggests an increased expression of p53 in T47D cells treated with BPA in a concentration dependent manner (1nM-2uM).

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#162 Alignable and Nonalignable Differences

Oakland University

Student Authors : Andrew Madison

Faculty Advisors : Cynthia Sifonis

Abstract : Research reported by Sifonis (2008) has demonstrated that the type of comparison made during analogical problem solving affects the quality of the ideas generated. Ideas generated by mapping the differences between domains are rated as less practical and yet more creative than ideas generated by mapping the similarities. The current study examines whether these effects of comparison could be due to mapping alignable or nonalignable differences between domains. The data used in the Sifonis (2008) study were examined to determine whether participants used alignable or nonalignable differences between domains to generate ideas for the source domain. Analyses indicated that ideas generated using alignable differences are more practical, while ideas generated using nonalignable differences are more creative. Consistency of participant responses are also examined and related to the participants average practicality, creativity and originality of responses.

#163 Expression Constructs of Two Ponticulin-Related Genes

Oakland University

Student Authors : Nicholas Collins, Kai Schmidt

Faculty Advisors : Anne Hitt

Abstract : Ponticulin, a small trans-membrane protein, is the major high affinity link between the plasma membrane and the F-actin cytoskeleton of *Dictyostelium discoideum*. We have identified three ponticulin related genes based on protein homology. The genes are differentially expressed in *D. discoideum* life cycles. Two of the ponticulin related genes (*ponC* and *ponD*), are being cloned into a bacterial expression vector (pTRCHIS) as a HIS tagged fusions, and a *D. discoideum* expression vector as a RFP tagged fusions. Bacterially expressed, protein will be isolated and tested for F-actin binding activity. *D. discoideum* expressed protein will be tagged with RFP for functional studies.

#164 Media Portrayal of Detroit

Oakland University

Student Authors : Teresa Dwyer, Bethany Greenhow

Faculty Advisors : Garry Gilbert

Abstract : This presentation will investigate the media portrayal of the city of Detroit told from a journalistic viewpoint. The research will mainly rely on interviews with members of national and local media, local politicians, and current Detroit residents. Some of the topics addressed will be: National vs. local media coverage Is the negative portrayal accurate? Deserved? The role and responsibility of the media The future of Detroit and the role media coverage has in it The research will be compiled into a video presentation, and a photo essay. The goal for this project is to examine the future of Detroit and the role and responsibility of the media in that future.

#165 Narratives Without Compartments

University of Michigan - Dearborn

Student Authors : Eman Elshaikh

Faculty Advisors : Elias Baumgarten, Maureen Linker

Abstract : The pursuit of knowledge is an often excluded virtue; some have even labeled it a vice if it continues unmitigated. At this intersection of virtue ethics and epistemology, this concept is examined simultaneously from an angle of plausibility and morality. The narrative view of ethics contextualizes virtue within the scope of one's life and the story of which he or she is a part. Quine puts forth an epistemological view that all knowledge is a function of a particular context. Such a discussion reaches even beyond philosophy into areas of mathematics and physics, where the pursuit of absolute knowledge collides with analytic concepts of uncertainty, lack of definition, and the obliteration of context. While considerations of narrative and cohesiveness are important, there exist ideas that transcend particular narratives of morality and truth. My thesis demonstrates that complementary narratives may exist, and their intersections may have implications for objective knowledge. It is

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the uniting narrative, a story where multiple gaps exist. It is fruitless to discuss knowledge in isolated compartments. In recognizing a universal context for knowledge, it becomes evident that there exists a moral imperative to integrate virtues in a comprehensive narrative.

#166 Bankers and Industrialists: A Longitudinal Analysis of Corporate Directors, Network Centrality and Political Contributions between 1983 and 1995.

University of Michigan - Flint

Student Authors : Samantha Honea, Daric Thorne

Faculty Advisors : Roy Barnes

Abstract : Utilizing data on corporate board memberships and political contributions, this paper describes the changes in network characteristics and political contributions by type of director. Building upon a rich literature of power structure research and political contributions among interlocking directorates, the analyses begin by describing differences in two measures of network centrality and one measure of network cohesion by the director's primary type of affiliation – financial, large industrial, industrial, utility or transportation – between 1983 and 1995. The second set of analyses compare patterns of political contributions across time among the directors by their primary type of corporate affiliation. The final set of analyses explores whether political contributions can predict network characteristics or whether network characteristics can predict political contributions in each of the two time periods.

#167 Perceptions of Geriatric Physical Therapy

University of Michigan - Flint

Student Authors : Christina Sweet

Faculty Advisors : Jennifer Blackwood

Abstract : With a growing percentage of the US population becoming 65 and older there is an increased need for persons with geriatric expertise. However, recent literature indicates that there is very little interest among medical, nursing and rehabilitation students to pursue a future career in geriatrics. For the past 4 months I have worked with a professor in the Physical Therapy Department researching and surveying the current attitudes, perceptions and interest of working with the elderly among Doctor of Physical Therapy students. At MOM I would like to present our findings thus far as well as a summary of how we are currently surveying the perceptions of U of M's DPT students.

#168 Legal Services Corporation Local Website Analysis

University of Michigan - Flint

Student Authors : Dan Burbar, Michael Whalen

Faculty Advisors : Dana Dyson, Kathryn Schellenberg

Abstract : The Legal Services Corporation provides funds to local legal agencies that work to serve low-income Americans. Recently, there has been a push to create online legal aid services to reduce costs and create greater accessibility for the poor. However, it is questionable as to whether the poor have the educational background to navigate the complex legal aid service websites. In this study, an examination is conducted on the average grade level and readability of legal service websites throughout the United States.

#169 Social Aspects of Posttraumatic Growth: How Disclosure and Satisfaction facilitates a Greater Feeling of Relating to Others

Oakland University

Student Authors : Thomas Butler, Sean Callan, Valarie Pierson

Faculty Advisors : Kanako Taku

Abstract : Positive changes after struggling with a trauma, known as Posttraumatic Growth (PTG), are assessed using the Posttraumatic Growth Inventory (PTGI), a self-report measure with five domains. A comprehensive model of PTG identifies disclosure as an indirect mechanism that facilitates growth. Sharing the details of a trauma with others may be important in

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coping and finding meaning. However, growth may be affected by how satisfied an individual is with choosing to disclose. The effects of disclosure and an individual's satisfaction with choosing to disclose on the Relating to Others domain of the PTGI will be examined. With a sub-sample of 200 undergraduates, a hierarchical regression analysis will determine any collective influence of these variables, while also determining the independent influence of disclosure on the Relating to Others domain. The combination of disclosure and satisfaction should predict Relating to Others domain scores. Clinical utility and future directions will be discussed.

#170 Timing of Sperm Activation in a Funnel-Weaving Spider (Agelenidae)

University of Michigan - Dearborn

Student Authors : Sabah Gagnon, Samaa Lutfi, Salam Neshewa, Bhumi Patel

Faculty Advisors : Anne Danielson-Francois

Abstract : Spiders have an unusual reproductive system in the sense that male sperm remains immobile until activated in the female spermathecae. We examined the timing of sperm activation in the species *Agelenidae pennsylvanica* collected from the University of Michigan-Dearborn. To observe the timing of sperm activation, staged matings were conducted in the laboratory and females were frozen at different time increments after mating. The sperm inside the spermathecae was found to be in several different morphological states including encysted, flagellated, and coiled. We found that females frozen immediately after mating had higher percentages of encysted sperm compared to females frozen at later days. We will also conduct histological sections of the female reproductive organ to localize areas of sperm activation for each time point in the series. This research will be the first to demonstrate the location of activated sperm within the female spider's reproductive tract. A more thorough understanding of sperm activation will help shed light on the unique and understudied reproductive system of spiders.

#171 A Mathematical Model of Brain Tumor: miR451 Regulation

University of Michigan - Dearborn

Student Authors : Soyeon Roh

Faculty Advisors : Yangjin Kim

Abstract : Glioblastoma multiforme is the most common and the most aggressive type of brain cancer. The median survival time from the time of diagnosis is approximately one year. GBM is characterized by the hallmarks of rapid proliferation and aggressive invasion. Cancer cells must adapt to a dynamic and challenging microenvironment in order to sustain tumor growth. A microRNA (miR451) has been known to play a key role in microenvironmental adaptation in glioblastoma by modulating the balance of active proliferation and invasion in response to metabolic stress. Abundant glucose promotes cell growth by inducing high miR-451 expression. In low glucose, proliferation is slowed down but migration and survival are enhanced allowing cells to survive metabolic stress, and seeking out favorable growth conditions. We develop a mathematical model which includes the rapid proliferation in the spherical core and invasion outside spheroids. The model takes into account miR-451 regulation on the invasion/growth.

#172 The Roads of Coba, Quintana Roo, Mexico

University of Michigan - Flint

Student Authors : Taylor Martinez

Faculty Advisors : Beverley Smith

Abstract : At the Mayan site of Coba, Quintana Roo, Mexico there is a network of over 50 roads; only two of which connect to other sites. Many of the roads in Coba have never been proven to leave the site itself despite Coba's known trade and control throughout the Yucatan peninsula. Evidence indicates, however, that an inter-site road system would have been needed in the region. Using various document types, artifacts assemblages and oral accounts, this presentation examines the evidence of the need to build and maintain a road system. The archaeological evidence for roads in the Yucatan is considered, whether a mythological pathway, a foot worn pathway or a paved road. The evidence shows that roads were deeply engrained into Mayan's daily lives, culture and history.

#173 Sperm Competition and Release Patterns in a Funnel-Weaving Spider (Agelenidae)

University of Michigan - Dearborn

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Student Authors : Sabah Gagnon, Samaa Lutfi, Salam Neshwait, Bhumi Patel

Faculty Advisors : Anne Danielson-Francois

Abstract : The male funnel-weaving spider transfers a relatively large amount of sperm during a single mating and extended mating time alludes to intense sperm competition in the species. The male spider's body index in relation to sperm count in the left and right palps were examined to confirm the existence of sperm competition in two species of funnel-weaving spiders, *Agelenidae pennsylvanica* and *Agelenidae longistylus*, collected from the University of Michigan-Dearborn campus. To observe sperm transfer, staged matings were conducted in the laboratory and males were frozen immediately after mating to preserve the amount of sperm in each palp. By analyzing the correlation between the body index and the average amount of sperm transferred per palp, we can establish whether it is advantageous for the male funnel-weaving spider to be of a larger size, in comparison to females and other males, and whether the right or left palp is favored during mating.

#174 The Central Nave of Saint-Séverin as Photographed by Eugène Atget

Oakland University

Student Authors : , Muamer Lojo

Faculty Advisors : Claude Baillargeon

Abstract : The Central Nave of Saint-Séverin as Photographed by Eugène Atget In a photograph of the church of Saint-Séverin taken by Eugène Atget in 1903, the central nave, devoid of worshipers, is graced by light flowing into the structure through a multitude of stained glass windows illuminating the interior. Most significant is the light flooding the space above the organ. An abstract angel that the naked eye could never see without aid appears to be descending into the church. This aid comes in the form of photography and Atget's mastery of the medium. Atget's passion for photography led him to take thousands of images through the only medium capable of capturing such a wonderful glowing angel, which the eye simply cannot see on its own. As I wish to show in this presentation, photography becomes Atget's seeing tool and the means to capture such evocative imagery as the angel of Saint-Séverin.

#175 Detroit Style Zen

University of Michigan - Dearborn

Student Authors : Laura Burgher

Faculty Advisors : Claude Jacobs

Abstract : The practice of Zen Buddhism originated in China in the 7th century and spread throughout Asia. These countries have a very strong traditional collectivist culture. The Still Point Zen Buddhist Center in Detroit, MI comes from a Korean tradition, and practices much of the traditional rituals and symbols. While the traditions are represented, the ethos is of a more modern variety. All of this is taking place within the individualist United States culture. This paper will examine the fusion of the rituals and symbols from a traditional collectivist culture, and the modern day individualist ethos. The Westernization of Zen shows us how the Eastern and Western worlds merge and what the role of the individual in society is. This has ramifications for a city of individuals desperately trying to form a sense of community.

#176 A QM/MM study of Myoglobin

University of Michigan - Flint

Student Authors : Michael Stogsdill

Faculty Advisors : Jie Song

Abstract : Nitric oxide (NO) has been shown to play a key role in the human body, including nerve signal transduction, vasodilatation, blood clotting and immune response by white blood cells. Many of the biologically important reactions of nitric oxide are mediated by heme proteins. Previous studies have shown that production of NO and further reduction to nitrous oxide (N₂O) can be catalyzed by either bacterial or fungal enzymes via different reaction pathways. These unknown mechanisms have attracted a lot of experimental and theoretical attentions. Current investigations of reaction mechanisms focus on the experimental synthesis and measurement, as well as, theoretical evaluations on model systems. However, the theoretical approach is strictly restricted by the large size of the model compounds, which makes computations practically difficult or impossible. In this study, a hybrid quantum mechanics/molecular mechanics approach (QM/MM) is proposed to supply reliable theoretical results at an affordable computational costs. All calculations were done using Gaussian 09 and Gaussview

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04 was used for visualization.

#177 Removed

#178 No such thing as a free lunch

University of Michigan - Dearborn

Student Authors : Yevhen Drobot, Ashim Wadehra

Faculty Advisors : Anne Danielson-Francois

Abstract : Adult male spiders do not build webs. For orb-weaving spiders, not building a web means that no prey can be captured and hence males cannot feed themselves. Here, we report for the first time that adult males of *Tetragnatha elongata*, are able to feed as adults by actively stealing food from their female mates. We collected 275 *T. elongata* spiders from the Rouge River in southeastern Michigan and performed staged matings. We observed 43 attempts to steal (A), 15 successful steals (S), 100 matings without an attempt to steal food (NA), and 7 that did not mate at all (NM). We found that male food-stealing behavior was significantly influenced by the relative body masses of males and females in each of the tested conditions. This finding suggests that males may have a trade-off between acquiring food from a smaller female and achieving greater reproductive success from mating with a more fecund female.

#179 A Story To Die For: Mexico's Deadly Triangle of Press, Government, and Drug Cartels

University of Michigan - Flint

Student Authors : Elizabeth LeBlanc

Faculty Advisors : Maureen Thum

Abstract : In recent years there has been a startling increase in the dangers that Mexican journalists face. According to Mexico's National Human Rights Commission, 59 journalists have been killed since 2000. The problem stems from government regulation, drug cartel violence, and the war between these two factions. In order to examine this problem further we will begin by studying the history of journalistic practices in Pre-Columbian and Revolutionary Mexico. Next, we will examine the current state of affairs in the triangle of press, government, and drug cartels. The resulting dangerous environment has caused many news media stations to practice self-censorship or refuse to report on any drug activity. In addition to the United States' rescue efforts; we will also examine what current resolutions and future solutions are available to Mexico. Aware of the situation it is facing, Mexico has attempted to take back the reigns of their ever struggling democracy.

#180 IREECE Midterm Presentation: Sleep Apnea Project

Oakland University

Student Authors : Christie Bucklin, Sam Lou

Faculty Advisors : Manohar Das, Osamah Rawashdeh

Abstract : Sleep-apnea is a disorder that manifests itself in breathing pauses during the deeper stages of sleep. Sleep-apnea has been linked to stroke, heart disease, and cognitive defects. Full-channel polysomnography (PSG), the "gold standard" in screening and diagnosing sleep disorders today, requires an overnight stay at an accredited sleep laboratory. PSG is expensive, time-consuming, and inconvenient. The goal of this project was to develop an inexpensive, simple, effective sleep-apnea pre-screening device. By using capacitive tri-axial accelerometers and digital processing techniques, sleep-apnea episodes were detected and classified. From this data a preliminary diagnosis and recommendation for further screening and treatment could be given.

#181 Functionally Graded Piezomagnetic and Piezoelectric Bilayers for Magnetic Field Sensors: Magnetolectric Interactions at Low-Frequencies and at Bending Modes

Oakland University

Student Authors : Sumit Bandekar, Gopalan Srinivasan

Faculty Advisors : G. Srinivasan

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Abstract : In a piezomagnetic-piezoelectric bilayer the interaction between the magnetic and electric subsystems occurs through mechanical forces. This study is on magneto-electric (ME) interaction in a bilayer of PZT and ferromagnetic layer in which the piezomagnetic coefficient q is graded. The grading is accomplished with the use of Ni (negative q) and Ni-Fe alloy or Permendur (positive q). At low-frequencies the ME coefficient shows a four-fold increase compared to homogeneous Ni-PZT bilayer. Bending resonance and consequent enhancement in ME coupling occurs at the lowest frequency, 800-1200 Hz, for a bilayer that is fixed at one end and free at the other end. The peak ME coefficient at resonance is in the range 12-15 V/cm Oe and is 10% higher for graded samples compared to Ni-PZT. The graded bilayers are promising candidates for use in ultrasensitive magnetic field sensors.

#182 The Effects of Body Weight on Sensitivity to Addictive Drugs

University of Michigan - Flint

Student Authors : Delia Nicholls

Faculty Advisors : Julie Broadbent

Abstract : It has been suggested that drugs of abuse and palatable food share the same neural reward pathways in the brain, increasing the possibility for individuals to become addicted to food as well as drugs. Food restriction and bingeing have also been shown to affect drug sensitivity, suggesting further that food and drugs of abuse activate the same reward pathways. Chronic food restriction (FR) in laboratory rats has shown an increase in sensitivity to d-amphetamine, suggesting that body weight affects sensitivity to drugs of abuse. To date, an experiment involving chronic FR and sensitivity to cocaine has not been conducted on mice. We will test this theory by subjecting laboratory mice to chronic FR for 2-3 weeks (until body weight is decreased by 20-25%), and then test their locomotor activity after injecting them with cocaine. If the results show increased locomotor activity after given cocaine, it will lend further evidence that body weight affects individual's sensitivity to drugs of abuse, and that food and drug addictions activate the same reward pathways.

#183 Design and Development Documents for Locusono iOS Application

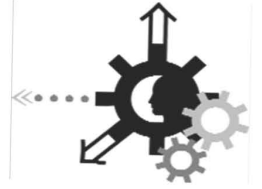
University of Michigan - Flint

Student Authors : James Barclay

Faculty Advisors : Joseph Reinsel

Abstract : Locusono is an innovative platform through which one can experience personal stories, public events, and histories of the City of Flint. By linking a Global Positioning System (GPS) location with the story recorded on the phone, Locusono weaves the physical space where the story is recorded with the content of the story to create a more impactful and immersive experience. My role in this project is primarily aimed at developing visual prototypes for the Locusono iOS application. This includes mockups of what the final application may look like, and describes how the user may interact with it. I began with preliminary sketches which aided in visually describing the application's functionality, then moved on to designing full-size mockups in Adobe Photoshop®. My responsibilities also include assisting faculty with design documents, which will aid in designing a consistent experience before moving on to a functional prototype.

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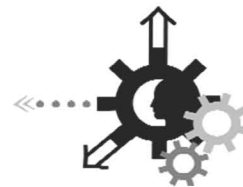
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