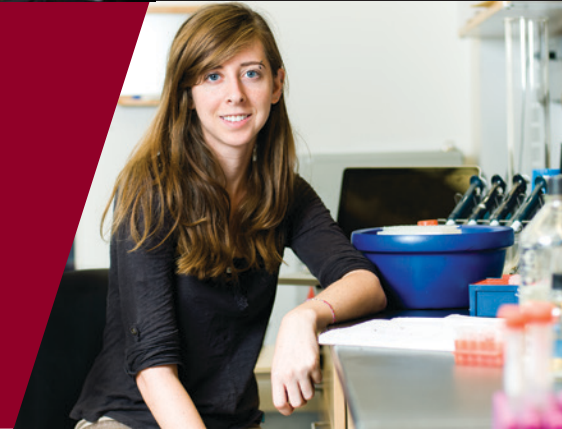
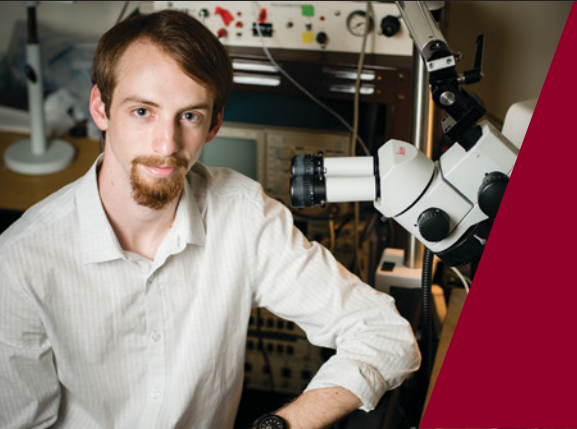


PRESIDENT'S SHOWCASE OF UNDERGRADUATE RESEARCH EXCELLENCE




September 30, 2014
5:30 pm – 7:30 pm



Augustus B. Turnbull III • Florida State Conference Center

Division of
UNDERGRADUATE STUDIES
*Center for Undergraduate Research
and Academic Engagement*



The Undergraduate Research and Creative Activity Awards (URCAA) and the Mentored Research and Creative Endeavors Awards (MRCE) award students funding to conduct a summer research project or creative activity under the direction of a faculty mentor.

The Public Service Research Fellowships (PSRF), awarded for research or creative projects conducted in partnership with a community-based organization, are partially funded through support from The Atlantic Coast Conference.

The Social Work Undergraduate Research and Creative Activity Award (SWURCAA) is funded by the FSU College of Social Work.

The ACC Collaborative Summer Research Award offers one undergraduate student the opportunity to travel and conduct research under the mentorship of a faculty member at another ACC university, and the award's aim is to improve collaboration between ACC institutions.

Special thanks to the FSU President's Office for their generous sponsorship of the event and to the FSU Student Government Association for their support of the Showcase reception.

WELCOME TO THE 2014 PRESIDENT'S SHOWCASE OF UNDERGRADUATE RESEARCH EXCELLENCE!



Joe O'Shea, Ph.D.
Director
Center for Undergraduate
Research and Academic
Engagement

We are delighted that you could join us tonight in celebrating outstanding undergraduate research. The students who are presenting their projects have enhanced their undergraduate experience by taking on directed research and creative activity under the supervision and mentorship of some of Florida State University's most distinguished faculty. Sponsored by the newly re-minted Center for Undergraduate Research and Academic Engagement (CRE), this event serves as the culmination of the Summer Research Award experience, but the work these students present tonight does not end here. Many of the awardees will continue their intellectual pursuits through honors theses, independent study projects, graduate research, and creative work, both here on our campus and beyond. Their Florida State University-funded research and creative activity will continue to flourish through academic conferences, scholarly journals, art showcases, festivals and competitions.

This evening's oral presentations are presented by students awarded the Undergraduate Research and Creative Activity Award (URCAA), the Public Service Research Fellowship (PSRF), and the Social Work Undergraduate Research and Creativity Award (SWURCAA), as well as the inaugural recipient of the ACC Summer Collaborative Research Award. Throughout the atrium you will find posters showcasing the research of the Mentored Research and Creative Endeavors Award (MRCE) recipients. In the downstairs atrium, students' creative work will be featured.



Latika L. Young, Ed. M.
Associate Director
Center for Undergraduate
Research and Academic
Engagement

These awards are a reflection of the University's commitment to developing students as scholars and innovators and are a testament to the stimulating education undergraduates receive at Florida State. The students' projects demonstrate the University's mission of nurturing independent thinkers, who are learning to create solutions that enrich both our campus and our larger communities.

Please also join us tonight in recognizing David Ford, Jim Lee, John and Sally Day, Phil and Linda Lewis, Scott and Ina McNichols, and Phi Eta Sigma for their continued financial support of our Summer Research Awards. Our sincerest gratitude is also offered to FSU Interim President Garnett S. Stokes for her office's generous sponsorship of the event, as well as to the FSU Student Government Association for their sponsorship of the reception. Of course, we also wish to thank all the faculty members who have volunteered their time and expertise to mentor these student researchers, as these efforts would not be possible without them.

If you're attending this event as a student, we hope you'll be inspired to develop your own research or creative projects. We are pleased to announce the launch of the Summer 2015 Research Awards application tonight. You can find information about our Summer Research Awards and all of our other programs at <http://cre.fsu.edu/>.

PRESIDENT'S SHOWCASE OF UNDERGRADUATE RESEARCH EXCELLENCE

PRESENTATION SCHEDULE

5:30 PM	Ballroom, Room 208	6:10-6:25 PM	Room 114
OPENING REMARKS AND WELCOME		THE POWER OF MEMORY AND MANIPULATION IN ANGLO-NORMAN DURHAM: SYMEON, ST. CUTHBERT, AND DURHAM CATHEDRAL	
WELCOME			
DR. GARNETT S. STOKES, INTERIM PRESIDENT FLORIDA STATE UNIVERSITY		MICHELLE L. SAUER	
STEFANO J. CAVALLARO, PRESIDENT FSU STUDENT GOVERNMENT ASSOCIATION		6:10-6:25 PM	Room 201
RECOGNITIONS		MGLUR-MEDIATED CALCIUM HOMEOSTASIS IN THE AVIAN COCHLEAR NUCLEUS	
DR. KAREN LAUGHLIN, DEAN UNDERGRADUATE STUDIES		CODY CALL	
DR. JOE O'SHEA, DIRECTOR CENTER FOR UNDERGRADUATE RESEARCH & ACADEMIC ENGAGEMENT		6:10-6:25 PM	Room 205
6:00-7:30 PM	Atrium and Walkways	PARTICLE FLOW ALGORITHM FOR UPGRADED CMS CALORIMETER	
POSTER PRESENTATIONS		AUSTIN VIHNCENT SKEETERS	
6:10-6:25 PM	Room 101	6:10-6:25 PM	Room 214
EXAMINING THE OBESITY EPIDEMIC THROUGH AN ECOLOGICAL LENS		NUTRITION ASSESSMENT IN JODHPUR, INDIA	
DAVID G. MILLER		TAYLOR NEWMAN	
		6:35-6:50 PM	Room 101
		TWO-POINT STANCE	
		KELSEY GRILLS	

6:35-6:50 PM Room 114
**FROM SURREALISM TO VISIONARY: AN
EXPLORATION OF THE BEGINNINGS OF THE
VISIONARY ART MOVEMENT**

MARY CHRISTINE WILLIAMS

6:35-6:50 PM Room 201
**ARTIFICIAL CHROMOSOMES FOR HUMAN
EMBRYONIC STEM CELLS**

MOLLY GORDON

6:35-6:50 PM Room 205
**MAPPING NEURAL NETWORKS IN
APLYSIA CALIFORNICA USING HIGH FIELD
MAGNETIC IMAGING**

GRACE CHRZANOWSKI

6:35-6:50 PM Room 214
**EXPAND PERU CASA DE BEBES: A
COMPREHENSIVE EVALUATION OF A
CHILDCARE PROGRAM IN RURAL PERU**

LINDSAY GREENE

7:00-7:15 PM Room 101
**FRAMING MOVEMENT GOALS: MOROCCAN
WOMEN'S AGENCY IN DISCUSSIONS OF
GENDER EQUALITY**

ALEXANDRA OLSEN

7:00-7:15 PM Room 114
**THE IRISH QUESTION RECONSIDERED:
EXAMINING NORTHERN IRELAND'S
PRECARIOUS PEACE**

ANNALISE KAPUSTA AND KATE MAZZOTTA

7:00-7:15 PM Room 201
**CHARACTERIZATION OF THE PROCESSIVITY
FACTOR PF-8 IN KAPOSI'S SARCOMA-
ASSOCIATED HERPESVIRUS**

SARAH TEPPER

7:00-7:15 PM Room 205
**APPLICATION OF FEMTOSECOND
SPECTROSCOPY METHODS TO STUDY
CONFINED FLUIDS IN HOLLOW GOLD
NANOSPHERES**

RYAN T. RHOADES

7:00-7:15 PM Room 214
**A COUNTRY IN TRANSITION: EXPLORING
COMMUNITY AND CULTURE IN
SOUTHERN INDIA**

TAYELOR VALERIO AND HILARY SMITH

7:25-7:40 PM Room 101
THE HOUSING CRISIS

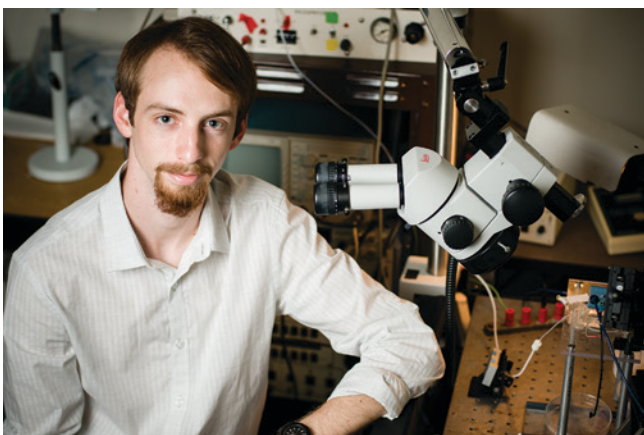
MARI KYLE

7:25-7:40 PM Room 205
**MECHANOCHEMICAL STRENGTHENING OF
BENZOCYCLOBUTENE POLYMER**

ILYA PISKUN

7:25-7:40 PM Room 214
WATER FOR STUDENTS BY STUDENTS

COLE FRIEDES



CODY CALL

Raised in southwest Florida, Cody Call is a senior working towards degrees in Psychology and Biology. He has worked in Dr. Richard Hyson's neuroscience lab since last fall and is currently conducting research for his honors thesis to study how sensory deprivation can lead to neurodegeneration. After graduation, Cody hopes to receive a master's degree in neuroscience from the University of Edinburgh as a Marshall Scholar. He then aims to earn a Ph.D. in the U.S. while studying glial cells' roles in neuronal signaling. Cody plans eventually to run a lab at a major research university as a professor.



COLE FRIEDES

Cole Friedes is a junior at Florida State University majoring in Biochemistry. He is extremely interested in international aid, epigenetics, and public health. He is the President of the Tallahassee Chapter of Advocates for World Health, a non-profit based on redistributing medical supplies to impoverished areas and also the Men's Ultimate Frisbee Team. He is also currently a Leader for FSU's Undergraduate Research Opportunity Program. His work in Ghana is his first international aid project. After graduation, he aims to pursue an M.D. /M.P.H. and work internationally, helping those who need pertinent medical care.



GRACE CHRZANOWSKI

Grace Chrzanowski is a senior in Chemical Engineering with a major in Biomedical Engineering and is very excited to be selected as an URCAA award winner. Grace has been involved in Dr. Samuel Grant's lab since her sophomore year at both the College of Engineering and the National High Magnet Fields Laboratory conducting research focused on conduction and connectivity in neuronal systems analyzed by ultra-high magnetic fields. Upon graduation, Grace wants to attend higher-level education that incorporates medical research directly into the clinical setting.



MOLLY GORDON

Molly Gordon, born and raised in Hollywood, Florida, is a third year Biology major interested in cellular and molecular biology. Working under the supervision of Dr. David M. Gilbert for two semesters studying DNA replication timing, she has never felt more support and confidence than from the members of the Gilbert lab. This coming spring, Molly will commence an honors thesis building off of her summer research. She also hopes to be considered for the Goldwater Scholarship as a representative of FSU. Molly plans on earning a Ph.D. in Biological Sciences upon her completion of her undergraduate studies.



LINDSAY GREENE

Lindsay Greene, a resident of Jupiter, Florida, will be graduating spring 2015 with degrees in Social Work and International Affairs. Under the guidance of Dr. Neil Abell of the College of Social Work, she has been developing her interests in Social Work through various research and volunteer opportunities. Upon graduation, Lindsay plans to continue her Social Work education by earning a Master's degree in the field. Her future aspirations are to work in a capacity that will allow her to engage with culturally diverse populations and help to develop solutions to current and projected problems that they may face.



ANNALISE KAPUSTA

Annalise Kapusta is a senior pursuing a dual degree in English Literature and Media/Communication Studies, with minors in Italian and Religion. She is currently writing her Honors in the Major thesis on the data she collected this past summer in Northern Ireland. In addition to being a Leader for the Undergraduate Research Opportunity Program, she is the nonfiction editor of the Kudzu Review. After graduation, she intends to teach English abroad for a year before going to law school with a specialization in international law.



KELSEY GRILLS

Kelsey Grills is currently attending the "FSU in NYC" program as a senior and working towards obtaining a B.F.A. in Dance. She has been studying the performance of identity since her freshman year and hopes to continue to mesh her interests in sociology and performance through the medium of dance. Her career goals include choreographing and producing multi-media entertainment productions, as well as directing her own dance company that focuses on the exploration of various social issues and human interaction.



MARI KYLE

Mari Kyle, a Japanese-American student double majoring in Studio Art and Advertising, is currently working on her honors thesis exploring the technicalities of virtual reality. Since the fall of 2013, she has been conducting research under Professor Joelle Dietrick on various projects ranging from the topics of home-insecurity in America to technology-based contemporary art. She hopes to expand her project entitled The Housing Crisis to other cities while she pursues her studies at FSU. Upon graduation, Mari would like to bring her research and art abroad to work for international video game designers such as Bethesda Softworks and LionHead Studios.



KATE MAZZOTTA

Kate Mazzotta is a senior in Creative Writing. In addition to working on her honors thesis, she also serves as the Editor-in-Chief for FSU's undergraduate literary magazine, *The Kudzu Review*, and works with the Student Council for Undergraduate Research and Creativity. Her current research focuses on the cyclical nature of terrorism, even in post-terror societies like Northern Ireland. After graduation, Kate would like to return to Belfast to study Northern Irish identity and maybe discover something new about her own identity. Her career plan is to work as a writer, specializing in literary journalism.



TAYLOR NEWMAN

Taylor Newman, a Tallahassee native, is a senior majoring in Dietetics with an emphasis on International Nutrition. She has interned with NGOs such as the Big Bend Homeless Coalition, Feeding Children Everywhere, and FSU's Global Peace Exchange, with whom she spent two months volunteering in Nepal. Taylor hopes to get her Master's degree in Dietetics at UC Davis before returning to Nepal with the Peace Corps on a food security and public health project. Her goal is to work for a non-profit where she can use her knowledge of nutrition to alleviate easily preventable diseases and malnutrition among impoverished populations.



DAVID G. MILLER

David Miller, a Tallahassee native, is senior at FSU majoring in Religion. David has dabbled in an array of research areas ranging from biochemistry to dance history. He worked on his current research studying obesity issues and bioethics at both the Yale Interdisciplinary Center for Bioethics and the Hastings Center, a bioethics think tank, and he will continue this work as part of his honors thesis this year under Dr. Aline Kalbian in the Department of Religion. Upon graduation, David hopes to pursue a career at the intersection of medicine, public health, and bioethics.



ALEXANDRA OLSEN

Alexandra Olsen, originally from Cape Coral, Florida, is a senior studying Sociology and French with minors in Statistics and International Affairs. Last fall she completed an honors thesis examining resources available for undocumented immigrants in Washington D.C. Since then she has been working with Dr. Deana Rohlinger on research on the women's movement in the U.S. and Morocco. Continuing forward, Alexandra would like to attend graduate school to get a Ph.D. in Sociology, studying social change and deviance through ethnography.



ILYA PISKUN

Ilya Piskun is a senior majoring in Chemistry with a minor in Physics and Mathematics. His current research interests are centered around organic and physical chemistry. After working with Dr. Igor Alabugin at FSU and Dr. Stephen Craig at Duke University, Ilya has gained a lot of experience in organic chemistry procedures, polymer synthesis, and chemical analysis. He will be applying to Graduate School this fall, where he plans to work on physical explanations of chemical reactivity, light-induced chemistry, and advancement of scientific education.



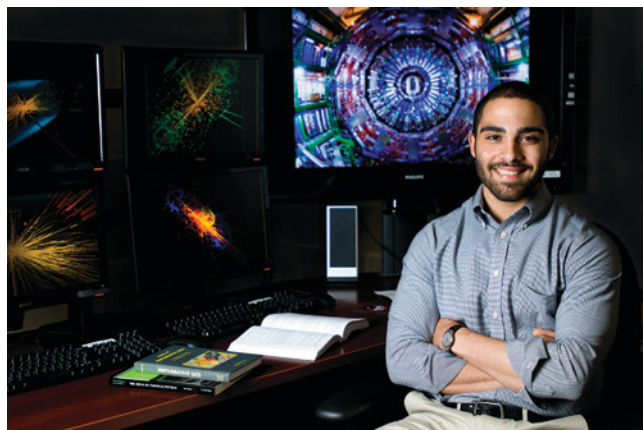
MICHELLE L. SAUER

Michelle Sauer is a senior at Florida State University majoring in History and English Literature with minors in Art History and Classics. Currently working on her honors thesis, she has been conducting research in medieval history under the supervision of Dr. Peter Garretson. Upon graduation, Michelle plans to continue her research and study of the Middle Ages by pursuing a Master's degree at Durham University in the United Kingdom. Her career goal is to earn her Ph.D. in Medieval Studies and become a prominent researcher and professor of history.



RYAN T. RHOADES

Ryan Rhoades, from Hobe Sound, Florida, is a 4th year student finishing a Physics and Applied Mathematics double major with a Chemistry minor. He began working with Dr. Knappenberger in the Department of Chemistry during the spring of 2014 and is currently working towards an honors thesis. Ryan's goal after graduation is to pursue a Ph.D. in Physics or Optical Science, and he hopes to continue performing experimental laser or optics research in graduate school.



AUSTIN VIHNCENT SKEETERS

Austin Skeeters, a Fort Walton Beach resident, is in his final year of Physics and is currently working on his honors thesis. Since last summer, he has been conducting research under Dr. Todd Adams in association with FSU's High Energy Physics Group. Upon graduation, Austin would like to pursue a Master's degree in Intellectual Property Law from Notre Dame University while continuing to engage in scientific research.



HILARY SMITH

Hilary Smith is in her final year at Florida State University studying Anthropology. She conducted a cultural anthropological research project in Tamil Nadu, India, this summer under Dr. Amy Kowal. This summer taught Hilary what real cultural fieldwork was like and gave her the unique opportunity to experience it during her undergraduate studies. After graduation, Hilary hopes to find a job with an NGO in the States and work in assessing the needs of the communities associated with her organization. She looks forward to working very closely with people who share her same passion of public service.



TAYELOR VALERIO

Tayelor Valerio is a senior in the Anthropology department. During the summer of 2014 she spent 9 weeks in India conducting cultural research under Dr. Kowal. While there, she implemented a heritage appreciation project at an organization with the help of another FSU student and also collected separate data to use for her undergraduate honors thesis. Tayelor realized her passion for conducting qualitative community research while integrating herself into the rural Indian village and will continue this in graduate school while obtaining a Ph.D. in Sociocultural Anthropology.



SARAH TEPPER

Sarah Tepper is a senior Biology major from Tallahassee, Florida. She was selected to participate in the Undergraduate Research Opportunity Program (UROP) as a sophomore, served as a UROP Leader during her junior year, and is also the President of the Beta Beta Beta Biological Honor Society. Sarah began conducting research in the laboratory of Dr. Zhu as a sophomore, researching the human tumor virus Kaposi sarcoma-associated herpesvirus (KSHV). Her research interests include understanding KSHV replication machinery and how the virus modulates cellular signaling pathways. After graduation, Sarah plans to attend medical school and specialize in pediatric emergency medicine.



MARY CHRISTINE WILLIAMS

Mary Christine Williams is a B.F.A. Studio Art major whose main focus is oil painting. Her work is highly influenced by the Visionary Art Movement, and she has been artistically trained and guided in research by her Professor Lilian Garcia-Roig of the Fine Art Department. Following graduation, Mary plans on applying to graduate school and to continue her career as a fine artist.

Undergraduate Research and Creative Activity Awards (URCAA)

MGLUR-MEDIATED CALCIUM HOMEOSTASIS IN THE AVIAN COCHLEAR NUCLEUS

CODY CALL

SUPERVISING PROFESSOR: DR. RICHARD HYSON

Cochlea removal results in the death of 20-30% of neurons in nucleus magnocellularis (NM), a cochlear nucleus of the chick auditory system involved in the precise time-coding of acoustic signals. Within one hour of removing stimulation of NM, intracellular calcium concentration ($[Ca^{2+}]_i$) rises by up to 400%. Very high levels of excess Ca^{2+} in cells are toxic and could potentially be a cause of cell death in NM. Glutamate-releasing axons of the auditory nerve provide the sole excitatory input to NM neurons and have been shown to provide them with trophic support by activating group I and II metabotropic glutamate receptor (mGluR) subtypes. This study aims to determine how $[Ca^{2+}]_i$ is maintained by auditory nerve stimulation by selectively blocking mGluR subtypes during stimulation and objectively quantifying the relative abundance of Ca^{2+} in NM cells using fluorometric calcium imaging techniques. If group I and group II mGluRs act on independent mechanisms, it is expected that blockade of either group alone will have a moderate effect on the rise of $[Ca^{2+}]_i$ in NM cells during auditory nerve stimulation, but combined blockade of both groups will have a robust effect.

MAPPING NEURAL NETWORKS IN APLYSIA CALIFORNICA USING HIGH FIELD MAGNETIC IMAGING

GRACE CHRZANOWSKI

THE DAVID B. FORD UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARD

SUPERVISING PROFESSOR: DR. SAMUEL GRANT

The use of Magnetic Resonance Imaging (MRI) has become a frontline technique for diagnosis and discovery in both the laboratory and hospital. As a non-invasive and non-destructive imaging method, MRI is able to analyze systems of the body, making their application more acceptable in clinical settings. In addition to anatomical information, Diffusion tensor imaging (DTI) is a specialized MRI technique that can help to provide quantitative information about normal and pathological tissue, particularly with respect to connectivity between and within excitable tissue. DTI is based on an analysis of the restricted dimensional movement of water within tissue, particularly with respect to the axons and white matter of the nervous system. In this project, DTI at high resolution was performed to map neuronal connections within the ganglion of *aplysia Californica*. As part of a larger work to map activity noninvasively using MRI, this project sought to use high-resolution DTI acquired at 11.75 T to map the networks of propagated activity. DTI tracks the diffusion of protons to measure the degree of anisotropy, a fractional measurement (0 to 1) in three dimensions that identifies the local environment along a continuum from isotropic (0) to fully anisotropic (1). Connections within the neuronal networks of the ganglia are more restrictive compared to other connective tissue and supporting cells, paralleling the white and gray matter of the grey matter in the human nervous system. Currently, the primary method used in mapping neuronal network connections is confocal microscopy of *ex vivo* specimens. This effort is focused on mapping the connections with the ganglion *in vitro* without the distortions of fixation and labeling while preserving the tissue's neural activity. Given the non-invasive nature of MRI, there is potential that these techniques could be implemented in a clinical setting to provide direct measurement of neural activity and connectivity.

ARTIFICIAL CHROMOSOMES FOR HUMAN EMBRYONIC STEM CELLS

MOLLY GORDON

SUPERVISING PROFESSOR: DR. DAVID M. GILBERT

DNA replication timing (RT) refers to the temporal order in which segments of chromosomes are replicated during the cell cycle, which changes during differentiation of embryonic stem cells (ESCs) into different cell types. Because many diseases such as cancer exhibit a disrupted RT program compared to that of healthy cells, it is possible for the mechanism of RT to offer information about the origins of these diseases. It is expected that DNA sequence alone is sufficient to control the mechanism of DNA RT. Introducing artificial chromosomes that carry segments of human DNA into human ESCs will demonstrate whether these segments dictate their original temporal replication. Furthermore, one can observe if the segments then change their RT appropriately during differentiation of ESCs to different cell types. If this hypothesis is correct, proper regulation of RT will be recapitulated in this artificial system and it will be possible to narrow further down the exact sequences necessary to regulate RT.

TWO-POINT STANCE

KELSEY GRILLS

SUPERVISING PROFESSOR: DR. JENNIFER ATKINS

Whether it is fraternities strolling in the Union, athletes strutting the halls, or even artists practicing their craft, this is the world around me-- life on a college campus-- and it is filled with gendered performances that manifest in body language. As a life-long dancer, I have developed an interest in these physicalized constructions of embodied gender performances. With this project I was able to marry my backgrounds in both dance and sociology. This research addressed the performance of male identity, but from the perspective of a woman, and was approached from a movement-based philosophy. The first phase of this research included observation of various groups of men on our college campus. This involved both my immediate conversations with men, as well as bystander experimentation. The second phase included implementing my findings through movement on women, to create choreographic material for a dance performance titled "Two-Point Stance." In order to synthesize this information, I created a subsequent documentary that follows the process of my research and includes the full performance of "Two-Point Stance." By doing this research I was able to draw insightful conclusions about male identity through various mediums of research and creative conduct.

THE IRISH QUESTION RECONSIDERED: EXAMINING NORTHERN IRELAND'S PRECARIOUS PEACE

ANNALISE KAPUSTA AND KATE MAZZOTTA

SUPERVISING PROFESSOR: DR. STEPHEN MCDOWELL

The Troubles marked a dark time in the history of Northern Ireland. Though the Good Friday Agreement was passed in 1998 after nearly thirty years of conflict, the peace process in Northern Ireland is still ongoing. To this day, walls separate Catholic and Protestant neighborhoods; sectarian murals and flags reinforce the division between these two communities; and further peace agreements are at a standstill. International communication professor Eytan Gilboa distinguishes the difference between resolution and transformation of conflict in a peace process – from "negative" peace to "positive" peace. Without this shift, the conflict is never truly resolved and makes the area susceptible to further violence. Our project is a response to this flawed peace process. We examined problems with reconciliation through media analyses, personal interviews, and collaboration with the Institute for Conflict Research, in the hopes of finding a solution to Northern Ireland's precarious peace. During our research, we addressed two primary focuses: the treatment of the peace process in the media and reconciliation through personal narrative. The former was examined with a media content analysis of mainstream and community newspaper coverage of the Orange Parades – a highly controversial, Protestant parade that tends to result in protests and occasionally violence. The latter was examined by collecting personal narratives about how life for Belfast residents has changed since the end of the Troubles and what issues complicate this change. This project looks closely at the role of walls and division, which reinforce a "them versus us" mentality by separating Protestant and Catholic neighborhoods. Personal interviews revealed whether or not the physicality of the city impacts their perception of the peace process and its progress.

EXAMINING THE OBESITY EPIDEMIC THROUGH AN ECOLOGICAL LENS**DAVID G. MILLER**

SUPERVISING PROFESSOR: DR. ALINE KALBIAN

Obesity is a critical public health threat in the United States. With one-third of Americans considered to be overweight, and another one-third considered to be obese, obesity is a priority for public health agencies. However, the need for public health interventions raises an array of questions regarding ethical responsibilities of the individual as well as public health agencies when addressing issues of bodyweight. The work of bioethicists in this area thus far is limited in scope to questions regarding the individual—primarily questions of government overreach and personal responsibility for overweight. I argue that this narrow scope of analysis limits the potential for bioethics as a field to provide meaningful insight into the obesity epidemic, and I challenge the current focus within bioethics on the individual agent. I call for bioethicists to examine instead this issue through what I call a larger “ecological lens.” That is, bioethical analysis must be critical of the sociopolitical and environmental factors that impact bodyweight. Obesity is not solely an individualized issue. Rather, it is influenced by, for example, government, industry, built environment, and social dynamics. By introducing these realms of influence into the bioethical discussion, bioethicists can better understand the moral relevance—and potentially the moral culpability—of the various agents that impact the obesity epidemic.

FRAMING MOVEMENT GOALS: MOROCCAN WOMEN'S AGENCY IN DISCUSSIONS OF GENDER EQUALITY**ALEXANDRA OLSEN**

SUPERVISING PROFESSOR: DR. DEANA ROHLINGER

A significant obstacle when researching international women's movements is understanding what women's goals are, how their arguments for gender equality are framed, and how gender norms affect how women discuss gender equality. Before being able to assess the effectiveness of a movement this understanding is crucial. Without it, there can be a tendency to privilege the western view of women's rights and evaluate the success of a movement based on criteria that are not indicative of women's desires. Thus, this investigation seeks to answer three questions to better understand Moroccan women's struggle for gender equality: 1) What are Moroccan women's visions for gender equality? 2) How are arguments used to justify their visions of gender equality framed? 3) Do traditional gender expectations affect women's agency in these discussions? This analysis draws from ethnographic data gathered over a period of three months in Morocco, south of the Atlas Mountains. Dialogue surrounding economic empowerment and legal rights of Moroccan women is concrete. Arguments used for these types of equality draw upon traditional notions of femininity in Moroccan society and Islamic conceptions of gender equality. In contrast, women are hesitant to express their desire for social equality in concrete terms. Traditional gender expectations limit women's agency in discussion of social equality.

APPLICATION OF FEMTOSECOND SPECTROSCOPY METHODS TO STUDY CONFINED FLUIDS IN HOLLOW GOLD NANOSPHERES

RYAN T. RHOADES

SUPERVISING PROFESSOR: DR. KENNETH L. KNAPPENBERGER, JR.

An area of interest in physical chemistry occurs at the nanoscale realm with the properties of confined fluids. Previous research has identified a discontinuity between the well-defined physical properties of macroscopic bulk water and nanoscale-confined water. This project endeavors to probe this discontinuity in water's characteristics by studying water confined within hollow gold nanospheres (HGNs) to determine the nature of the confined fluid's thermal properties. To generate HGNs of desired cavity size (on the order of ~15nm), a reliable and consistent chemical synthesis was applied, using the oxidation of sacrificial cobalt nanoparticles and reduction of gold ions, to create variable thickness HGNs, which were initially characterized using UV-Vis spectroscopy. To study the fluid inside the HGN, phonon-coupling with the HGNs and the energy transfer and dissipation that occurs at the HGN-fluid dielectric will be analyzed to determine the confined fluid's properties. In order to do so, a method of femtosecond pump-probe spectroscopy was developed by incorporating a programmable spatial light modulator (SLM) to generate pulse-modulated ultrafast laser pulses. Future work will consist of further characterizing the synthesized nanoparticles using transmission electron microscopy or related methods and by implementing the developed SLM spectroscopy system with the HGNs to produce the needed energy transfer data to ultimately derive conclusions on the phenomena.

THE POWER OF MEMORY AND MANIPULATION IN ANGLO-NORMAN DURHAM: SYMEON, ST. CUTHBERT, AND DURHAM CATHEDRAL

MICHELLE L. SAUER

THE MICHAEL J. SHAARA UNDERGRADUATE RESEARCH AND CREATIVE ACTIVITY AWARD

SUPERVISING PROFESSOR: DR. PETER GARRETSON

One of the most interesting areas in the field of history is the phenomenon of cultural memory. History does not change, but a culture's perception of events is malleable. The cultural memory of Northern England is a major part of their identity as a people. This memory has been built and changed throughout time by various invading groups and has contributed to the enduring legacy of the British people that exists to this day. This project seeks to examine the ways in which the cultural memory of the Anglo-Saxon people was altered after the Norman invasion through historical propaganda and the building of Durham Cathedral. The Normans built Durham Cathedral as a way to consolidate power and legitimize their reign through an emphasized devotion to the religious scene in Durham. Through analysis of historical documents and religious art used as a means of political and religious manipulation by the Normans, my research examined the pre-Norman cultural memory of Durham and delved into the ways that perception changed to include the Normans and merge the two groups into one. Working with renowned professors at Durham University, I analyzed the alteration of cultural memory in the early Norman period and how the changed perception in that time helped to create the cultural memory of Northern England today.

PARTICLE FLOW ALGORITHM FOR UPGRADED CMS CALORIMETER**AUSTIN VIHNCENT SKEETERS**

SUPERVISING PROFESSOR: DR. TODD ADAMS

Built as part of the Large Hadron Collider at CERN, the Compact Muon Solenoid (CMS) is a general-purpose calorimeter designed to study particle collisions and interactions at energies up to orders of TeV (tera electron volts). The CMS experiment is built around a large solenoid magnet whose field is roughly five orders of magnitude stronger than that of the Earth. Protons are accelerated in beams traveling in opposite directions at speeds approaching that of light, which collide at the center of the detector. Upon collision, protons from the beams explode into showers of other particles such as electrons, photons, muons, etc. Scintillating crystals in the Electromagnetic Calorimeter (ECAL) and the Hadronic Calorimeter (HCAL) produce light that is proportional to the deposited particle's energy. Over time, the endcaps of the ECAL have suffered extensive radiation damage to the point that they will no longer be viable for taking accurate data. One of the main focuses of this project was the simulation and analysis of viable replacement crystal materials and geometric configurations. This phase of the project involved the simulation of the passage of particles through the various proposed materials. The particles' momenta, angle of incidence with the detector, as well as type were all varied. Once analysis of this data was completed, and in conjunction with results from colleagues at CERN, an optimal material (WLYSO) and an efficient geometric configuration (Shashlik) were determined. The second phase of the project involved the adaptation and testing of a prototype "Particle Flow" algorithm. The aim of the algorithm is to utilize information from the various pieces of the detector to create clusters, which will be used in conjunction with the generated particle information to determine the identity of a collision's precipitate particles. This phase will be continued through to my Honors Thesis.

CHARACTERIZATION OF THE PROCESSIVITY FACTOR PF-8 IN KAPOSI'S SARCOMA-ASSOCIATED HERPESVIRUS**SARAH TEPPER**

SUPERVISING PROFESSOR: DR. FANXIU ZHU

Kaposi's sarcoma-associated herpesvirus (KSHV) is an oncogenic virus and the etiological agent of three human cancers: Kaposi's sarcoma, primary effusion lymphoma, and multicentric Castleman's disease. To ensure its propagation, KSHV encodes a DNA polymerase designed to replicate the viral genome. Achieving high replication efficiency requires a processivity factor, known in KSHV as PF-8, which prevents polymerase dissociation from the template DNA strand. After infection, KSHV exists in a dormant, non-replicative state called latency and the virus uses host cell histones to package the genome and repress transcription in order to maintain this state. KSHV must transition from latency and enter the lytic cycle to actively replicate its genome and produce progeny virions, necessitating regulatory proteins able to manipulate histones and remodel the chromatin. We recently discovered that PF-8 co-purifies with histones in KSHV lytically-infected cells. Interesting, we also found that PF-8 undergoes a post-translational modification called biotinylation and that the modified form is present in the histone extracts. Further examination of PF-8 is necessary to determine the significance of its biotinylation and association with cellular chromatin to KSHV lytic replication and pathogenesis. The targeted inhibition of the essential functions of PF-8 may represent novel therapeutic strategies to treat or prevent KSHV-associated diseases.

FROM SURREALISM TO VISIONARY: AN EXPLORATION OF THE BEGINNINGS OF THE VISIONARY ART MOVEMENT

MARY CHRISTINE WILLIAMS

SUPERVISING PROFESSOR: PROF. LILIAN GARCIA-ROIG

Surrealism is one of the most well-known artistic movements of the twentieth century, influential in its concepts and its innovation of artistic techniques. The subject of my research was to study the transition of the Surrealist movement to the Visionary Art movement, focusing on the traits that were shared between them, the differences that separated them from each other, and what the transitional link between the two movements was. In order to obtain a better understanding of both movements I traveled to locations considered prominent points in their respective histories. First, I traveled to Vienna, Austria, where I took classes at the Vienna Academy of Visionary Art. There I was able to explore the techniques of the Visionaries under tutelage of current practicing Visionary artists, such as Amanda Sage and Laurence Caruana. Through this, I experienced first-hand the techniques and concepts that are an integral part of the Visionary Art movement. I then traveled to Figueres, Spain, where I studied one of the main artistic influences and foundational blocks of the Visionary and Surrealist art movement, Salvador Dalí. Equipped with a more thorough understanding of the movements, I aimed to find the link between them, which I discovered while I was in Vienna: the artist Ernst Fuchs and the Vienna Academy of Fantastic Realism. This information displays a clear lineage between the Visionary and Surrealist art movement, and shows how their techniques expanded and developed over time.

Public Service Research Fellowships (PSRF)

WATER FOR STUDENTS BY STUDENTS

COLE FRIEDES

SUPERVISING PROFESSOR: DR. STEPHANIE ZUILKOWSKI

The WHO reports 1.8 million people die every year from diarrheal diseases; 90% are children under 5, mostly in developing countries. 88% of diarrheal disease is attributed to unsafe water supply. Many community schools in the Volta Region of Ghana depend on drinking water from unhygienic sources. Students and teachers not only use this unsafe water for drinking but to wash and cook as well. The lack of clean drinking water and sanitation systems is a severe public health concern in Ghana, contributing to 70% of diseases in the country. There are also many microbes and dirt particles in the water that can contribute to these illnesses. Exposure to microbes in water can lead to nausea, fevers, diarrhea and dehydration. Long-term exposure can cause rashes, heart disease, diabetes, cancer, and a number of immune, neurological, developmental, and reproductive problems. If these schools are not given access to potable water, then there is an extreme concern for the public health at hand in each one of these communities. The Water for Students by Students project is an international aid project designed to provide clean and potable water in the most efficient and longstanding manner. Through community needs assessment interviews, the best water filtration device was selected, designed, and implemented into five different primary schools in the Adaklu District. The WSS project set out to improve local health of many different communities, increase the quality of life for many villagers, and gain valuable cultural insight to the international aid domain.

THE HOUSING CRISIS**MARI KYLE**

SUPERVISING PROFESSOR: PROF. JOELLE DIETRICK

During my time in Tallahassee, I've come to realize that the average reaction to homelessness and home-insecurity is to turn away from it. With home-insecurity becoming a growing phenomenon in the youth of America, the children affected by this crisis are often ignored. To raise awareness about this problem, I began my project entitled The Housing Crisis in collaboration with the PACE Center for Girls. The PACE Center for Girls is a gender-specific non-profit intervention and prevention program in Tallahassee that provides education and wrap-around services to at-risk girls. I designed and directed a series of workshops for the students at PACE to teach them the foundations of visual art. The coursework was designed to be easily understood and memorable. I began by teaching the foundations of color theory during the first week and the foundations of two-dimensional art the next. The third week was spent exploring various mediums of art. The fourth and final week was spent combining all of the skills the students previously learned to create a message to convey to the public to raise awareness about PACE. After four weeks of intensive workshops, the students and I used the message to create a mural to celebrate the female spirit. This mural not only worked to boost morale and inspire creativity at the PACE, but also gave the students a voice. As a final step in the project, the students exhibited their works and their mural at The 621 Gallery at Railroad Square on the First Friday event of September. My goal for this project was to show the Tallahassee community that ignoring this phenomenon would only prove detrimental to our society. With the gallery exhibition, the students and I succeeded in raising awareness about the fact that home-insecurity affects even our city and its children.

NUTRITION ASSESSMENT IN JODHPUR, INDIA**TAYLOR NEWMAN**

SUPERVISING PROFESSOR: PROF. WILLIAM CLAY

A staggering 842 million people in the world do not have enough to eat. According to the UN's World Food Program, India is home to more than 27 percent of those living without sufficient nutrition. My project aimed to pinpoint the sources of malnutrition specifically amongst females in Jodhpur, India, and to address the identified causes with a nutrition education plan. Along with my team of three other Dietetics students, I worked with a women's empowerment center called Sambhali Trust to survey two populations of females from the lowest Indian caste, the Harijan. The first population consisted of women and girls ranging from age 10 to 50 who frequented Sambhali in urban Jodhpur while the other was comprised of Sambhali's remote location in rural Setrawa, a nearby village. After discussing possible causes of malnutrition with local experts, we chose to conduct a health survey with three categories of questions to determine if female malnutrition stemmed from a lack of resources, a lack of nutrition education, or as a result of gender neglect. Physical measurements were taken to determine BMI, which further supported proof of malnourishment. Based on the survey results and physical measurements, my team and I created a nutrition education plan addressing the specific issues contributing to poor nutrition in this region. We conducted nutrition education workshops in both Jodhpur and Setrawa for the females who participated in hopes of remedying underlying causes and improving nutritional status in Indian females.

A COUNTRY IN TRANSITION: EXPLORING COMMUNITY AND CULTURE IN SOUTHERN INDIA

HILARY SMITH AND TAYELOR VALERIO

SUPERVISING PROFESSOR: DR. AMY KOWAL

Since gaining independence from the British Empire in 1947, India has been in a state of great transition, growing both economically and technologically at alarming rates. As Cultural Anthropology majors, we were curious to understand how these changes were affecting local customs. While volunteering at a community organization in Tamil Nadu, India, for nine weeks we conducted a case study to explore the theme of heritage preservation. Through participant observation and casual interviews we conducted research on a recent social change of senior citizens losing their value in the area. To offer possible solutions for this problem, we also implemented a heritage appreciation project. Children and senior citizens that live at the organization were encouraged to develop meaningful bonds and form lasting relationships with one another while the seniors shared their life histories. The collected data from these meetings was then publicly displayed in the communal dining hall for residents, staff members, and donors to enjoy. We hope that by placing the seniors in positions to be seen as knowledgeable and insightful individuals by the youth, the task of reinstating their value in society can begin.

Social Work Undergraduate Research and Creative Activity Award (SWURCAA)

EXPAND PERU CASA DE BEBES: A COMPREHENSIVE EVALUATION OF A CHILDCARE PROGRAM IN RURAL PERU

LINDSAY GREENE

SUPERVISING PROFESSOR: DR. NEIL ABELL

In the first four years of life the children in the rural areas of Peru are at a great risk of malnutrition, illness, and even death, as a result of the cycle of poverty indicative of the region. According to the National Institute of Statistics (UNICEF, 2010), 78 percent of indigenous children between the ages of three and seventeen in Peru are growing up in poverty and 25.4 percent are developmentally stunted (Cueto, 2009). Consequentially, this results in the children struggling in school, being economically disadvantaged, and eventually culminating in a perpetuation of the cycle of poverty (Grantham-McGregor, 2009). This critical issue led to the creation of the National Program Casa de Bebes in 2012. This program works to provide a comprehensive child daycare service in regions of impoverished Peru in order to ameliorate the effects of poverty on the children's developmental potential. This research focused on an evaluation of the efficacy of the Expand Peru: Casa de Bebes in Huancayo, Peru, in meeting its objectives for advancing the well-being of the children who attend it. Qualitative methods of semi-structured interviews and participant observation data served as the basis for the evaluation. Through a comprehensive analysis of the program it was determined that the Expand Peru: Casa de Bebes utilizes four specific components of Food and Nutritional Care, Child Care, Early Learning, and Work with Families to provide an extensive array of services to the children. As the only child care program in the Pilco Mayo neighborhood, the Expand Peru: Casa de Bebes contributes an invaluable resource to the community in terms of supplementing gaps in the children's development and affording the mothers of the children the opportunity to work or study.

AACIAC Summer Collaboration**MECHANOCHEMICAL STRENGTHENING OF
BENZOCYCLOBUTENE POLYMER****ILYA PISKUN**

SUPERVISING PROFESSOR: DR. STEPHEN CRAIG, DUKE UNIVERSITY, & DR. IGOR ALABUGIN, FLORIDA STATE UNIVERSITY

Mechanophores are functional groups that get activated by the application of mechanical force such as sonication, solid state compression or extrusion. The goal of this project is to harness the mechanical, typically destructive, force in a positive way, such as guiding the crosslinking in polymer synthesis. We have proposed a system that has potential for mechanically induced crosslinking at ambient conditions: a polymer containing a known benzocyclobutene (BCB) mechanophore was synthesized via ring-opening metathesis polymerization. On application of ultrasound, BCB moiety forms a reactive intermediate ortho-quinodimethide (oQDM), which then can act as a diene in a Diels-Alder addition with a reactive dienophile, or has the potential to react with itself. The reactivity of the BCB polymer is probed in various sonication conditions in order to find the best condition for the crosslinking to occur.

Mentored Research and Creative Endeavors Awards (MRCE)

MUSIC EDUCATION AND GENDER EQUALITY IN BRAZIL

SYLVIA ROSE AYCOCK

SUPERVISING PROFESSOR: DR. FRANK GUNDERSON

Sylvia Rose Aycock is a junior Choral Music Education student with a passion for gender equality. She has participated in Global Scholars and the Undergraduate Research Opportunity Program, both of which led her to do the research she's working on today. She wishes to continue her endeavor in Brazil next year after applying for an URCAA. After she graduates, she'll be delighted to become a music teacher and inspire her students to work towards justice and equality.

NONPROFIT SUCCESS THROUGH SOCIAL MEDIA

CHRISTINE DUSOME

SUPERVISING PROFESSOR: PROF. KAREN OEHME

Christine Dusome has been an undergraduate research assistant at The Institute for Family Violence Studies since the fall of 2013. Christine is currently a senior, majoring in Public Relations and Psychology. Upon graduation, Christine hopes to pursue a Master's degree in Integrated Marketing Communications and become a public relations professional to combine her two passions, public relations and nonprofits.

PULLING MY LEGS ALONG WITH MY EYES: PERFORMANCE RESEARCH BASED ON INTERNATIONAL EXPERIENCE

LUKE EVANS

THE SCOTT AND INA MCNICHOLS UNDERGRADUATE RESEARCH AWARD

SUPERVISING PROFESSOR: DR. DANIEL SACK

Luke Evans is a junior in the B.F.A. Acting program at FSU. In Tallahassee, he has worked in many different types of artistic pursuits including theatre, film, and performance art. Over the last year, Luke has been studying a particular discipline of performance art known as walking art, along with site-specific theatre in general. Luke intends to continue this research and expand it into an honors thesis over the next two years. After graduation, he hopes to continue to broaden his horizons and work in as many facets of the theatre and art worlds as possible.

COMPUTATIONAL STRUCTURAL MODELING OF SHORT SELF-ASSEMBLING POLYPEPTIDES

ROBERT D. FRANKLIN

SUPERVISING PROFESSOR: DR. ANANT PARAVASTU

Robert Franklin is in his final year in pursuit of dual degrees in Chemical-Biomedical Engineering and in Biochemistry. He is currently working on an honors thesis focused on protein engineering. Robert has been conducting research under Dr. Anant Paravastu at the College of Engineering since summer of 2013. Upon graduation, Robert plans to continue research in the rational design of proteins while obtaining a Ph.D. in Chemical Engineering. His career goal is to design useful protein systems and bring them to market.

EFFECTS OF GLOBAL CHANGE ON INDIRECT INTERACTIONS BETWEEN PLANTS AND PREDATORS

KAITLIN GRIFFITH

SUPERVISING PROFESSOR: DR. NORA UNDERWOOD

Kaitlin Griffith, from Sarasota, Florida, is in her final semester as a Biological Science student and is currently working on her honors thesis in Ecology. Upon graduating, Kaitlin will be spending 6-9 months at a biological field station working as a research assistant. Her career goal is to eventually obtain her Ph.D. in Ecology and help restore and protect the ecosystems that make up our diverse planet.

DIFFUSION TENSOR IMAGING FOR MAPPING NEURAL NETWORKS

LAUREN GRIFFITH

THE HELEN LOUISE LEE UNDERGRADUATE RESEARCH AWARD

SUPERVISING PROFESSOR: DR. SAMUEL C. GRANT

Lauren Griffith, a Tallahassee resident, is in her senior year of the Biomedical-Chemical Engineering program. Since the beginning of the year, she has been conducting research under Dr. Samuel Grant at the College of Engineering. Upon graduation, Lauren would like to continue research in the biomedical-chemical engineering field while obtaining a Ph.D. in Chemical Engineering. Her career goal is to work in research and development in an industrial setting.

INVESTIGATING BEHAVIORAL DIVERGENCE AND HYBRIDIZATION IN FLORIDA TREEFROGS**MADISON KUCINICK**

SUPERVISING PROFESSOR: DR. EMILY LEMMON

Madison Kucinick, a senior Biology student, is conducting an honors thesis under the supervision of Dr. Emily Lemmon. Currently, she is in Brazil working on a second project with the National Science Foundation "International Research Experience for Undergraduates" to investigate the evolution of reptiles and amphibians in the Cerrado ecosystem. After graduation, Madison hopes to continue her fieldwork with animals by pursuing a Master's Degree in Wildlife Biology. Her professional interests include population genetics and maternal care, and she hopes to conduct research that aids in the preservation of wildlife and their habitats.

TELEVISION'S EFFECT ON MATH AND READING ACHIEVEMENT IN CHILDREN**DANIELLE LUZ****THE PHI ETA SIGMA ENDOWED SCHOLARSHIP TO ENHANCE UNDERGRADUATE RESEARCH**

SUPERVISING PROFESSOR: DR. SARA HART

Danielle Luz is a junior at FSU getting her degree in Psychology and the Biological Sciences. She has been working with Dr. Hart since the beginning of her sophomore year as part of the Undergraduate Research Opportunity Program, where she decided to continue her research throughout the rest of her college career. She has enjoyed researching the effects of different factors on the development of children and hopes to use what she has learned while working in the medical field with children. Danielle hopes to keep such research a part of her life by hopefully being successful enough to fund it herself.

EL SOL ES EL MEJOR TORERO: AN EXAMINATION OF RITUALIZED VIOLENCE THROUGH DRAMA**BRITTANY LYONS**

SUPERVISING PROFESSOR: DR. KRIS SALATA

Brittany Lyons is in her final year as a Creative Writing and Theatre double major. She has been conducting research in the field of theatre under the direction of Dr. Kris Salata. Upon graduating, she hopes to pursue an M.F.A. in Fiction with Playwriting as her secondary genre. Her career goal is to become a professional writer and workshop instructor.

ASSORTATIVE MATING OF COLOR MORPHS IN THE TROPICAL SEA URCHIN *LYTECHINUS VARIEGATUS*.**JOSE A. MOSCOSO**

SUPERVISING PROFESSOR: DR. DON LEVITAN

Jose Moscoso is an avid marine scientist interested in the ecology and evolution of coastal and subtidal ecosystems. He is in his last year as a Biology major, focusing on doing research as part of the Marine Biology Honors Program with Dr. Don Levitan. In addition, he is a scientific diver and currently training to become a Divemaster. Upon graduation, Jose would like to pursue a career in research and academia focusing on marine invertebrates.

NEIGHBOR EFFECTS OF *ERIGERON SPECIOSUS* AND *ERIGERON ELATIOR* ON THEIR POLLINATORS AND HERBIVORES**PRATHYUSHA PAMIDI**

SUPERVISING PROFESSOR: DR. NORA UNDERWOOD

Prathyusha Pamidi is a fourth year student from Tallahassee majoring in Biology. After having conducted research this summer at the Rocky Mountain Biological Laboratory, she is currently working on her honors thesis under Dr. Nora Underwood in the Department of Biological Science. Upon graduation, Prathyusha would like to attend graduate school and pursue a career in research.

THE EFFECTS OF AUTOPHAGY ON THE CIRCADIAN CLOCK**NATASHA RICH**

SUPERVISING PROFESSOR: DR. CHOOGON LEE

Natasha Rich, completing her final year as a Biological Sciences major, is currently working on her honors thesis. Since fall 2012, she has been conducting research under Dr. Choogon Lee at the College of Medicine. Her research has been working on expanding the Lee lab's characterization of the mammalian clock on a genetic, molecular, and behavioral level. Upon graduation, Natasha plans on attending medical school and looks forward to continue her exploration of biomedical research. Her career goal is to take on the dual role of physician-researcher, and she is currently interested in the fields of neuroscience and genetics.

BATTLING TRADITIONAL FEMININE ROLES IN THE 21ST CENTURY

CATHERINE SCHNEIDER

SUPERVISING PROFESSOR: PROF. KEVIN CURRY

Catherine Schneider is a Studio Art major currently pursuing a second bachelor's degree. After graduating from Florida State University in 2007, she remained in the area to begin her career and family. After the birth of her daughter, she realized that art was missing from her life and returned to FSU in 2012. The experiences she had after graduation became the impetus behind her finding interest in women's rights issues. Art has given her the platform to be fully creative and address the ideas she feels most strongly about. Upon graduation she plans to pursue a Master's of Fine Art.

COMPLETION OF MASS BALANCE INVOLVING HEXANE OXIDATION THROUGH PLASMA REACTION ENGINEERING

PARASTOU MANDY SHAHZEIDI

SUPERVISING PROFESSOR: DR. BRUCE R. LOCKE

Parastou Mandy Shahzeidi is a Chemical Engineering student in her fourth year at FSU and originally from Miami, Florida. She has been conducting research for the past year and a half with the primary focus being on utilizing electrical plasma discharge to drive desired chemical reactions and obtain preferred products. Her post university career goal is to enter the petroleum industry and work with larger oil companies, such as Exxon Mobil, with her skill sets in engineering and process development.

"THIS RELATIONSHIP IS A ROMANTIC ONE": THE INFLUENCE OF OUTSIDE CULTURES ON NAVAJO WEAVING

VICTORIA SUNNERGREN

THE JOHN W. DAY III UNDERGRADUATE RESEARCH AWARD

SUPERVISING PROFESSOR: DR. KAREN BEAROR

Victoria Sunnergren is in her third year at Florida State University as an Art History and Religion double major, with a minor in Museum Studies. She completed research this summer in Arizona, working with native artists and traders to better understand influence in Navajo artwork. She will develop this research into an honors thesis in the coming semesters. Her career goals are to work with Native American art in a museum education field.

DETERMINATION OF THE TRITIUM AND HELIUM-3 MASS DIFFERENCE USING THE WORLD'S MOST PRECISE MASS SPECTROMETER

BRIDGET ANASTASIA WESSON

SUPERVISING PROFESSOR: DR. EDMUND MYERS

Bridget Anastasia Wesson, Tallahassee native, is a senior Chemical Engineering student, founder of Tallahassee Rotaract, and active volunteer. She has worked in the Ion Cyclotron Resonance Laboratory under the guidance of Dr. Edmund Myers since the fall of her freshman year. She plans to pursue a Master's degree in Chemical Engineering, preferably at Imperial College London. Her career goal is to become a project leader for one of the world's largest energy companies. In addition, she plans to continue her volunteering career with Rotaract and Rotary clubs all over the world.

THE FAKE CITY OF PARIS OF WWI: A THEATRICAL INTERPRETATION SET IN WWII

DANIELLE WIRSANSKY

SUPERVISING PROFESSOR: DR. NATHAN STOLTZFUS

Danielle Wirsansky is a third year student with a double major in Theatre and Creative Writing. After being accepted to the Undergraduate Research Opportunity Program in fall of 2013, she began conducting research with Dr. Nathan Stoltzfus on German Resistance during WWII and is continuing this assistantship for the fall of 2014. She is most interested in interpreting historical events of WWII and creating dramatic works based on this research.

CHARACTERIZING THE LIPID DROPLET COLOCALIZATION OF HCV HOST FACTORS

RICHARD WU

SUPERVISING PROFESSOR: DR. HENGLI TANG

Richard Wu, a third year Biology major at FSU, has been working in the lab of Dr. Hengli Tang to feed his curiosity for biology at the cellular level and progressing the frontiers of HCV research. Richard is passionate in pursuing his goal in becoming a physician, possibly specializing in fields such as neurology or cardiology, in which he believes research will play a significant role in enhancing doctor-patient communication. In the future, Richard plans on furthering his work in the Tang lab and concluding it by presenting an honors thesis.



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