Messages from the Deans...

Dr. Jeffrey L. Buller, Dean

I’m delighted to welcome you all to this year’s Wilkes Honors College Symposium for Scholarly and Creative Research. Developing each student’s ability to conduct original, innovative scholarship at a very high level is an important part of the Honors College’s mission. Each year, the Symposium gives us an opportunity to sample the fruits of our students’ efforts and to provide them with practical experience in sharing their research and creative activity with others. I think you’ll find each presentation and poster to be of extremely high quality and impressive in its scope. I know that I always learn something new every year. Feel free to ask questions about each participant’s project and to be inspired by what immersion in a 100% honors experience can produce.

Dr. Mark Tunick, Associate Dean

Research Day began in 2003, the year of the first Honors College graduating class of 46 strong. Mathematics professor Dr. Stephanie Fitchett and psychology professor Dr. Julie Earles took the lead in providing an opportunity for seniors as well as other HC students to present their research and creative work in a mini-conference setting. On April 11, 2003, 21 students gave oral presentations and fielded questions from the audience—the toughest ones coming from their fellow students—and 27 students contributed to 13 poster presentations. These numbers have skyrocketed as more students continue to take advantage of the tremendous opportunities for research and collaboration with faculty at the Honors College. In the first 11 years, there were over 669 presentations as well as over 97 visual art exhibits. Keynote speakers have reflected the same diversity of research interests that our students pursue, and have included Islamic philosopher Mustafa Abu-Sway, astronaut Tracy Caldwell, psychologist Theresa Reyes, historian and HC professor Chris Strain, economist Hans Czap, novelist Ngũgĩ wa Thiong’o, and philosopher Michael Ruse.
THE COLLABORATIVE TERRAIN OF DRAWING & ANIMATION:
THE WORKS “THE LAST POST,” “PIVOT” & “PARALLAX”

Shahzia Sikander

Internationally recognized Pakistani-American Artist, National Medal of Art Recipient, & MacArthur Foundation ‘Genius’ Award Winner

Shahzia Sikander is best known for her experimentation with the formal constructs of Indo-Persian miniature painting in a variety of formats and mediums, including video, animation, mural, and collaboration with other artists. Over the years, she has pioneered an interpretive and critically charged approach to the anachronistic genre of miniature painting. Underpinning the work is also Sikander’s interest in paradox, societies in flux, and formal and visual disruption as a means to cultivate new associations. In addition to her BFA in 1991 from the National College of Arts, Lahore, Sikander received her MFA in 1995 from the Rhode Island School of Design. Sikander’s work launched a major following at the National College of Arts in Lahore during the 1990’s, inspiring many others to re-contextualize the Indo-Persian miniature painting tradition.
PROGRAM

Friday, April 11, 2014

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Please join us for a reception in the Honors College Atrium from 2:00 to 4:00 p.m.
SESSION 1

9:15—9:30 A.M.

Christina Powell

*Drum Disciples*

Advisor/Professor: Dr. Timothy Steigenga, Dr. Christopher Strain

As a part of the Kenan Scholarship for Social Engagement, funds were provided to start the nonprofit “Drum Disciples” and an associated social venture, Tribal Dude, LLC. “Drum Disciples” is a musical education program which aims to teach authentic African drumming and traditional stick drumming to inner-city youth in order to develop discipline and musical skills which can lead to scholarships. Tribal Dude, LLC sells drums to the public in order to supply a drum for each child enrolled in Drum Disciples, while raising awareness for the program and gaining financial aid. Through the one-for-one drum campaign, Tribal Dude has been able to supply 12 drums to the program as well as multiple percussion instruments (over $4,900 worth). Enrollment in the program has doubled since the social venture’s inception and three students have received college scholarships due to their percussion skills.

9:30—9:45 A.M.

Justin Odom

*Examination of Behavioral Enrichment and its Effect on Octopods*

Advisor/Professor: Dr. Jon Moore

In an attempt to better understand the effects of environmental enrichments on captive octopods, specifically Octopus vulgaris, as conducted by aquariums, attempts have been made to collect wild octopi from various sites in the Indian River Lagoon. Any collected specimen will be observed in captivity in order to compare their behavior with that of their wild counterparts based on the data collected by Kayes in 1973. The research conducted served to investigate if the environmental enrichments, institutionalized by aquariums, encourage octopods to behave more closely to the natural or wild type behaviors, or if the enrichments encourage less natural behavior. Enrichment is used to guarantee the mental wellbeing and health of animals in captivity in the interest of maintaining a good quality of living. This thesis looks at whether the quality of life achieved by enrichment impacts behavior by either encouraging natural or unnatural behavior in octopi.
Alden Sharp, Shan Raja

Classifying Nil Clean Group Rings
Advisor/Professor: Dr. Warren McGovern

A ring is called nil clean if every element is the sum of a nilpotent ($n^k = 0$ for some $k$) and an idempotent ($a^2 = a$). We will discuss our work on classifying when a commutative group ring is nil clean, which builds on the recent work of algebraist Dr. A. Diesl.

Seth Donahoe

Punishment, Privacy and Criminal Background Checks
Advisor/Professor: Dr. Mark Tunick

I argue that widespread use of criminal background checks fosters unjust punishment for ex-offenders. A criminal conviction has a two-fold effect on the offender: judicial punishment in the form of court fees, incarceration, and similar court orders that temporarily restrict individual liberty; and non-judicial punishment in the form of social stigmatization attached to an arrest and/or conviction that marginalizes the offender from society. Background checks hinder reintegration by inhibiting the ex-offenders’ ability to obtain employment, housing and social acceptance. Widespread use of background checks violate privacy rights for the ex-offender, and I conclude by suggesting a revised system modeled after European criminal background procedures that would create a better balance between the ex-offender’s right to privacy and society’s interest in public safety.
Alexa Robinson

Sun Equipment Rentals: Earned Income Strategy for Jupiter’s El Sol
Advisor/Professor: Dr. Christopher Strain, Dr. Timothy Steigenga

El Sol: Jupiter’s Neighborhood Resource Center has provided Jupiter citizens and immigrants with valuable assistance both through its use as a center for day laborers to meet employers and as a place to learn English and other valuable skills. However, El Sol must rely on grants and donations to operate. This project, Sun Equipment Rentals, will ideally provide El Sol with an earned-income strategy to provide financial support to El Sol’s vocational program by renting out tools to employers who hire El Sol’s day laborers. Several hurdles, including liability worries, have prevented the plan from being brought to its full potential. In order to navigate these issues, several different avenues are being explored which I intend to explicate in this presentation. Such methods include a re-evaluation of the project, a pilot program, and the consideration of using other tools or equipment to rent.

Daniel Lopez-Chavez

The Ego in an era of Big Data: Towards a model for computer scoring of the WUSCT
Advisor/Professor: Dr. Kevin Lanning

The Washington University Sentence Completion Test (SCT) is a measure of a broad parameter of personality called ego development. We explore the possibility of scoring participant’s textual responses by computer. Beyond the advantages of automatic scoring, there exist theoretical advantages as well. Our sample encompasses both item response exemplars from the SCT manual and responses gathered from hundreds of participants over several decades of research. We run empirical analysis of the morphological characteristics of these responses using the Linguistic Inquiry and Word Count (LIWC) software program. Results demonstrate a clear relationship between a response’s ego-level rating and LIWC categories relating to cognitive mechanisms (such as causality and insight) as well as use of certain pronouns. The results bode well for the potential applicability of algorithmic scoring to the SCT.
Kathleen MacDonald  
AD 102  
*Lust, Love and Likeness: The Moral Hierarchy of Consanguineous Desire in Milton's Paradise Lost*  
Advisor/Professor: Dr. Michael Harrawood  

This paper examines the representation of incest and desire in John Milton's *Paradise Lost*, addressing the favorable portrayal of Adam and Eve's sex in Book IV in comparison with other episodes of consanguineous relations in the epic. It will contend with the view that the coitus in Book II is a parodic representation. I will argue that the rape of Sin by both Satan and Death in Book II, the prelapsarian sex of Adam and Eve in Book IV, and the postlapsarian sex of Adam and Eve in Book IX establish a moral hierarchy driven by sexual desire based on likeness. By consulting sexual theory, literary criticism, seventeenth century religious tracts and modern interpretations of biblical laws, I will reveal the basis for Milton's hierarchal representation of coitus in the epic.

Andrew Kessler  
AD 103  
*To Seed or Not to Seed, That is the Question: Seagrass Distribution and Abundance Within the Central IRL*  
Advisor/Professor: Dr. Jon Moore  

Seagrasses are fully submersed, marine angiosperms that provide crucial ecological functions. Yet, seagrass communities in the Indian River Lagoon (IRL), Florida, have been in decline as a result of pollution. Monitoring projects have been initiated due to the detrimental effects of human-caused and environmental sources. A small-scale monitoring project was conducted throughout the central IRL in order to observe trends based on spatial gradients and any factor that might be affecting the growth and distribution of these seagrasses. A second component of the study incorporates observations of seagrass reproduction via seed development and germination. In terms of percent coverage, shoot counts, canopy height, and overall transect length, the Southern sites had higher averages for almost every species of seagrass compared to the northern sites. Throughout the ten sites that were monitored, a seed bank was identified as being present. Further inquiries would allow for a better understanding of the distribution, abundance, and relationships between seagrass beds, seed bank characteristics, and the surrounding environment.
Raymond Fowler, Brandon Harris, Dr. Lorin Matthews, Dr. Truell Hyde

Parallel Plate Capacitor Simulation and Transverse Oscillation of Vertical Dusty Plasma Chains in a Glass Box
Advisor/Professor: Dr. Terje Hoim

Dust particles in plasma can arrange themselves into a vertical configuration when placed inside a glass box. What really occurs in the glass box is still unknown, and no known method of direct measurement exists. In this talk we describe the related experiment and use simulation to find the parameters of particles in their equilibrium positions.

Parker McDonald

The Integration of Eastside High School
Advisor/Professor: Dr. Mark Tunick

In the 1954 Supreme Court Case Brown v. Board of Education, the U.S. Supreme Court ruled unanimously that separate schools for white and black students is inherently unequal. I evaluate the goals of desegregation based on the Court’s writings, and the work of academic scholars. I then look at the history of desegregation in Gainesville, Florida’s Eastside High School. With this history in mind, I will evaluate whether or not the goals of desegregation expressed by the court and scholars have been met at Eastside. I conclude that while the goal of desegregation (simply removing codified segregation) has been met, the goal of integration (an active state intervention to remedy the effects of segregation) has not.
Megan Geiger   

*Guía de salud: A Social Entrepreneurship Project at El Sol, JNRC*  
Advisor/Professor: Dr. Timothy Steigenga, Dr. Christopher Strain

Many members of Jupiter’s large Hispanic immigrant community are hesitant to utilize local health resources, and few are aware of the low-cost resources available to the uninsured. While El Sol JNRC has sought to publicize information about these resources to the community, they have not been able to effectively distribute this information to their constituents. To help distribute this information, I developed a short guidebook in Spanish listing low-cost health resources for members of the immigrant community to utilize. This guide will be distributed via the promotores de salud, a health-focused outreach group made up of members of the immigrant community. Furthermore, El Sol is exploring the possibility of selling advertising space in the guide, thereby generating reliable income for the non-profit organization. In this way, members of the immigrant community will be able to directly access available health resources themselves, and to promote healthier practices within Jupiter’s immigrant population.

Daniel Tracy   

*Neoconservatism, Realism, and Conflicts in Iraq: Analyzing the Perspectives that Influenced Policy*  
Advisor/Professor: Dr. Timothy Steigenga

Where, when, and why the U.S. goes to war is influenced by foreign policy perspectives held by those in leadership. Realism and Neoconservatism are two of the most important perspectives that have influenced U.S. foreign policy over the past twenty-five years. This thesis examines these two foreign policy perspectives, and how they influenced U.S. policy in both the 1991 Persian Gulf War and the 2003 Iraq war. An analysis of these two conflicts suggests that Realism, if followed too strictly as a policy prescription, can isolate policy makers from the public and cause them to lose public support. Neoconservatism, on the other hand, may appeal to public values but lead to imprudent and costly actions and unnecessary conflicts. The best foreign policy may be one that acknowledges the prudence of realism, but still embraces American values such as democracy, and seeks to spread it opportunistically rather than manufacturing unnecessary and costly conflicts.
Tyler Crawford

**Cynics in Love: The Obsession with the Reflected Image in Dangerous Liaisons and Cruel Intentions**

Advisor/Professor: Dr. Michael Harrawood

There is a common trope that reads “the mirror is the window to the soul.” In the films Dangerous Liaisons and Cruel Intentions, both adaptations of Chaderlos de Laclos’ 1782 epistolary novel Les Liaisons Dangereuses, mirrors play a critical role in the audience’s understanding of character and the obsession these characters have with their own images, real or imagined. This presentation considers the symbolic value of mirrors and reflected images in these two very different adaptations of Laclos’ novel. My argument will be that the characters of Dangerous Liaisons understand or interpret themselves as reflected images, while the characters in Cruel Intentions seek to define themselves outside of the reflecting surface of social discourse. The mirror thus operates as a metaphor of the socialized and performative self in both films.

Tokio Sano

**Demographic Survey of Gopherus polyphemus (Gopher Tortoise) at the Abacoa Greenway**

Advisor/Professor: Dr. Jon Moore

The Abacoa Greenway reserve is a 9 hectare area of land that houses over 85 individual gopher tortoises. The Greenway was a reserve initially used for the relocation of gopher tortoises. We investigate the demographics of the gopher tortoise population and their burrow distributions. The Abacoa population is considered to be a support population. Since it includes less than 250 individuals living in an area of less than 100 hectares and can be further improved towards minimum viable population status with extensive land management. Our findings show that 14.3% of the population of sub-adult age, which would increase recruitment for the population. We also found that tortoises in the reserve are showing signs of maturity characterized by narrow growth rings starting at the age of 8 or 9 years old, a younger age compared with populations further north. We hypothesize that this is due to the latitudinal climate effects and warm winters allowing year-round foraging. We found that many tortoises are creating new burrows on the periphery of the reserve. We hypothesize that this is due to the overgrowth of vegetation.
Neha Shrestha

New Trends, Old People: Modeling the Effects of Population Aging on House Prices in the United States and Japan

Advisor/Professor: Dr. Terje Hoim, Dr. Keith Jakee

Several countries are experiencing a new demographic trend that can significantly impact housing markets. Called “population aging,” countries such as the United States and Japan are seeing their share of elderly people expanding. Using regression analysis, I determine the relationship between house prices and population in the U.S. and Japan to assess the impacts of population aging on housing. Then, along with population projections for the period 2015-2050, I use the parameters estimated by the regression analyses to simulate house price trends for these two countries. These regression and simulation tests merge aspects of past models, compare the effects of population on real house prices in the U.S. and Japan, and support the claim that population aging causes real house prices to decrease.

Claudel Louis

The First Amendment and the Madisonian Dilemma

Advisor/Professor: Dr. Mark Tunick

In healthcare cases involving children, people are still vulnerable to religious persecution in this country, particularly in the State of Florida, because the public officials responsible for securing and enforcing the laws tend to lend the prestige of their offices to advance the private and special interests of themselves and others at the expense of minority groups. Following a literature review of the laws that provide for the free exercise of religion nationally and in the State of Florida, I apply case law to a hypothetical case based on true facts concerning the religious freedom of parents who are African American, Jehovah's Witness and Muslim to refuse certain medical treatment for their minor child. I argue that public officials sometimes abuse their powers and neglect their duties at the expense of minority groups; and address possible remedies.
Benjamin Arsali

*Maintenance Magicians*
Advisor/Professor: Dr. Timothy Steigenga, Dr. Christopher Strain

Maintenance Magicians hires the formerly homeless clients of The Lord’s Place to provide property maintenance services in Palm Beach County. Many homes in the county are either in foreclosure or are owned by institutional investors but must be maintained in order to meet local ordinances and codes. Maintenance Magicians provides landscape maintenance, painting, window cleaning, pressure washing, and general upkeep to keep properties in compliance with local codes. Our goal is to provide high-quality property maintenance while helping to break the cycle of homelessness. Our partner, The Lord’s Place, has 30 years of experience fighting homelessness in Palm Beach County. Together, we intend to provide job training and resources to allow their formerly homeless clients to become effective property maintenance professionals.

Vincent Scerbo

*Redefining the Creed: President George W. Bush, President Barack Obama, and the American Dream*
Advisor/Professor: Dr. Christopher Strain

In each of the four inaugural addresses delivered by George W. Bush and Barack Obama, the presidents referenced the American Dream, a concept that has grown to represent a shared set of values in American society. After explaining the origins of the American Dream and the ways in which certain values associated with the term have been emphasized or neglected over time, this analysis illustrates how each president invokes the term in those inaugural addresses, allowing the reader to understand the extent to which both presidents define the Dream on a spectrum ranging from meritocratic individualism to society-building communitarianism that all Americans can recognize and apply to their everyday lives. The entanglement of these values suggests the importance of maintaining balance between individual initiative and a community commitment to the preservation of the equality of opportunities inherent in “our nation’s promise.”
Chrystal Wong  
*The Disruption of Patriarchy in Emily Brontë’s Wuthering Heights*  
Advisor/Professor: Dr. Michael Harrawood

In Emily Brontë’s Wuthering Heights, both male and female characters have the ability to fluidly move between classes and display behaviors that far outreach their class rank. In this thesis, I argue that Brontë uses the fluidity of class to dismantle the layers of patriarchy within the novel and larger social structures. Nelly Dean is both the narrator and a lowly housemaid within Wuthering Heights. Despite her status, she is given many privileges within the house and has a distinct sense of agency. However, there is a subtle queering of class structures. Heathcliff is able to gain a massive quantity of wealth and move from a lowly stable boy to a stately land owner; this is also despite the racial stigma of Heathcliff being introduced as an orphaned gypsy. Many characters move both up and down within class structures through gaining and losing both social and monetary capital. Brontë is successful in disrupting patriarchy, but is ultimately unsuccessful in entirely dismantling it because it is primarily the male characters that are able to move up within the social scale.

Amanda Alker, Shervon DeLeon, Rachel Parson  
*Antibiotic Resistance in Bacteria following the Sewage Outfalls of Bermuda*  
Advisor/Professor: Dr. Jon Moore

Antibiotic resistance in bacteria is an ominous problem occurring around the world, which has the potential to threaten the way that the medical field manages bacterial infections. In Bermuda, there is no municipal wastewater treatment plant. Therefore, about $4.3 \times 10^6$ L of untreated sewage is released into the ocean by two outfalls daily. Water samples were analyzed for the presence of Escherichia coli, Enterococcus, and Staphylococcus aureus. Antibiotic susceptibility testing was performed on all purified isolates and the multiple antibiotic resistance (MAR) index was determined for all the isolates. More S. aureus isolates had high MAR indexes, than did Enterococcus and E. coli isolates. The high incidences of isolates with high MAR indexes indicate that these isolates originate from a source where antibiotics are heavily used. These observations, along with the presence of bacterial isolates with high MAR indexes at the recreational beach sites, indicate that these isolates are originating from the outfall.
Dominick Casciato, Amanda Jacob, Theo Walker, Dr. David Fitzpatrick

The development of parvalbumin-positive neurons in ferret visual cortex

Advisor/Professor: Dr. Paul Kirchman

Experience plays a critical role in maturation of cortical circuits. In visual cortex, experience-dependent development has been linked to the maturation of inhibitory interneurons. Parvalbumin-containing (PV+) interneurons, a subtype of GABAergic interneurons, play an important role in cortical circuit function; however, it remains unknown how visual experience shapes their organization. We used immunohistochemistry to observe the organization of PV+ expression in visual cortex through visual maturity. Before visual experience, PV+ cell bodies and processes are most pronounced in layer 5, less in layer 2/3, and generally lacking in layer 4. Within 3 days of the onset of visual experience, PV+ organization undergoes a major shift, with PV+ expression found throughout layers 2-6. We performed dark rearing which determined these morphological changes are due to visual experience. This rapid change in parvalbumin organization may play a role in functional changes associated with the onset of visual experience.

Jaclyn Goldstein

Protecting Privacy in Intimate Relationships

Advisor/Professor: Dr. Mark Tunick

I argue that when an individual enters into a relationship, they should be able to share private or embarrassing facts with their partner without fear of waiving their right to privacy: members of an intimate relationship have a moral obligation not to publish, whether orally or in writing, intimate information about one another to third parties. This moral obligation further extends to photographs or videos, and I focus on the case of revenge porn. I also argue that a legal obligation is necessary to protect an individual’s privacy interests. Currently, an individual’s privacy rights are protected by four privacy torts, including the publication of private facts tort. However, in many cases one’s First Amendment right to free speech outweighs one’s right to privacy and so I propose that individuals who enter into an intimate relationship should have an additional legal form of protection.
Calvin Bankert

Match-Maker Staffing Solution
Advisor/Professor: Dr. Timothy Steigenga, Dr. Christopher Strain

Match-Maker Staffing Solutions is a social enterprise that addresses the problem of unemployment in Palm Beach County by representing and advocating a diverse pool of job-seekers. Our team has two functions: developing a client portfolio database containing résumés and other employment information, and creating a business outreach program through which our company can connect with businesses and employers in search of potential employees. Our company is a meeting point for both workers and employers who may come to us instead of searching for each other. We guarantee ease and efficiency in the area of employer-employee relations.

Janeen Smith

Political Efficacy and Postmodern Multiplicity in Ishmael Reed’s Flight to Canada
Advisor/Professor: Dr. John Hess, Dr. Timothy Steigenga

American writer Ishmael Reed defends literature as a mechanism for effective protest and a form of comment on American politics. In his early works, Reed used postmodern aesthetics to destabilize common assumptions about race and politics. Today, Reed continues to grapple with racial inequality, but he has shifted away from postmodern fiction, producing mostly essays and reviews. Reed’s use of various media to protest political injustice blurs the line between politics and literature. In this thesis, I use a textual analysis of Reed’s novel Flight to Canada, interviews with Reed, and literary criticism to argue that Reed utilizes the concept of multiplicity (the state of being various) to impart a political message that adapts to changing political climates. In turn, Reed’s work is intended to influence the reader’s sense of political efficacy by emphasizing the political power of the individual.
Juliana Gomez  
*Applications of Mathematics to Dante’s The Divine Comedy*

Advisor/Professor: Dr. Michael Harrawood

The metaphysical structure of Dante Alighieri’s universe in The Divine Comedy suggests a synthesis of mathematical models to represent Inferno, Purgatorio and Paradiso. In forging an infrastructure of geometric figures and modern mathematical precepts to establish representations of Dante’s three kingdoms and the Holy Trinity, various abstractions are considered. One can suggest that Dante transcends geometric postulates in order to profess his faith. Whereas, conversely, the mathematical contradictions present can be interpreted to suggest that Dante attempted to restrict the concept of an incorporeal all-powerful deity; confining it to mundane geometric premises. Dante indulges in either elucidating or further eclipsing curious mathematical scenarios which ultimately allow him to assert that terrestrial concepts, primarily in the form of Euclid’s postulates, cannot be utilized to define or constrain divinity.

Claire Robinson  
*Five-year Manatee Census and Behavioral Analysis in the Harbor Branch Channel Utilizing Photo-Identification Techniques*

Advisor/Professor: Dr. Jon Moore

Despite anecdotal accounts of manatees aggregating in the channel of Harbor Branch Oceanographic Institute (HBOI), it was not until 2009 that the manatees were studied. Land-based observation and photo-identification techniques have been used over the past five years to accrue data on the manatees. It was determined that a resident population of manatees frequents the HBOI channel, particularly in the winter months and at the Westernmost Basin. Photographs were compared to the state Manatee Photo-identification System database and multiple matches were found, signifying some manatees are migrants. The main observed behaviors – resting, maintaining body warmth, and mating – indicate that the Harbor Branch channel is an important habitat for the manatees. Knowing this area is crucial for the manatees year-round, actions can be taken to create a more ideal habitat for the manatees, such as solar-powered heat in the cold winter. (Research funded by the Link Foundation and Florida Specialty License Plates).
David Friedman

*Generation of Stress Resistant Aconitase by Directed Evolution*

Advisor/Professor: Dr. Paul Kirchman

The enzyme aconitase is found in many organisms and plays multiple roles inside the cell, including roles in mitochondrial DNA stabilization and the citric acid cycle. Studies have indicated that aconitase is preferentially targeted for oxidative stress due to the iron-sulfur cluster [4Fe-4S] group in its active site, thus deactivating aconitase. This in turn has been linked with cell death and aging. In this experiment I generated a Saccharomyces cerevisiae library with mutant copies of the ACO1 gene generated by error prone PCR (EP-PCR) and used this to select for oxidative stress resistant mutants, with the hypothesis being that these would have increased lifespan. The selection was accomplished by putting yeast with mutant ACO1 genes through consecutive rounds of heating, which simulates oxidative stress, and then competitive growth.

Erin Coletti

*Verdad y ficción en “En el tiempo de las Mariposas” por Julia Álvarez y “Viva en su jardín” por Dedé Mirabal*

Advisor/Professor: Dr. Carmen Cañete Quesada

This thesis investigates the case of the legendary Mirabal sisters, or the so called “Mariposas” [the “Butterflies”]: three young Dominican women who sacrificed their lives to end the tyranny of General Rafael L. Trujillo. The purpose of this thesis is to compare the portrayal of the Mirabal sisters in two different books, *In the Time of the Butterflies* (1994) by Dominican-American writer Julia Álvarez and *Vivas en su jardín* [Alive in their Garden] (2009) by Dedé Mirabal, the only sister to survive. Mirabal implements an important biographical component in her testimony while Álvarez utilizes the genre of historical fiction to describe the events leading to the sisters’ assassination in 1960. This thesis explores the concepts of “truth” and “fiction” in Mirabal’s memoir and Álvarez’s historical novel, arguing that the range of objectivity and subjectivity in these two genres are interchangeable in the representation of this tragic episode in the history of the Dominican Republic.
Jaspar Leahy, Shan Raja  
**Dream Team Commercial Clean: A Social Enterprise**  
Advisor/Professor: Dr. Timothy Steigenga, Dr. Christopher Strain

Dream Team Commercial Clean is a social enterprise operating within The Lord's Place, a nonprofit 501(c)(3) organization. DTCC will provide a commercial cleaning service to local businesses and nonprofits in the West Palm Beach area. The purpose of this enterprise is to employ the formerly homeless clients of The Lord's Place. Not only will DTCC generate profits for this organization, it will do so while maintaining an eco-friendly standard of cleaning. Our goal is to help these individuals through supportive systematic training and employment so that they can gain confidence and experience in this field of work. Ultimately, we hope for our employees to become self-sufficient by seeking employment outside DTCC. Given the obstacles faced by the formerly homeless to obtaining employment, we anticipate maintaining a core group of employees that will remain in the program until they are able to find external employment.

Gabrielle Vitucci  
**Restriction versus Integration: Party Affiliation and Other Factors in Local Immigration Enforcement**  
Advisor/Professor: Dr. Timothy Steigenga

Immigration has become a controversial local issue across the United States as Latino immigrants have moved to ‘new destination’ localities that have never experienced an influx of immigrants before. Many local governments have responded with highly restrictive policies, while some have pursued integrative policies. Some scholars hypothesize that the primary variable explaining the difference in policies is party affiliation, with Republican localities more likely to pass restrictionist ordinances. I examine this hypothesis using case studies of the restrictive policy employed by Hazleton, PA, versus the integrative policy favored by Jupiter, FL, arguing that other factors including the system of local government, homogeneity of the immigrant community, and the presence of local civic institutions also help predict whether a locality chooses a punitive or more integrative approach. Examining the outcomes of the two policies, the integrative approach appears less costly and holds the long-term promise of a more integrated immigrant community.
11:00—11:15 A.M.

Philip Olsen  
**Reading the World, Writing the Mind: Ideology, Morphogenesis, and Revolution**  
Advisor/Professor: Dr. Daniel White

In the 1960s, the French Communist thinker Louis Althusser undertook to reorient capitalistic societies toward realizing socialist ideals. However, Althusser envisioned a self-sustaining capitalist state placing, through ideological state apparatuses, seemingly insurmountable limitations on constituents’ ideas and actions. In brief, his characterization of social phenomena as revealing a constructed ideology favoring the state, itself supporting the economy, seems to have contradicted his revolutionary goal. This thesis argues that communication theory, as explicated by the Canadian theorist Anthony Wilden, provides a framework capable of rectifying Althusser’s theory of the state to meet his goal of creating a society whose citizens are free from state control. Althusser thought undoing ideological apparatuses began with their identification, proceeded through their disruption, and concluded with their transformation. Wilden’s theory of morphogenic systems, conceptualizing “resistance” to ideological structures as “noise” in the “signal” of the state apparatus, shows that generating noise permits political actors to foster morphogenesis in a “repressive” state.

Ian Moore  
**The Keystone XL Pipeline Debate**  
Advisor/Professor: Dr. William O’Brien

This project examines public opinion about the Keystone XL Pipeline and analyzes arguments for and against this pipeline using economic principles. The Keystone Pipeline is a proposed construction project that connects existing pipelines and will carry oil from the tar sands of Alberta Canada to the Gulf of Mexico for shipping purposes. The pipeline has been a controversial issue since it was first proposed in 2008, and it is viewed as symbolic of our country’s future on energy policies in the face of global warming. Thousands of people have marched and protested, and several hundred protestors have been arrested. I will examine the arguments and concerns of proponents and opponents of the pipeline by reviewing personal blogs, news articles and other publications, and use economic publications and methods to hypothesize what the actual effect this project’s construction or dismantling will have on the national and international economy.
Rachel Turn, Chrystal Wall, Christopher Ferguson, Dr. Haiqing Zhao

Expression of Olfactor Receptor P2 outside the Olfactory System
Advisor/Professor: Dr. Paul Kirchman

Olfactory signal transduction is activated by the binding of a chemical from the environment to a receptor on the olfactory epithelium. Upon odorant binding, the neuron relays a signal along its axon to a specific location in the brain’s olfactory bulb. Each neuron expresses only one odorant receptor, and different receptors possess unique sequences that dictate binding specificity. Recent studies have shown that odorant receptors are expressed outside of the olfactory system. As a result, there has been a push to identify receptors in other regions of the body, to uncover their function, and to discover an endogenous ligand. In this investigation, we sought to confirm odorant receptor P2 expression in the mouse brain and to examine developmental changes in expression. Through the use of reporter allele assays our findings suggest that the P2 receptor is expressed in the subventricular zones commencing postnatal day 3.

Fernando Varela

Pan’s Labyrinth and an Alternative Interpretation of the History of Spain under Franco’s Regime
Advisor/Professor: Dr. Carmen Cañete Quesada

Following the death of Francisco Franco in 1975, Spain transitioned into a democratic form of government that exhibited a similar polarization that led to the civil war in that country in June 1936. One question that arose is what to do with the memories of abuses committed by Franco from 1939 until his death. Guillermo del Toro explores this issue in his movie Pan’s Labyrinth (2006). The film tells the story of a young girl, Ofelia, who employs her imagination in order to envision a past without the oppressive Francoist stepfather, Captain Vidal. This paper analyzes Del Toro’s use of fantasy as a resource to showcase an alternative interpretation of the history of Spain that challenges and subverts in most of the cases the official version of the war during Franco’s regime.
Akemi Inamoto

Green Crafts for the Homeless: A Triple Bottom Line Venture
Advisor/Professor: Dr. Timothy Steigenga, Dr. Christopher Strain

Green Crafts for the Homeless is a triple bottom line venture for The Lord’s Place that will employ and train clients (the homeless or formerly homeless individuals being aided by The Lord’s Place), create a revenue stream, and help the environment. Homelessness is an issue that currently afflicts Palm Beach County. The Florida Department of Children and Families estimates that there are around 1500 homeless people in Palm Beach County. The Lord’s Place is a nonprofit, nonsectarian 501(C)3 organization that has been battling to break the cycle of homelessness for the past thirty years. Green Crafts for the Homeless consists of having The Lord’s Place clients create environmentally friendly products from recycled materials that will take the shape of baskets, purses, ornaments (seasonal as well), bowls, plates, coasters, jewelry, jars, vases, and rugs made out of old clothing.

Megan Geiger

“He Has Asked Us to Live Our Lives for Tomorrow:” A Longitudinal Analysis of Sermon Discourse in a United Pentecostal Church Congregation
Advisor/Professor: Dr. Timothy Steigenga, Dr. Miguel Vázquez

The rapid growth of Pentecostalism has drawn significant scholarly attention in recent decades. However, few researchers have utilized sermon transcripts as a data source for understanding the evolution of Pentecostal thinking. An archive of thirty sermons from one United Pentecostal Church congregation is the primary data source for this analysis. Two groups of sermons from different time periods (1976-86, 2000-10) were compared to examine how one minister’s approach to social issues changed over time. The minister’s discourse about education, marriage and divorce, and homosexuality held to a Pentecostal worldview of “good” and “evil” across time periods. However, key shifts in the Pastor’s dualistic discourse suggest how Pentecostals can adapt to societal change over time. This study suggests that Pentecostalism may be significantly more adaptable to external changes than some analysts had predicted, and that longitudinal discourse analyses provide a window into how the Pentecostal dualistic worldview adapts to such changes.
Alexa Robinson

Evolving Media: An Analysis of Social Media and Digital Identity
Advisor/Professor: Dr. Daniel White

Media are constantly evolving and these changes have significantly altered our ways of thinking and our identities. In this presentation I will discuss digital media – more specifically the Internet and social media – and their impact on the formation of identity. Numerous aspects of digital media influence the development of identity including the infinite access and collection of information they make available. However, this information comes at the cost of the commodification of the individual’s identity through the processes of data mining and the use of individuals as cogs within the advertising machine. I intend to demonstrate that the advancements made through social media and the Internet have resulted in the formation of “imaginary” identities that are externalizations of the individual’s fluctuating personality. This new malleable and multi-dimensional human identity is the basis for new forms of social life, learning, politics, and social control.

Gerline Christophe

Raché Manyok Bay Té-a Blanche: Deforestation in Haiti and the Power of an Image
Advisor/Professor: Dr. William O’Brien, Dr. Wairimù Njambi

Media representations perpetuate stereotyped images of Haiti and Haitians. Such expressions typically emphasize extreme poverty, mismanagement, exploitation, hopelessness, and also environmental degradation. The environmental image of Haiti is that it is massively deforested, and the connection of deforestation to poverty and other problems has been captured in an iconic aerial photograph of the Haitian and Dominican Republic (DR) border. First appearing in National Geographic in 1987 and replicated since in various sources, the image displays a stark contrast between the tropical lushness of the DR and a desert-like Haiti, stripped of its vegetation. The stark image in effect dichotomizes a supposedly dysfunctional Haiti with a normally-functioning DR. This study analyzes the “mythologies” that are reinforced by the photo and the discourse surrounding it, which produces an accepted story of the way Haiti “is.” Going beyond such stereotypes, the study considers ways of rewriting such depictions to account for greater complexity.
Thomas Dombrowski

*Complex Nuclear Pasta Phases in Neutron Stars*

Advisor/Professor: Dr. Charles Horowitz

Very dense matter in neutron stars is expected to form nuclear pasta phases where individual nuclei merge into exotic shapes. To characterize them, we calculate radial distribution functions, \( g(r) \), from large scale molecular dynamics (MD) simulations that consist of 51,200 nucleons modeled classically in a periodically bounded cube. The sides of the cube are expanded in order to study lower density configurations. As the density decreases, the system transforms from one exotic phase to another. This is shown by changes in \( g(r) \). At distances of tens of fermi there are characteristic peaks and minima in \( g(r) \). The peaks represent the inter-nuclear distance between these exotic shapes, and the minima describe the distance between an exotic shape and its neighboring hole. As the density is decreased, the heights of these peaks and the depths of the minima increase, which reflects the size of the exotic shapes and their holes, respectively.

Philip Olsen

*“The Faithless, Money-driven World”: Communication, Exchange, and Historiography in Thomas Pynchon’s Inherent Vice*

Advisor/Professor: Dr. John Hess

Set at the end of the 1960s in Southern California, Thomas Pynchon's novel *Inherent Vice* (2009) is a nostalgic and parodic take on the hard-boiled crime genre. With a nebulously defined search for an erstwhile lover and intimations of foul play from global corporations, its conventional plot construction has led most critics to view the frequency with which its private eye protagonist, Doc Sportello, consumes and distributes cannabis while detecting as a hyperbolic motif designed to accentuate the ostentation of the book’s stylistic parody. This thesis argues that *Inherent Vice* uses cannabis as a symbolic embodiment of a way of thinking about exchange that effectively circumvents the problems Pynchon perceives to be posed by capitalism. *Inherent Vice* represents a stylistic departure for Pynchon in that, by advocating the repeated institution of small-scale economies of gift exchange, it offers a specific proscriptive ethical guideline for readers wishing to resist capitalism.
Ashlee Mclymont  
*ProjectU*
Advisor/Professor: Dr. Timothy Steigenga, Dr. Christopher Strain

ProjectU is a non-profit organization dedicated to empowering young women by reinforcing positive self-images, encouraging students to make informed decisions, and stressing both self-acceptance and self-confidence. We will change the face of beauty in the community of Palm Beach County by decreasing young women's dependency on damaging and self-destructive body altering procedures including skin bleaching, chemically straightening hair processes, excessive tanning etc. We will provide alternatives to skin and beauty regimens during presentations, programs, and seminars throughout the community that allow young women to celebrate their natural and uniquely beautiful spirit. ProjectU will partner with members of the community to offer its clients diverse programs including: round table discussions, seminars, and hands-on workshops. Clients will gain a functional understanding of the historical relevance behind detrimental beauty practices and the tools to navigate the beauty industry.

Hannah Mae Gladyszewski  
*The Cycle of Realignment in the Two-Party System*
Advisor/Professor: Dr. Timothy Steigenga

This thesis analyzes the two-party system in the United States, identifying a set of conditions that triggers party realignment. Realignment seems to occur each time the two-party system appears to be in danger of ending due to: the emergence of a strong third-party, infighting in one of the two major parties, or economic problems that weaken one party. By identifying these triggers, I offer evidence that the two-party system in the U.S. is not in any danger of disappearing, as the system is self-correcting. Historically, the U.S. party system tends to cycle through a period in which the two-party system is thriving and party loyalty and cohesiveness is strong, followed by a period of infighting and heightened third party activity during which the two-party system becomes weak. The cycle ends with realignment, in which the system corrects itself.
SESSION 3

VISUAL ARTS CREATIVE RESEARCH AND POSTERS
2:00—4:00 P.M.
HC BUILDING

Taylor Clark, Eli Thomas

Seconds to Sketch
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

As part of the Writing and Illustrating Comics class, we invite you to participate in our live demonstration of sketching and modeling for art. This exercise allows you to become part of the comic-making process through a warm up exercise designed to mimic how models are referenced for sketches in our comic. In this exercise, volunteers participate in short sketches, either by drawing models in seconds or holding poses to draw. The goal of this activity is to warm up the artist, train the eye to quickly look for characteristics of the human form, analyze the accuracy of a drawing given a short deadline, and challenge the artist to draw temporary poses.

Tyler Crawford

From Film Script to Comic Script: The Evolution of a Nervous Novice
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

As an author, one can become very attached to their stories, but especially the characters within. True creativity and spontaneity can only occur when one is forced to pare down the extraneous detail and let the essence of the characters shine through with clear, focused writing and visuals, as I did with my comic entitled “The Little Cares,” adapted from a film script I began writing in high school. My story follows the superficialities and realizations of a high school student forced to choose between lust and love. My presentation takes the audience through my journey from the anxieties of changing my original film script to a comic script and the artistic process of, years later, finally giving faces, expressions, and visual context to characters who were once just words on a page and thoughts in my head.
Brian Evans  
*Simple Comic Process Diagram*  
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

Throughout the past several weeks, “Simple Dimple” has been developed as a project for course IDS 3932: Honors Writing and Illustrating Comics. “Simple Dimple” is centered around Dimple, a lazy high school student who is determined to receive high marks in the most difficult course his school is offering without having to study. To provide elucidation of the steps involved in producing a comic, the creation process of “Simple Dimple” is visually diagrammed, showing aspects of the proposal, the typed script, rough thumbnail sketches of the panels, and finished penciled panels presented both before and after inking. Utilizing a multiple step process in developing “Simple Dimple” facilitated improvement of both the story and the way by which the art style and panel layout conveys information to the reader.

Erin Farmer  
*Women in Comics*  
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

My presentation is of an original fantasy comic created for Honors Writing and Illustrating Comics. In this class, we are taught the basics of the art of comic making from both writing and drawing standpoints. In my presentation I will be discussing the representation and contributions of women in the realm of comics and manga, from outfits to the agency and role of female characters to the role and treatment of female writers and fans. I will also discuss the similarities and differences of this treatment between mainstream American comic book culture and that of Japanese manga and how it has influenced my work on the comic.
Michael Ford
*From Concept to Comic: The Process of Creating a Graphic Novel*
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

Comic development from start to finish involves doodles, rough sketches, scripts, and some guidance from *Drawing Words and Writing Pictures*. This project will follow the comic making process of my own comic, from beginning ideas to rough scripts and thumbnails to the final, visual and written graphic novel. Traditionally, comics are thought of as something childish, but I want to expose the work that goes into creating these elaborate comics by dissecting mine. The title of my comic is “Potential: A Character Prequel from The Butterfly Problem.” It follows the story of a boy named Cole who is going to inherit one of the eight Governor General seats in the government on his planet. Through his journey Cole learns the awful secrets of his government and wants to change everything. The task seems insurmountable, but with the help of his father he may just be the driving force of rebellion.

Lauren Fremont
*Don’t Judge a Comic by Its Cover*
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

A comic should be judged on its quality of story and how well the images help the story—not on its genre. The title of my comic, created for my Honors Writing and Illustrating Comics class, is “A Parody on Every Fan Girl’s Dream.” It is meant to be comedic and unrealistic, but it does show a side of human nature that everyone can relate to. My comic is a somewhat autobiographical account of two girls who desperately want to go to Comic-Con®. They face obstacles, but I won’t give away the ending here. My presentation will take you through the process of creating a comic. It is arduous, but the final product is rewarding. From concept to final inked comic, there are several steps in between that must be taken in order to produce a comic that looks good and that people will want to read and enjoy.
Jaclyn Goldstein, Jared Hesse, Kadeem Ricketts, Rachel Rohan, Sarah Sax
Searching for the Truth
Advisor/Professor: Dr. William O’Brien

This music video was produced as part of a final project for the course, Honors Global Warming, taught in the fall semester of 2013. Filmed mainly at a local beach, the performance highlights concerns about planet Earth’s future as a result of anthropogenic climate change. The lyrics of the song urge viewers to learn more in order to promote action on the issue and to counter the efforts of special interest groups, which seek to maintain an unsustainable status quo. The performance contemplates a future of sea level rise, biodiversity loss, and more intense storms, all considered by the vast majority of scientists as likely outcomes of global warming, which will potentially be even more severe if current inaction continues.

Luz Stella Hernandez-Torres
Calligraphy and What You Will Say
Advisor/Professor: Professor Dorotha Lemeh

Technology can be a useful and varied tool that helps us to complement our creativity. In Writing and Illustrating comics, sophisticated software, computerized pens, and specialized tablets are just a few of the options offered to a cartoonist to draw, to color or simply to tell their stories. However, there is another group of artists who still work with traditional techniques such as paper and pencil. Through using both the digital and analog worlds, I will create a workshop to look at the audience’s handwriting skills and their imagination in creating stories. I will provide them paper and a black ink pen so they will be able to write dialogues in panels previously designed.
**Luz Stella Hernandez-Torres**  
*Superhero’s Journey: Born Again*  
Advisor/Professor: Professor Dorotha Lemeh

A hero is one who embarks on an adventure. His journey can be either physical, psychological, or both. For the hero following his path is a need. He receives a call to start his journey, and if he responds, his voyage begins. Or he can disregard the signal and try to forget about it. However, ignoring the request to embark on an adventure does not make the call disappear; it makes its volume get louder until finally the hero has to respond to it. By doing so, he starts navigating a path of self-discovery that includes excitement, passion, disillusion, fear, enjoyment and a never ending amusement about life’s unfolding. My thesis is based on the creative process of recognizing myself as the main character of my life story. During this journey, I have learned how my weaknesses have become strengths, and how each life lesson shaped me as the hero of my own life.

**Luz Stella Hernandez-Torres, James Walton, Benjamin Hammaker, Randell Doane**  
*The Thousand Arms Legend*  
Advisor/Professor: Professor Dorotha Lemeh

According to Buddhist beliefs, Guanyin, or Thousand Arms is a goddess of compassion and healing. She encourages us to reflect on our purposes in life, and the manner in which we help others. Based on this legend, S. Hernandez-Torres, J. Walton, B. Hammaker, and R. Doane created the video installation titled "The Thousand Arms Legend" to encourage each of us to observe our individual behaviors in relationship to others. Hopefully, through mindful observation of our internal thoughts, egocentric patterns of behavior, which generally lead us away from creating community and supporting those in need, can diminish, thus allowing for a clear message of love, kindness, and compassion to enter our world.

**David Lucien**  
*Analysis of Development Process of Comics*  
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

Many people dismiss comics as a group of simple drawings with shallow meanings. They do not realize the work that goes into it. In this presentation, I will show the process from the beginning script to the thumbnails of the comic by examining my own work and that of other professional artists. I will also discuss the meanings of some of the details in my comic and other comics by examining panel transitions, panel size, and panel borders. Through the development of my story, I will demonstrate the value of comics as an art.
Kathleen MacDonald

*Mirror, Mirror: Dancing with Demons*

Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

This project examines my original comic "Mirror, Mirror: Dancing with Demons” and the classic concept of Man vs. Self, the idea of a protagonist whose interiority is their antagonist. It is primarily concerned with the ways in which a graphic novel can better portray this concept over a traditional prose form. The story follows an aspiring ballerina who perceives resistance from external forces around her when her biggest obstacle is herself and her doubts. By playing with page layouts, panel shapes, and repeated imagery, I examine the distinction of thought and action, the direction of reading, the idea that the richness or distortion of an interior life is not always shown externally, and the dangers/repercussions of the internal manifesting itself externally.

SriGita Madiraju

*Ramayan, the Heroic*

Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

My comic “Ramayan, The Heroic” is based on an ancient Indian tale in a Marvel superhero style, with updated illustration and dialogue. By updating the setting, timelessness of themes and archetypes can be recognized from an ancient context to one identifiable to today. Ramayan encompasses King Ram’s battle between good vs evil, themes of dharma (righteousness), loyalty to family and kingdom and sacrifice for the greater good. It has cultural and theological significance, not just as a literary epic, but also an integral part of Hinduism that is worshipped across the country and depicted in art, temples, monuments etc. Updating and retelling various tales are very common across the world. My presentation will discuss the similarity of themes in ancient tales and modern stories seen in my comic and other forms of art. By updating ancient tales, the universality of values/themes and their ability to remain constant over time can be better understood.

Katherine Mahoney

*The War of the Clouds*

Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

For my presentation, I will have a poster that outlines the process in which I came up with my idea for the story of *The War of the Clouds* and how the story unfolds, as well as why it was chosen. On the poster there will be initial sketches of the characters that lead to the final forms that they take in the comic, as well as a few thumbnail sketches from the actual comic. The poster will also have a short outline of the ultimate points of the initial chapters.
Parker McDonald, Chrystal Wong

*The Freshmen Fifteen*

Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

Do you like comic books, superheroes with underwhelming powers, and spectacular writing combined with beautiful illustrations? We have the presentation for you. Let Parker McDonald and Chrystal Wong take you step by step through the creation of their amazing new comic book, The Freshman Fifteen. What’s the comic book about you ask? It’s the story of John Jeremy (aka the Freshman Fifteen). He’s a mild mannered college student with the not so awesome ability to make objects exactly 15 pounds heavier. You’ll see the entire development of the comic from story concept, to script, to thumbnail sketches, all the way to finished pages. Will the Freshman Fifteen be able to use his lackluster power to defeat evil? Will his mom get kind of mad at him for trying to fight crime? Come and find out.

Carina Morales

*Hues*

Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

In the same vein as detective comics such as Dick Tracey and Sin City, my comic “Hues” is a mystery of one man and his cohorts living in a grayscale world. In my poster presentation, I will cover the meaningful use and artistic value that color can create in comics when trying to convey a certain feeling or idea. Hues as a value scale can be placed metaphorically into characters’ lives as their sense of discovery or their sense of understanding evolves throughout the comic. Overall, I want to show the importance of color (or lack thereof) and what hues can represent.
Sireesha Reddy

Jimmy Corrigan: The Smartest Kid on Earth
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

I will analyze the graphic novel Jimmy Corrigan. I will discuss the semi-autobiographical story content which follows Jimmy, and his grandfather, who are both awkward, abused, and lonely. This comic’s genre is very different from stereotypical action comics or cartoons. Jimmy Corrigan is a valuable graphic novel because of the experimentation with the concept of comic form. The author subverts the standard left-to-right square panel flow with elaborate diagrams and info-graphs which force reader engagement. I will examine how the art’s simplicity is very suitable for the story’s theme, especially in comparison to other art styles. The flat-colored line-art implies that Jimmy’s life is not intrinsically beautiful, that Jimmy is child-like, and that Jimmy’s world is depressingly flat. There is no inherent drama, not even in the shading.

Colleen Sanders

The Comic Process: Examining “Ascension”
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

The comic “Ascension,” created for IDS 3932: Writing and Illustrating Comics, is a dark, slightly comedic tale about Lavender, a girl with an abusive and neglectful mother who has a run in with a demon who possesses one of her stuffed animals. The demon, searching for a truly selfish soul, offers to eat the soul of Lavender’s mother, but Lavender refuses out of principle. An unusual friendship develops between the two, from which Lavender learns to rely on others while Henry, the demon, struggles with his inability to carry out his roles as a demon. This exhibit will show the process of developing this story, including the progress currently made through a proposal, script, and thumbnails. This poster will allow viewers insight into other steps of creating a comic, including the development of a final script as well as its conversion into penciled and inked pages.
Guillermo Sawai
*The Different Styles of Comic Art*
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

This exhibit will examine how the Japanese use of visual language creates a manga comic that differs from western style comic art. I will incorporate this into my story, “Life and Times of William,” an autobiographical comic created for the class Honors Writing and Illustrated Comics. The style of drawing will be of a western style comic as William, the main character, is in the Americas, while the comic will assume more of a manga style when he moves to Japan which indicates that William has adapted to the culture. Aside from the story, the style of drawing will also be examined by exploring what makes comic drawings a manga style of art and how visual language is important in creating this type of comic.

Emily Senderey
*Menstruation with Comics*
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

A challenge the medical field faces is communicating the intricacies of physiology and disease to patients, which can interfere with effective medical treatment. Exploring the comic medium, I realized comics can be used as a resource for healthcare professionals to teach their patients. Comics can take a dry and detailed biological mechanism and maximize understanding through visualization, personification and humor. In this presentation I provide an example of how I developed a comic addressing the detailed biological mechanism of menstruation. I hope to convey the promising potential of comics in the field of medicine for patients, healthcare professionals, and students.

Chun May Siu
*From Sketching to Illustrating in Easy Paint Tool SAI*
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

In this example comic panel, I use a drawing tablet and Paint Tool SAI to show the process for one method of sketching and illustrating a character for my final project in the Writing and Illustrating Comics class. Digital art programs, such as Easy Paint Tool SAI, allow artists to draw and illustrate on drawing tablets that are plugged into computers. Easy Paint Tool SAI is a computer program that enables artists to paint in a digital animation art style or a style that reflects traditional art mediums, such as watercolor and oil paints.
Jonathan Summersbee, Jennifer Cardozo

*Scripting for Comics*

Advisor/Professor: Professor Dorothea Lemeh, Professor Rachel Luria

Drawing, inking, coloring, and writing are all components of a successful and interesting comic. However, only the exceptional can do this all on their own. Anne and I are collaborating and we realized that with great collaboration comes the need for great communication. In this workshop my collaborator and I will teach those who can write but have all the drawing skill of an epileptic octopus how to write scripts that a collaborating artist can easily translate into any visual medium. From basic story structure to panel formatting and descriptions, this crash course in scripting will teach you how to take the rich world in your head and finally see it come to life at the hands of another. Even if you’re a novice writer or just want to see how comics are made, all are welcome to peek in.

Bettina Teng

*Living a Dream: An Analysis of the Representation of the External in Comics*

Advisor/Professor: Professor Dorothea Lemeh, Professor Rachel Luria

This project delves into the visual and storytelling elements that shaped my original comic, *Living a Dream*. In this work, the protagonist, Alex, is never sure if he is hallucinating or if the events occurring actually took place. The costume design and other props used in the story add to the purposeful ambiguity regarding Alex’s hallucinations, which leave Alex and the reader perplexed, underscoring human unreliability when it comes to one’s senses. Different external markers in the story, including clothing and setting, are important aspects that shape the plot and outline the protagonist’s development. It is important to analyze the visual elements and other detailed instances not only in this story, but also in other comics, because these components add tension and interest to the plot without explicitly stating the conflict. *Living a Dream* explores the human perception of reality, as well as criticizes the materialistic society.
Loren Terry  
*Deciding When to Hit Pause*  
Advisor/Professor: Professor Dorotha Lemeh, Professor Rachel Luria

What is a bride thinking the moment she walks down the aisle? Maybe she's thinking back to all of the memories she shared with her groom over the years, or maybe she’s thinking of their life to come. In my story it is the former. As the bride revisits highlights in their lives, as the author, it can be hard to pick and choose a few key examples to relate a couples’ love and whole relationship. In this presentation I will go into depth about my personal writing experience and the factors I found helped, and some that possibly hindered, the development of my script. I have found that writing a script is full of revisions and decisions, but just like the bride, it is the moments I choose to share and recreate that will determine my final draft.

Chrystal Wong, Alexa Robinson  
*Who Are You?*  
Advisor/Professor: Professor Dorotha Lemeh

This poster will explain how Alexa Robinson and I were able to create an animation using FAU’s artist Wacom Tablets and Photoshop CS6. I was in charge of the art portion while Alexa used Photoshop to pull the pieces together. We will explain this in the poster and display images of our process.

Chrystal Wong  
*Wacom Tablet Presentation*  
Advisor/Professor: Professor Dorotha Lemeh

I will be demonstrating how to use Photoshop and the Wacom artist tablets that professor Lemeh purchased, via her technology grant. This takes place in the HC building after the morning presentations, in the room for the comic book class. I will be demonstrating how to use the tablets for graphic design, as well as their practical art applications.
Blake Bailey

*Methods for Post-hoc Cellular Subtype Analysis In-vivo Imaging*

Advisor/Professor: Dr. David Fitzpatrick, Dr. Gordon Smith, Dr. Paul Kirchman

The use of two-photon microscopy has allowed for detailed large scale sampling of in-vivo neuronal activity. One of the new frontiers made possible by this technology is that of connectomics, with a focus on the roles of individual neuronal subtypes on normal and abnormal brain activity. Few methods currently exist that allow for the discrimination of neuronal subtype in coordination with functional imaging. By creating coupled functional imaging post-hoc immunostaining methods aided by computer reconstruction, distinct neurons can be identified based on functional as well as molecular properties. Utilizing large scale techniques such as physical pinholes, down to molecular scale sparse labeling, researchers can with some proficiency relocate cells in-vitro from functional in-vivo data. With the ability to better identify the types of cells causing functional changes in the brain, it is then possible to attribute functions and dysfunctions at the cellular level appropriately.

Jenna Banks, Areti Vassilopoulos

*Examining Interference and Suppression Effects for Spider Stimuli in the Emotional Stroop Task*

Advisor/Professor: Dr. Laura Vernon

The emotional Stroop task is an information processing approach to assess emotion. It works by examining the response time of participants naming the colors of emotionally-valenced words. Previous emotional Stroop research has typically found an interference effect in that participants are slower at color-naming words when the content of the words is related to a feared stimulus. There is a removal of the interference effect when participants are exposed to the feared stimulus, called the suppression effect. The interference effect is thought to be due to the emotional words evoking a response, causing a delay in naming the color of the words. Suppression is thought to be due to a “fight or flight” response that is triggered by the presence of a perceived threatening stimulus. This project examines the interference and suppression effects and if they are present in response to both fear and disgust spider stimuli.
Skylar Benedict  
**Reclaiming Nationalism through Alternative Youth Histories in Indonesia**  
Advisor/Professor: Dr. Jaqueline Fewkes

The founders of the Republic of Indonesia emphasized links with their cultural-historical roots to create a national identity in contrast to the one imposed upon them by the Dutch colonial government. This study examines how, similarly, Indonesian youth cultural groups are re-appropriating ideas of cultural and national identity in contrast to those professed by the national government and supported by many members of the nation’s founding generations. One such group, the Komunitas Historia Indonesia seeks to reclaim their cultural heritage by introducing the younger generations to an alternative view of the archipelago’s history and culture through educational programs, excursions, and entertainment. In this study I used Benedict Anderson’s theory of imagined communities to perform text analysis of the KHI website. Through text analysis I identified ways in which these youth are reconnecting with their cultural roots in order to create a national identity in contrast to the current official ideology.

Jennifer Bolton  
**Oxidative Stress in Saccharomyces cerevisiae**  
Advisor/Professor: Dr. Paul Kirchman

A proximate cause of aging is cellular damage from oxidative stress. The budding yeast, *Saccharomyces cerevisiae*, was grown on 3% glycerol medium and used as a model for cellular aging. Glycerol is a non-fermentable carbon source, which forces the yeast to use mitochondrial respiration. A model that emphasizes mitochondrial function mimics the metabolism in higher multicellular organisms. Mitochondria produce oxidative stress as they produce energy, and cellular function declines as this oxidative stress accumulates with age. This project focuses on the gene for aconitase (ACO1). Aconitase proteins have an active iron-sulfur cluster and may be a sink for oxidative stress in the mitochondria. ACO1 was integrated into the yeast chromosome under the control of a doxycycline repressible promoter to control the level of gene expression. Over-expression was verified by Northern blotting. Lastly, a life span analysis was conducted to determine if over-expression increased the life span in yeast.
Steven Brettler  
*Synthesis of Flosal*  
Advisor/Professor: Dr. Veljko Dragojlovic

Flosal (Jasmonal, Jasmine Aldehyde, (E)-2-benzylideneheptanal) is an important commercial fragrance compound. The principal method for its preparation involves a crossed aldol condensation reaction of heptanal and benzaldehyde. The method has a serious drawback as the synthesis of jasmine aldehyde is accompanied by self-condensation of heptanal to produce foul-smelling 2-pentyl-2-nonenal. We optimized the reaction conditions to maximize yield of jasmine aldehyde while preventing formation of 2-pentyl-2-nonenal. The desired product was obtained in ~60% yield, with room for future improvement.

Nicholas Fuller, Dr. Alan Kersten, Dr. Julie Earles  
*Identification of Others through Biological Motion*  
Advisor/Professor: Dr. Alan Kersten

In point-light models, visual cues are reduced to points of light indicating the major points of movements of the human body. Although we are able to recognize people through movement, accuracy of identification of strangers through point-light models is low. Connecting the major points of motion to represent a skeleton might enhance the ability to recognize strangers. This study wishes to assess whether accuracy will be improved through learning general movement characteristics of an individual. After a learning stage, participants were randomly assigned to match names with either point-light or skeleton models of actor movements. Two of the four actions performed by actors in the testing stage were previously seen during the learning stage. We expect identification from skeleton displays will be higher than for point light displays. We also expect higher accuracy for actions previously seen during the learning stage. The findings and their implications will be discussed.
Kira Geiger, Sarah Sax, Anna Quinones  
*The Relationship of Mindfulness and Existential Anxiety*  
Advisor/Professor: Dr. Laura Vernon

Adopting various mindfulness techniques has been shown to affect both psychological and physiological conditions within the body (Hill & Updegraff, 2012; Nyklíček et al., 2013). This experiment was conducted to explore the relationship between mindfulness meditation techniques and existential anxiety. Existential anxiety has been defined within past research as “a deep concern over whether or not one is living a meaningful and fulfilling life” (Morse, 1998). Increased mindfulness was expected to lead to more meaningful experiences for an individual, decreasing the individual’s reported existential anxiety. In the present study, participants completed video mindfulness training and completed self-report questionnaires both before and after viewing the videos. As predicted, mindfulness was negatively correlated with existential anxiety, both before and after the video session. Although the video session significantly increased general trait-like mindfulness scores, it did not significantly change existential anxiety.

Darlena Henderson, Sarbani Ghoshal, Qingshang Zhu, Ana Rodrigues, Anutosh Chakroborty  
*Inositol hexakisphosphate kinase 1 regulates Perilipin-1 activity resulting in decreased lipolysis*  
Advisor/Professor: Dr. Paul Kirchman

Inositol hexakisphosphate kinase 1, commonly referred to as IP6K1, is responsible for regulating the insulin signaling pathway and promotes the formation of IP7. Previous research has shown that IP7 interferes with Akt activity and leads to the development of insulin resistance and weight gain under aging or high-fat diet conditions. My research aimed to discern the effect of the lipase motif within IP6K1 in hopes of explaining its involvement in lipolysis. Our findings suggest that IP6K1 lacks intrinsic lipase activity but instead regulates Perilipin-1 (PLIN1), a signaling molecule in the lipolysis pathway which governs the cleavage of diacylglycerol into monoacylglycerol. Upon overexpression of iP6K1, PLIN1 activity is hindered and results in decreased lipolysis.
Jared Hesse  
*Meaningful Links: Using Network Analysis to Articulate the Structure of Personality Psychology*  
Advisor/Professor: Dr. Kevin Lanning  

The current study is presented as an exploratory network analysis of personality psychology using a network composed of 54 source papers and their references. The articles used were papers from the Annual Review of Psychology journal, which dealt with the subject of personality, from 1950 to 2012. References from the source papers were pulled and then mapped onto a network that graphically illustrated the links between different citations. From the network it was possible to deduce, both visually and statistically, distinctively clustered communities, the relative influence of certain psychologists, and the researchers that bridged disciplinary gaps within the field of personality research. By using digital humanities methods, such as network analysis, it is possible to better understand and articulate the history and growth of personality psychology.

Amisha Jinandra  
*Development and Calibration of a Low-Cost Visible Spectrometer*  
Advisor/Professor: Dr. Eugene Smith  

Visible spectrometers record the absorption of electromagnetic radiation as a function of wavelength, and the spectral data contains both qualitative and quantitative information. While these instruments are essential tools for chemists, students often have limited access to quality instruments due to their high cost. The components used to construct visible spectrometers are moderately inexpensive due to recent technological advances, yet instruments remain expensive. The long term goal of this study is to develop a visible spectrometer that is accessible to students using readily available and inexpensive components. To accomplish this goal, a prototype instrument was calibrated. Resolution was determined by recording data for samples that absorb visible light at specific wavelengths. To assess the utility of the spectrometer for quantitative analysis, signal intensities were obtained as a function of sample concentration.
Rachel Nosacka  
*Chondroprotective Protease Inhibitors in APIC*  
Advisor/Professor: Dr. Paul Kirchman  

Osteoarthritis (OA) is a cartilage catabolizing disease which is due, in part, to changes in the normal physiology of chondrocytes within cartilage which leads to the upregulation and release of cartilage degrading proteases. Cytonics Corp. has developed the Autologous Protease Inhibitor Concentration (APIC) System as a potential therapy to slow the progression of OA. The APIC System concentrates α2-Macroglobulin (A2M), a general protease inhibitor, from a patient’s blood to be injected back into the site of cartilage degradation. A2M is an effective inhibitor of cartilage degrading proteases. However, it is unclear if A2M is the only chondroprotective factor in APIC. In this study, the chondroprotective effects of three other common blood protease inhibitors, α1-antitrypsin (AT), α1-antichymotrypsin (ACT), and antithrombin III (ATIII), are investigated. AT demonstrated some chondroprotective ability, while ACT and ATIII were not chondroprotective at the concentrations observed in APIC.

Hannah Paperno  
*Analysis of United States Perception of Indonesian Gays and Waria through Online Discourses*  
Advisor/Professor: Dr. Jacqueline Fewkes  

In this study I focus on the etic United States perspective on the lifestyle and treatments of communities based on sexual orientation and/or gender roles, such as gays and waria, in Indonesia. I compare etic views of an understanding of what it means to be gay or transgendered in Indonesia to Tom Boellstorff’s interpretation of the emic Indonesian perspective. To do this I have used online newspaper article commentaries with the same subject matter – President Barack Obama’s waria childhood nanny – and analyzed the comments. The online commentary is then compared to Tom Boellstorff’s interpretations. My findings have shown that those from the United States tend to view the topic in absolute terms, they either have the general idea that Indonesians are accepting of alternative lifestyles – specifically those other than heterosexuality – or that they are heteronormative. Those from Indonesia typically refute the American claims and are in agreement with Boellstorff’s more nuanced understandings of the topic.
Anna Quinones
*Examining the Relationships Among Meditation, Mindfulness, and Self-Compassion*
Advisor/Professor: Dr. Laura Vernon

Mindfulness is the awareness that emerges through paying attention on purpose, in the present moment, and without judgment (Kabat-Zinn, 2003). Neff (2003) draws the definition of Self-Compassion from the description of compassion for others and defines it as being open to one’s own suffering, not avoiding or disconnecting from it, and healing oneself with kindness. In the present study, the participants were exposed to a single video mindfulness session comprised of four meditations, three psychoeducation components, and discussion through an online chat. We hypothesized that in within-subjects analyses the single session would improve scores of self-compassion immediately post meditation and at a one week follow-up. We found that although self-compassion did not increase immediately following the session, it did increase at the one-week follow-up. These results could have implications for the methods of administration and total treatment time necessary for meditation-based interventions.

Nicole Santos
*Health Care Decisions Survey*
Advisor/Professor: Dr. Kevin Lanning

The purpose of the study is to research help-seeking behavior and adherence to advice by health providers. The study will investigate the effects of the gender of both participant and care-provider, as well as the expertise of the care-provider. Based on work done by Hoar and Flint (2011), we expect to find that female participants will be more likely to seek help from a care-provider with a lower level of expertise and that men will initially seek help from a care-provider with a higher level of expertise. Based on work by Schuller (2006), we expect to find that participants will be more likely to adhere to advice if the care-provider fits the gender norm (e.g., male doctor and female nurse). The results may help care-providers understand what they need to do in order to increase patient adherence to the treatment advice that they provide.
Sarah Sax
Logging On: An Examination of the Efficacy of a Short Online Mindfulness Meditation Training Session
Advisor/Professor: Dr. Laura Vernon

Mindfulness refers to a state of mental awareness in which the individual is focused on the current moment while attempting to experience, and nonjudgmentally accept, passing sensations and thoughts. A previous study (Vernon, Stiksma, & Levy, 2013) found that one week following a single meditation training session, participants reported positive results, including increased mindfulness and decreased stress. The current study examined the efficacy of the same one-session mindfulness meditation training administered through video and examined scores of mindfulness, anxiety, and positive and negative emotion. Paired t-tests revealed a decrease in anxiety and negative emotion following the session and an increase in positive emotion. Surprisingly, momentary state mindfulness did not change significantly immediately following the session. This research has implications for online mindfulness meditation classes, which are growing in popularity.

Lori Simmonds
2D:4D Digit Ratio and Muscularity
Advisor/Professor: Dr. James Wetterer

Studies in geriatrics have found that the second and fourth digit ratio (2D:4D), an indicator of in utero androgen exposure, shows significantly negative correlation with muscle mass (MM) and muscle strength (MS). I examined correlations between 2D:4D and MM as well as the 2D:4D and MS of college students and compared the results to previous geriatric studies in order to evaluate 2D:4D measurement as a supplementary tool for understanding factors associated with muscularity. I evaluated college students aged, 18-22, using a scanning bed and calipers to determine digit ratio. I then measured MM using calf-circumference and bioimpedence technology as well as MS using a dynamometer for grip strength. Individually, correlations between separate left and right ratios, as well as males versus females, did not give statistically significant results.
Harrison Stubbs  
*Biochemical analysis of Crematogaster Ant Venom*  
Advisor/Professor: Dr. James Wetterer

In this research, we sought to identify and compare the organic compounds from the venom of two species of Albanian *Crematogaster*. Using Gas Chromatography- Mass Spectroscopy (GC-MS) and High Pressure Liquid Chromatography (HPLC), we separated and identified the organic components. Once the bioactive compounds were known, we were able to look at them individually to understand their significance in functioning. This allowed us to take note of the similarities and differences between the ants’ venoms.

Elizabeth Tranquil  
*Responses of a Calcium Channel Model to Variations in Voltage Waveform*  
Advisor/Professor: Dr. Paul Kirchman

Action potential repolarization in certain neurons slows at neurotransmitter release sites in the axon if an action potential is preceded by sufficient depolarization. We hypothesize that slower repolarization allows axons to change strength of neurotransmission by changing calcium channel open probability. This was explored with a Markov model comprised of multiple calcium channel subtypes and an action potential waveform input. The model was solved for channel open probability, channel ionic current and charge from ionic current. The outputted charge from the model was compared to experimental calcium imaging results in neurons from mouse cerebellum. The results show that more calcium flows into the cell when the action potential is widened. This implies that in some neurons, a wider action potential may lead to opening of calcium channels that respond selectively to the duration of the action potential waveform at sites of release.
Areti Vassilopoulos, Jenna Banks, Dr. Laura Vernon

**Contribution of Fear and Disgust to Spider Avoidance and Spider-related Stroop Interference**

Advisor/Professor: Dr. Laura Vernon

Emotional Stroop tasks are used to observe the effects of interference in color-naming performance when under high arousal. Participants will complete Spider Phobia, trait fear and trait disgust questionnaires and be administered the specific phobia module of the Anxiety Disorders Interview. Response latency data will be collected by an emotional Stroops task with spider-related words. It is expected that there will be interference in the spider-phobic group. Participants will also take part in a Behavioral Approach Task with a tarantula and exoskeleton and have their heart rate data collected. The correlation of reported disgust and fear during the BAT, BAT approach distance, trait disgust, and trait fear with the level of interference will be examined. The heart rate during the Stroop tasks and BAT will be analyzed. Relative to the non-phobic group, higher heart rates in the spider phobic population are expected during the spider-related Stroop tasks and the BATs.

Zsak Vincente

**Encoding Gene for Immunoglobulin D (Ig D) in Trachemys scripta elegans**

Advisor/Professor: Dr. Joseph Caruso, Dr. Jon Moore

This research project will help determine if Immunoglobulin D (IgD) is found in *Trachemys scripta*, the North American red-eared slider. Since *T. scripta* is used as a model for several human diseases, it important to determine the Immunologobulin isotypes this species has. Recent work (Ohta & Flajnik, 2006, PNAS) showed IgD is evolutionarily more ancient than previously known, but IgD seems to be distributed less uniformly across species than IgM, the most ancient antibody known. Using several Polymerase Chain Reaction (PCR) methods, a Chinese group reported the coding IgD gene in Chinese soft-shelled turtles *Pelodiscus sinensis* (Xu *et al*, 2009, Mol. Immunology). The importance of this project will help establish whether all turtles have IgD and if not, why *T. scripta* lacks this Immunoglobulin. This, in turn, may shed further light on the evolution of immune responses in lower vertebrates and on turtle evolution.
Ashley Walker
*Copper Supplementation Increases Lifespan in Saccharomyces cerevisiae*
Advisor/Professor: Dr. Paul Kirchman

Copper supplementation increases the lifespan of the yeast *Saccharomyces cerevisiae* by facilitating the import of iron into the cells. Previous results have shown that the additional iron increases yeast lifespan by decreasing the effects of oxidative stress in the cells. *Saccharomyces cerevisiae* were grown on YPG media supplemented with copper in order to determine where iron is being utilized in the cell. Since the electron transport chain is the main source of oxidative stress, I hypothesized that the iron would be transported into the mitochondria. Mitochondria were isolated from yeast by differential centrifugation. The mitochondria from yeast grown on copper media were tested for iron content versus mitochondrial from yeast grown on non-supplemented media. The iron concentration in mitochondria from cells grown with copper supplementation was higher than from non-supplemented cells. Western Blots was used to confirm that the mitochondrial samples were pure.
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