A CELEBRATION OF THE SCHOLARLY AND ARTISTIC ACHIEVEMENTS OF THE CLASS OF 2014

FRIDAY, APRIL 25 | SCIENCE CENTER
DEAN’S GREETING

One of the hallmarks of an Oberlin education is the opportunity to undertake independent research or creative endeavors. Each year, hundreds of students engage in intensely focused work on their own projects: investigating phenomena in the laboratory, combing through archival materials, analyzing a collection of texts, finding new patterns in social science data, or creating new works for exhibitions or performances. The Senior Symposium is a forum in which the college community recognizes and celebrates these accomplishments, and we invite students to share their work in the laboratories, libraries, and studios with the community as a whole. In our fifth annual celebration this afternoon, 49 seniors will present their work, and dozens more will be displaying or performing their work in other venues throughout April and May.

This event was made possible by the efforts of Randal Doane, assistant dean of studies, with funding from the Mellon Foundation. Cosponsors for this event include the Office of the Dean of Studies and the Office of the Dean of Arts and Sciences. To the seniors presenting at the symposium: congratulations on your accomplishments. I am looking forward to hearing more about your work.

Steven Wojtal  
Associate Dean of the College of Arts and Sciences

OPENING REMARKS • 1:00 PM

Steven Wojtal, Associate Dean, College of Arts and Sciences, and Professor of Geology  
Location: Science Center, Craig Lecture Hall

SESSION I • 1:30-2:30 PM

PANEL 1: The Disorder of Things: Conservation and Risk with Cranes, Coral Reefs, and Crayfish  
Moderator: Angie Roles, Assistant Professor of Biology

Emily Lumsdaine  
My Summer in Costume: Crane Reintroduction and the Conservation of Small Populations

Christopher Pickens  
Response of Herbivorous Fish Communities to a New Resource: Insight into Macroalgal Phase Shifts on Coral Reefs

Dyani Sabin  
The Complete Mitochondrial Genomes of Two Crayfish in the Genus Orconectes: O. Rusticus and O. Sanbornii  
Location: Science Center, A154

PANEL 2: Meiosis, Memory, Mutation: Studies in Reproduction, Menopause, and Ovarian Cancer  
Moderator: Tracie Paine, Associate Professor of Neuroscience

Karin Yoshida  
Histological Changes in Monodelphis domestica Uteri During Pregnancy

Veronica Burnham  
Luteinizing Hormone and the Brain: Implications for Post-Menopausal Memory Decline

Tae Nyu (Brian) Uhm  
Selection of DNA Aptamers for Ovarian Cancer Biomarker CA125  
Location: Science Center, A155
SESSION II  •  2:45-3:45 PM

PANEL 6: Experiments in Root Formation, Damselfly Parasites, and Intestinal Fortitude
Moderator: Marta Laskowski, Professor of Biology

Ari Schwartz
Understanding Lateral Root Formation: Genetic Control of Lateral Root Spacing and Emergence

Ben Garfinkel
Parasites of the Damselfly Ischnura verticalis: Relationships to Sex and Egg Load

Trip Freeburg
Analysis of an RNAi-Induced Defect in the Caenorhabditis elegans Defecation Motor Program

Location: Science Center, A254

PANEL 7: Careful What You Wish For: Cautionary Case Studies in (Radical) Democracy
Moderator: Chris Howell, Professor of Politics

Reid Palmer
“You Started Something When You Joined the International Brigade, Papa”: Alvah Bessie, the Spanish Civil War, and the Communist Party of the United States of America

Samsun Knight
Democracy and the Effects of Drought

Arielle Swernoff
Is Participatory Democracy Possible? A Study of Participatory Budgeting in Porto Alegre, Chicago, and New York

Location: Science Center, A255

PANEL 8: Enigmatic Art Objects: Case Studies of Social Practice, Tricksters, and Patronage
Moderator: Susan Kane, Mildred C. Jay Professor of Art and Classical Archaeology

Elias Wright
Art as Communication Objects in a Practice-Centered Account of Albrecht Durer

Anna Feuer
Reynard the Fox in Medieval Marginal Illustrations

Brenna Larson
The Balue Nielli: Intercultural Exchange and Conspicuous Consumption in 15th-century France and Italy

Location: Science Center, A254
**SESSION III • 4:00-5:15 PM**

**PANEL 12: Risk, Regulation, and Response: Biological Studies of Muscle Contraction, Carcinogens, and Black-Capped Chickadees**

*Moderator: Marta Laskowski, Professor of Biology*

- **Sam McCright**
  - Calcium Signaling and Neuropeptide Secretion in the Expulsion Step of the Caenorhabditis Elegans Defecation Motor Program

- **Anne Nighra**
  - Tree Core Analysis for Heavy Metal Carcinogens in a Childhood Cancer Cluster

- **Helen Rich**
  - Interactions Among Myosin, Twitchin, and Troponin I in Caenorhabditis elegans Muscle Contraction

*Location: Science Center, A154*

**PANEL 13: Enigmatic Agents: Studies in the Decoding of Language and Action**

*Moderator: Cindy Frantz, Associate Professor of Psychology*

- **Christopher Bromberg**
  - An Exploratory Investigation of Word Aversion

- **Evan Tincknell**
  - Effects of Providing Real-Time Feedback About Electricity and Water Consumption

- **Alex Bianchi**
  - Becoming the Breath: Experience in the Practice of Ashtanga Vinyasa Yoga

*Location: Science Center, A155*


*Moderator: James Dobbins, James H. Fairchild Professor of East Asian Studies*

- **Ryan Reynolds**
  - Identity and Commerce along the Maritime Spice Route between Egypt and India

- **Gabriel Kanengiser**
  - The Hood Takeover: New York City’s Housing and Gentrification Organizing in the Face of Non-Profit Surveillance

*Location: Science Center, A254*
MEET THE PRESENTERS

SAMANTHA AISEN
ANTHROPOLOGY

Advisor and Mentor: Crystal Binik, Anthropology

Minds, Bodies, and Political Selves: Embodying Pro-Choice Activism

The recent introduction of legislation aimed to limit abortion access has reenergized activists on both sides of this issue. In this ethnographic study of political activists and clinic escorts, I examine the activists’ political beliefs on abortion and the ways in which they embody those beliefs. My research focuses on the rhetoric and embodied practices surrounding key issues in the pro-choice movement, including gender inequality, the body as an object, the influence of medicalization, and the status of the fetus.

Sam came to Oberlin from the suburbs of Chicago and for the past three years has focused on medical anthropology and reproductive justice. In spring 2013, she studied in Amsterdam and focused on social policy. In addition to her academic interests, Sam enjoys vegetarian cooking, travel, and cats. After college, she hopes to pursue a PhD in medical anthropology and a master’s in public health in order to conduct research on policies pertaining to reproductive rights.

ALEXANDER BIANCHI
RELIGION

Advisor and Mentor: Laurie McMillin, Religion and Rhetoric

Becoming the Breath: Experience in the Practice of Ashtanga Vinyasa Yoga

The past decade has seen the emergence of modern yoga studies. While much of this scholarship dedicates itself to understanding yoga’s historical development over time, fewer scholars have sought to understand the transformative experiences of practitioners themselves. In this practice—based ethnographic study of Ashtanga Vinyasa yoga, I examine the experience of heightened sensitivities to—and alternate understandings of—body, mind, the corporeal presence of others, and the surrounding environment. Using these patterns of experience, I argue that the practice of Ashtanga yoga yields new ways of knowing the self and its environment not normally cultivated in daily life.

Alexander hails from the hills of western Massachusetts. His experience over the past four years in Ashtanga yoga includes training in adjustments with his teacher, Michelle Ryan, and a trip to Mysore, India, the birthplace and home of Ashtanga yoga. Through a Sahnsi grant, he practiced and conducted an ethnographic field study at the Sri K. Pattabhi Jois Ashtanga Yoga Institute. The study later became the basis of his capstone. In addition to studying religion, Alexander studies in Oberlin’s acting program and has appeared in numerous department and student productions. He plans to pursue a career in theater after graduation, at least for the foreseeable future.

HADAS BINYAMINI
HISTORY

Advisor: Zeinab Alul-Magal, History
Mentor: Shulamit Magnus, History

Ethnic and National Identities in Jewish and Israeli Minority Literature

My research examines the construction of ethnic-national identities through cultural work that subverts national-historical narratives. German and Israeli authors both rejected a dichotomy between Germaneness and Jewishness, and between Jewishness and Arabness, respectively. Here I explore the works of German-Jewish authors on Jewishness, and Mizrahi-Palestinian-Israeli authors on Israeliness. The artists’ explorations of fragmented identities occurred in distinct historical contexts, but the similarities between the German-Jewish pre-WWII experience, and the Mizrahi-Palestinian-Israeli contemporary experience, raise political and ethical questions about Jewishness, Israeliness, and nationhood.

NOTE: Room K209 in the Science Center is located above the entryway into the Science Center off Lorain Street. To get to K209 from the first floor, head south down the main corridor and take the staircase adjacent to the Lorain Street entrance to the second floor. To get to K209 from A254, exit the room and turn right, then left down the hallway, and left again at the end of the hallway.
Hadass spent half of her life in Israel and the other in California’s Silicon Valley. She is former cochair of Oberlin Students for Israel and a cofounder and former chair of J Street U at Oberlin, which advocates for vigorous and sustained American leadership in facilitating a negotiated, two-state resolution to the Israeli-Palestinian conflict. After college, she hopes to continue studying diaspora nationalisms and historical memory.

TRUMAN BRASLAW
POLITICS

Advisor and Mentor: Harry Hirsch, Politics

An Arbitrary Death? Capital Punishment and the Supreme Court

In the 1970s and 1980s, the Supreme Court decided three landmark cases on death penalty laws in the United States. While adjudicating those cases, the Court sought to address one of the central questions regarding capital punishment: can it be applied fairly? My paper attempts to understand how the Court found an answer to this question. I employ complementary frameworks of constitutional interpretation, formalism, and realism to suggest that the Court’s focus on judicial restraint and its weak understanding of race and discrimination led it to conclude that capital punishment can be applied “fairly enough” for our constitutional system.

Hailing from the sunny state of California, Truman has learned to alleviate his suffering during the dark Ohio winters by diving into his studies, playing indoor soccer, and indulging in excessively long lunch breaks. Truman also interns for the Immigrant Worker Project, where he teaches ESL classes and prepares clients for federal immigration court. Additionally, Truman has “the best job ever” (i.e., a tutor for American Constitutional Law), for which he is paid to have impassioned discussions about the U.S. Constitution. Truman is exploring the possibility of a career in law or in public education and looks forward to continuing his studies.

LILY BRYANT
HISTORY

Advisors: Renee Romano and Steven Volk, History
Mentor: Kristina Mani, Politics

Between Force and Law: The Early Years of the Pinochet Regime

For 17 years, the authoritarian regime of General Augusto Pinochet ruled over Chile. My research explores the first two years of the dictatorship as a critical period for understanding contemporary Chilean politics and society. From 1973-1975, the regime sought to legitimize its violent repression of political dissidents through nuanced manipulations of the country’s legal structures. This strategy demonstrated the ways in which the Pinochet years embodied the potential coexistence of authoritarian objectives and democratic and constitutionalist ideals. As a result, the country’s political system continues to function today as a protected democracy.

Lily, from Los Angeles, is a student representative for the history department. She has volunteered as a social studies tutor at Oberlin’s Langston Middle School and is currently a mentor to Oberlin High School students in the Mind Scholars Program. In fall 2013, Lily studied abroad in Chile. She returned to Chile this past winter term to conduct research for her thesis after receiving the Artz Honors Research Grant and the Jerome Davis Research Award. After Oberlin, Lily hopes to serve as a Fulbright English teaching assistant to university students in Medellín, Colombia.

CHRISTOPHER BROMBERG
PSYCHOLOGY

Advisor: Travis Wilson, Psychology
Mentor: Paul Thibodeau, Psychology

An Exploratory Investigation of Word Aversion

In recent decades, a cultural phenomenon known as word aversion has been present in American culture. Words such as “moist” cause certain individuals to experience disgust and considerable discomfort. This research represents an extension of initial findings about the cause and prevalence of word aversion by attempting to determine if reactions to the word “moist” can be measured through behavior.

Chris grew up in central New Jersey and serves as a research assistant to professors Wilson and Thibodeau in the psychology department. He has also worked as a tutor for Introduction to Psychological Science and Developmental Psychology and as a teaching assistant for Cultural Psychology. After graduation, he hopes to study positive psychology and earn his PhD.

VERONICA BURNHAM
NEUROSCIENCE

Advisor and Mentor: Jan Thornton, Neuroscience

Luteinizing Hormone and the Brain: Implications for Post-Menopausal Memory Decline

Estrogen has long been studied for its positive impact on memory. Some hypothesize that decreasing estrogen in menopause causes the increase in risk for Alzheimer’s disease observed in post-menopausal women. However, estrogen replacement therapy has not proven to be an effective preventative measure, failing to consistently improve memory while increasing the risk of breast cancer. Exciting research from our lab indicates that a related hormone, luteinizing hormone, which increases dramatically after menopause, may play a role in memory decline. Intracranial injections of luteinizing hormone are shown to impair spatial memory formation in female rats, while blocking luteinizing hormone activity can rescue these deficits.

Veronica comes from a small town in slightly upstate New York and is completing an honors thesis in neuroscience. She is the cofounder and editor-in-chief of The Synapse, Oberlin’s science magazine, and is involved in a variety of science-outreach efforts on campus, including a mentorship program with the high school and a science radio talk show. She is also employed as a tour guide, a DeCafe smoothie-maker, and an academic ambassador. Veronica has done research on everything from polymer synthesis to sexual behavior in fruit flies and plans to pursue a PhD in neuroscience.

SIEGA CASTARÉAS
MUSICAL STUDIES AND PSYCHOLOGY

Advisor: Joseph Lubben, Music Theory, and Travis Wilson, Psychology
Mentor: Devin Burke, Musicology

Comparing Students’ and Educators’ Perspectives on Composing Music in the Elementary Classroom

Comparing music gives children a deeper understanding of themselves, better social and cognitive skills, and a sense of personal agency, according to dominant voices in music education research. Whether children who study music composition would agree is a question that researchers have only recently begun to ask. In this project, I use my work with students in local music programs to test the validity of prevailing pedagogical claims about the benefits of composition. By comparing my findings with previous ones, I hope to contribute to the burgeoning research into students’ perspectives on composition in the classroom.
and international affairs and eventually work with non-governmental organizations on foreign policy.

Sarah Cole
HISTORY
Advisor: Zena Abul-Magd, History
Mentor: Leonard Smith, History

Black September and Jordanian Nationhood
The Jordanian Civil War, colloquially known as Black September, placed Jordan at the forefront of international affairs, for it emerged as a battleground for Cold War tensions and Arab-Israeli hostilities. My research analyzes the Jordanian nation that emerged and its unique position as a refuge to multiple identities, held together by the monarchy, foreign investments, and a domestic desire for a stable state.

Originally from Orange County, California, Sarah is a student representative for the history department. She has been involved with the Oberlin Democrats, Kosher-Halal Co-op, and multiple political campaigns. She spent spring 2013 studying abroad in Jordan and interning as a research assistant at the University of Jordan, where she became interested in the complexities of Jordanian identities. After college, she hopes to continue her research on the Middle East and international affairs and eventually work with non-governmental organizations on foreign policy.

ALYSSA CIVIAN
MUSICAL STUDIES AND THEATER
Advisors: Allen Cadwallader, Music Theory, and Daniel James, Theater
Mentor: Devin Burke, Musicology

Symmetries in Practice: Ruth Crawford Seeger’s Diaphonic Suites in Graphical Representation, Technical Analysis, and Historiographic Discussion
This paper re/presents Ruth Crawford Seeger’s four Diaphonic Suites (1930-1) and represents the first collective analysis of these works. Herein I use historiographic critique, as well as graphical analysis, to both “present” these pieces by providing a structural overview and “represent” them by revealing problematic aesthetic and analytical trends in the last 40 years of scholarship. In doing so, my research uncovers valuable symmetries across the suites and their histories and offers a new understanding of these works and contemporary music theory itself.

Alyssa hails from Dedham, Massachusetts, and—in addition to her majors—has studied mathematics and sociology at Oberlin. She has also held a variety of leadership roles on campus: treasurer for visiting performers, stage manager for a dozen productions, musician across five instruments, carpenter for theater and dance, OSCA facilitator, and president and top scorer on the rugby team. In the past year, Alyssa covered 45,000 ground miles around the country—a lifestyle that will continue after graduation as she organizes and performs on a number of national tours.

SARAH COLE
HISTORY
Advisor: Zena Abul-Magd, History
Mentor: Leonard Smith, History

Black September and Jordanian Nationhood
The Jordanian Civil War, colloquially known as Black September, placed Jordan at the forefront of international affairs, for it emerged as a battleground for Cold War tensions and Arab-Israeli hostilities. My research analyzes the Jordanian nation that emerged and its unique position as a refuge to multiple identities, held together by the monarchy, foreign investments, and a domestic desire for a stable state.

Originally from Orange County, California, Sarah is a student representative for the history department. She has been involved with the Oberlin Democrats, Kosher-Halal Co-op, and multiple political campaigns. She spent spring 2013 studying abroad in Jordan and interning as a research assistant at the University of Jordan, where she became interested in the complexities of Jordanian identities. After college, she hopes to continue to conduct research on the Middle East and international affairs and eventually work with non-governmental organizations on foreign policy.

RYAN EASTMAN
CREATIVE WRITING and ENGLISH
Advisors: Sylvia Watanabe, Creative Writing, and David Walker, English
Mentor: Hamod Suarez, English

The Unsolved Problem: Anger and Female Authorship
In A Room of One’s Own, Virginia Woolf addresses “the unsolved problem”: what is the true nature of women and fiction? Although the question remains unanswered, she discusses how the female artist can achieve success in a male-dominated market. I outline my interpretation of Woolf’s advice and demonstrate how her philosophy manifested in fictional works. I further discuss the role of anger and Woolf’s assertion that, in order to write honestly, a woman must speak outside of her repression. Lastly, I address Woolf’s possible self-censorship and consider whether modern female authors ought to follow her example today.

KATRINA CORTÉS
COMPARATIVE AMERICAN STUDIES
Advisors: Pablo Mitchell, Comparative American Studies and History
Mentor: Gina Perez, Comparative American Studies

The Hood Takeover: New York City’s Housing and Gentrification Organizing in the Face of Non-Profit Surveillance
This project examines gentrification and the struggle for immigrant housing rights through the work of two community organizations: Make the Road New York and CAAAV: Organizing Asian Communities. I also analyze the structural limitations of the “Non-Profit Industrial Complex” (NIC), within which neoliberal policies hold non-profit organizations accountable to their funding sources, rather than their communities. How can these organizations navigate and strategize for the systematic empowerment of marginalized communities while working with neoliberal funding? I specifically analyze Make the Road and CAAAV’s methods of working around the limitations of the NIC and seek to understand how gentrification is displacing low-income Latinos and Asian communities within New York City.

Katrina hails from Jackson Heights, Queens. She is cochair of the Filipino American Students Association (FASA) and loves dancing, singing, and performing with La Alianza Latina and FASA. As a Mellon Mays Undergraduate Research Fellow, she focused on gentrification organizing in New York City as a way of connecting the struggles happening at home. This research, among many other things, would not be possible without the folks at CAAAV: Organizing Asian Communities and Make the Road New York, her Oberlin family, and her family at home. Katrina is very grateful for the people in her life at Oberlin and in New York.

JULIA CONNOR
VIOLIN PERFORMANCE and HISPANIC STUDIES
Advisor: Milan Vitek, Violin
Advisor and Mentor: Patrick O’Connor, Hispanic Studies

Don Quijote in Western Classical Music
Since its early 17th-century publication, El ingenioso hidalgo don Quijote de la Mancha has captivated composers of music throughout the West. In this project, I explore why the novel has for so long served as a source of inspiration to composers. I look at the way in which Don Quijote was interpreted in various European countries and how this influenced music composed there. Finally, I look at the broad impact that Don Quijote had on Western concert music.

Julia grew up on a small ranch in Albuquerque, New Mexico, with sheep, chickens, goats, donkeys, geese, and other unusual furry and feathered pets. While at Oberlin, she has served as an academic ambassador and played in numerous orchestras and ensembles. Next year, she plans to begin her graduate studies in violin performance. She hopes to spend her life bringing people together through music.
Anna Feuer
ART HISTORY

Reynard the Fox in Medieval Marginal Illustrations

Reynard the Fox, the trickster anti-hero of the medieval folk tale known as the Roman de Renart, became an integral part of medieval culture, first in France and then throughout Europe. This popularity led to his appearance in the marginia of illuminated manuscripts. My research examines how Reynard’s liminal presence in both religious and secular works comments on these texts and adds to their meaning.

Anna is proud to call Chicago her home. She has spent her time in Oberlin cultivating a love of art history, library science, museum education, and ancient Rome. In her spare time, she appeared onstage in student and departmental theater productions and worked behind the scenes as a stage manager. After spending three wonderful years as an employee of the Clarence Ward Art Library, she hopes to continue working in art libraries in the years to come.

TRIP FREEBURG
BIOLOGY

Advisor: Katherine Cullen, Biology
Mentor: Maureen Peters, Biology

Analysis of an RNAi-Induced Defect in the Caenorhabditis elegans Defecation Motor Program

Caenorhabditis elegans undergoes a rhythmic three-step defecation motor program involving the intestine, neurons, and muscles. A genetic screen identified a mutant that dramatically reduces the frequency of the final step of this motor program. The mutant was generated with RNAi, a technique that lowers levels of specific proteins. To determine which cells were important, I limited RNAi to either the intestine or neurons. Intestine-specific RNAi reproduced the defect, while neuron-specific RNAi did not. I also performed optogenetic and pharmacological experiments to test whether RNAi affected certain neurons and muscles. These experiments suggested that muscles and neurons may be affected.

Trip, who comes from Memphis, Tennessee, has been involved in undergraduate research since summer 2011 and is a member of Professor Peters’s lab. He plans to travel with the Peters lab to the Experimental Biology Conference in San Diego this month to present a poster describing his honors research. After graduation, he hopes to work as a biomedical research technician and eventually enter an MD/PhD program with a focus on oncology and cancer biology.

Ben Garfinkel
BIOLOGY

Advisor: Keith Tarvin, Biology
Mentor: Chris Anderson, Biology

Parasites of the Damselfly Ischnura verticalis: Relationships to Sex and Egg Load

Found in every county in the state, the damselfly Ischnura verticalis (order: Odonata) is the most common damselfly in Ohio. This project explores, first, the diversity and intraspecific distribution of endo- and ectoparasites within I. verticalis populations and, second, the potential fitness costs of protozoan gregarine parasitism in I. verticalis. We demonstrate a female bias on gregarine intensity and prevalence. Collection site, but not gregarine intensity, had an effect on female egg load. Learning about these interspecific relationships informs future oodnate research, as well as the study of fitness costs of parasite-mediated selection across other organisms.

Ben’s love of the outdoors and biology was cultivated in his watery home of Seattle. He is a cofounder of The Synaps, Oberlin’s only student-run science magazine, and Kid Business, the short-form improv troupe. A lover of invertebrate biology, Ben spent winter terms in Florida performing gastropod censuses and in Seattle studying juvenile salmon diets. After graduation, he hopes to travel the world and then move back to the Pacific Northwest for a gap year before beginning post-graduate education.

Julia Harris
GENDER, SEXUALITY, AND FEMINIST STUDIES (GSFS) and STUDIO ART

Advisors: Meredith Raimondo, GSFS, and Pipo Nguyen-Duy, Studio Art
Mentor: Anuradha Needham, GSFS

Without the Closet: A Critical Exploration of Queer Experiences of Visibility

In this project I use interviews conducted at Oberlin to explore how queer women challenge and resist the dominant paradigm of coming out and enact new modes of understanding queer visibility. Guided by queer and feminist theory, my research reveals queer interventions that trouble the structure and content of the “coming-out narrative.” While the coming-out paradigm has served a political purpose for LGBT communities in recent decades, my research and analysis of alternative, contemporary narratives that challenge the relevance of this paradigm in today’s world highlight new modes of understanding queer experience.

Julia, from Belmont, Massachusetts, has been part of the cross-country team since her first-year at Oberlin. In spring 2013, she took a semester off to volunteer at a women’s and children’s shelter in Chiang Mai, Thailand, and to travel independently through Southeast Asia. She hopes to find a way of integrating her loves of travel, queer theory, and art.

Rhys Hertafeld
MUSICAL STUDIES

Advisor and Mentor: Joseph Lubben, Music Theory
Mentor: Devin Burke, Musicology

The Fusion of Timbre and Pitch in the Spectral Music of Gérard Grisey

In the 1970s, French composer Gérard Grisey pioneered a new form of avant-garde composition known as spectral music. In this paper, Grisey creates soundscapes that obscure the distinction between pitch and timbre. The prominence of timbre in Grisey’s works challenges traditional music theorists’ treatment of pitch as the most important aspect of music. In my talk, I discuss the musical language of spectral music by analyzing Jour, Contre-Jour (1978), one of Grisey’s less well-known works. The innovations of this minimalist composition suggest new ways to understand the relationship between pitch and timbre.

Rhys grew up in Lansing, Michigan. While at Oberlin, he has been on the diving team, a violinist in the Arts and Sciences Orchestra, and a singer in Collegium Musicum. Rhys has spent past winter terms studying musical acoustics and TIMARA, and he holds a general interest in the physical properties of sound. After graduation, he will enroll in Oberlin’s Masters in Music Teaching Program, with hopes of becoming a high school orchestra director.
Porter James  
**MUSICAL STUDIES**

Advisor: Jan Miyake, Music Theory  
Mentor: Lyn Guerninger, TIMARA

"I some hear words": Authors and Authority in Representations of Mormon Prophecy

Since the writings of Mormon prophet Joseph Smith first appeared in the 1820s, a bitter controversy has arisen over the question of Smith’s authority to speak for God. Reframing this controversy as a question of authorship, I ask: Who or what is the subject in Smith’s creative process of vision-production, and to what extent can this subject be considered an author? I explore different approaches to this problem that representations of Smith have taken in popular culture, church-sponsored media, and an opera I composed, prophecy machine. The latter reflects my own secular Mormon perspective on Smith’s authorship.

Porter is a composer, poet, and sound artist from Mesa, Arizona. At Oberlin he has served as an officer with the Oberlin Student Cooperative Association and a trip leader for Oberlin in Solidarity with El Salvador. During the past three years, Porter has presented musical works in various recourses of the college—at a gallery show sponsored by Exhibition Initiative, at a junior guitar style, and guerrilla-style in the Sky Bar at 8 a.m. In spring 2013, he presented a sound installation at the International Supercollider Conference in Boulder, Colorado. His opera prophecy machine was staged from April 10-12 in Wilder Main.

Connor Jerzak  
**HISTORY**

Advisor and Mentor: Annemarie Sammartino, History

The Fragile Sovereign? Sovereignty, Citizenship, and Conscription in Northern Ireland, 1938-1946

This thesis examines conflicts that emerged during WWII over the introduction of military conscription to Northern Ireland. Through my review of primary documents written between 1938 and 1946 by leaders in Northern Ireland, the Irish Free State, and Great Britain, I argue that debate over conscription provided a venue for elites in and around Northern Ireland to define the nature of citizenship existing within this space. The conscription issue compelled actors in Northern Ireland to articulate their views on citizenship, perhaps in the most elaborate form since the territory’s creation as a political entity.

Connor hails from Omrode, a small town in northeast Wisconsin. He has served as a mediator for the Oberlin College Dialogue Center, worked for the Brennan Center for Democracy, and interned for the Office of the Mayor of Green Bay. Connor also traveled to Northern Ireland through the US-UK Fulbright Commission and received advanced computational modeling training from the National Science Foundation. Come fall, Connor will be pursing a PhD in the Department of Government at Harvard University.

Gabriel Kanengiser  
**INDIVIDUAL MAJOR: PRACTICE AND ECONOMICS IN THE MUSIC INDUSTRY**

Advisor: Barbara Craig, Economics  
Advisor and Mentor: Charles McGuire, Musikology

Innovation and Reaction to Change in the Music Industry

There is a common misconception that the Napster era (1999-2000) caused record sales to plummet and pushed the music industry into a free fall. Select musicians, though, continue to adapt successfully to changes and create sustainable careers. In the music industry, change correlates closely with technological advancements, which have dictated (or disrupted) different modes of control exercised by the publisher, the record label, or the Performing Rights Society. Through my review of the careers of Elgar, Duke Ellington, Radiohead, and Zoe Keating, I analyze dictated (or disrupted) different modes of control exercised by the publisher, the record label, or the Performing Rights Society. Through my review of the careers of Elgar, Duke Ellington, Radiohead, and Zoe Keating, I analyze...
**BRENA LARSON**

**ART HISTORY**

Advisor and Mentor: Erik Ingalls, Art History  
Mentor: Christina Neilson, Art History

The Balue Nielli: Intercultural Exchange and Conspicuous Consumption in 15th-century France and Italy

In the second half of the 15th century, the French Cardinal Jean Balue (c. 1421–1491) commissioned a lavish set of niello silver book covers decorated with New Testament scenes and emblazoned with his coat of arms. Now divided between the Cleveland Museum of Art and Minneapolis Institute of Arts, the nielli are a window into the confluence of political, artistic, and trade networks among the Valois court, the Vatican, and Florence. This study examines the possible dating of the covers, the nature of the manuscript they bound, the niello as an understudied medium, and Cardinal Balue’s identity as a patron in France and Rome.

Brenna grew up in Summit, New Jersey, and currently works as a research assistant for Professor Neilson and as a peer mental health advocate for the Office of Student Wellness. Brenna has worked in the American art department at the Newark Museum, the curatorial department at the Visual Arts Center of New Jersey, and the docent program at the Allen Memorial Art Museum. While abroad in Florence in fall 2012, she interned at the Cooperativa Archeologia, and in spring 2013 was awarded the Laurine Mack Borgiorno Prize for promising third-year art history majors. Brenna plans to spend time gaining more work experience before attending graduate school in art history.

**DAVID LEACH**

**JAZZ PIANO and CREATIVE WRITING**

Advisor: Dan Wall, Jazz Studies  
Advisor and Mentor: Razin Avi, Creative Writing

“The Long Watch”: Original Poems / An Exploration of Poetic Voice

My project presents a selection of original poems I produced for my creative writing capstone. I drew inspiration for the poems in large part from the works of T.S. Eliot, Wallace Stevens, Jorie Graham, and Charles Wright. I explored the particularities of each poet’s voice at the syntactical, formal, tonal, and philosophical levels, in order to inform my own writing process. I hope that the elements of each poet that resonated most with me have coalesced into a versatile poetic voice, capable of uniting divergent influences while maintaining its own unique identity.

David grew up in Boston, where his writing and musical abilities emerged at a young age. He self-published his first book in kindergarten—a graphic novel about monsters that critics hailed as “Lovely! Let’s hang it on the fridge!” His early musical experiments with pots-and-pans percussion were less well-received. In addition to spending his time writing and in kindergarten—a graphic novel about monsters that critics hailed as “Lovely! Let’s hang it on the fridge!” His early musical experiments with pots-and-pans percussion were less well-received. In addition to spending his time writing and

**JOELLE ELIZA LINGAT**

**COMPARATIVE AMERICAN STUDIES and ENVIRONMENTAL STUDIES**

Advisor: Janet Fako, Environmental Studies  
Advisor and Mentor: Pablo Mitchell, Comparative American Studies and History

Self-Made Spines: Healing, Politzication, and Education through Zines

This project explores the capacities of zines to heal, politicize, and educate. Zines are informal magazines of both original and appropriated texts and images. They are often committed to distributing radical information to readers and—as “alternative textbooks”—can inspire direct action. This project contextualizes the increased presence of zines on Oberlin College’s campus in 2013, including three comic strips created in response to the March 4th racist events, and the “Disorientation Zine” created by students during fall orientation.

Joelle is a graduating third-year student from Jersey City. She has been involved with the Asian American Alliance and the Filipin@ American Students Association, organizations that she now cochairs. She is a Bonner leader, an academic ambassador, and an Oberlin College Dialogue Center mediator and facilitator. She studied in India, Senegal, and Argentina through the International Honor's Program. After college, she hopes to continue fighting the good fight.

**NICHOLAS LOVALLO**

**ANTHROPOLOGY and MUSICAL STUDIES**

Advisor: Erika Hoffman-Ollowy, Anthropology, and Jennifer Fraser, Ethnomusicology  
Mentor: Ian MacMillen, Russian and East European Studies

“Anyone Can Improvise”: Technology and the Quantification of Jazz Improvisation

In the past 20 years, jazz educators and researchers have expanded the use of technology to understand, teach, and perform jazz improvisation. These technological advancements include computer software such as Band-in-a-Box, improvisation algorithms, neuroscience studies, and the use of improvisation as a model for computer-human interactivity. In my presentation, I argue that these developments are a continuation of a concept of jazz improvisation as a quantifiable, technical process that is accessible to anyone. This concept, associated with educators such as Jamey Aebersold, has been the dominant view in institutionalized jazz education for over 50 years.

Nick hails from Chicago. During his junior year, he studied abroad in Ghana, and he hopes to continue traveling and seeing the world. Nick will work in Jacksonville, Florida, next year with City Year, an AmeriCorps organization providing educational assistance for children in underprivileged schools. He hopes to eventually pursue graduate studies in anthropology or ethnomusicology.

**JOSEPH LUBITZ**

**COMPARATIVE LITERATURE**

Advisor and Mentor: William Patrick Day, Cinema Studies and English

Anxious Seas: Reading Affect in Dazai and Murdoch

Martin Heidegger advanced a concept of anxiety as a constitutive way of being-in-the-world, one that stands in stark contrast to psychoanalytic theory and the stable bourgeois subjectivity of modern literature. Looking at two 20th-century literary works—The Sea, The Sea by Iris Murdoch and Ningen Shikkaku by Osamu Dazai—my research investigates how these two texts configure the sea as a space for reflecting on and subverting a stable modern subjectivity and its moors. In doing so I call for the necessity of rereading the “Age of Anxiety” and a reevaluation of affect as it is represented in these anxious self-portraits.

Joseph grew up in Portland, Oregon. At Oberlin he served on the board of WOBC 91.5 FM, founded around the bike co-op and served as its treasurer, and danced quite a bit. He studied fine art at the Gerrit Rietveld Academie in Amsterdam for a semester and spent last summer in New York City assisting the cultural critic Tasia Njorgo’s and intermedia artist Mika Tajima. Joseph aspires to further his practice of the interdisciplinary study of aesthetics, literature, and critical theory well into the future.

**EMILY LUMSDAINE**

**BIOLOGY**

Advisor and Mentor: Angie Roles, Biology

My Summer in Costume: Crane Reintroduction and the Conservation of Small Populations

The critically endangered Mississippi Sandhill Crane (Grus canadensis pullus) is found year-round along the Gulf Coast at the Mississippi Sandhill Crane National Wildlife Refuge. At the refuge’s establishment, in 1975, only 30 to 35 individuals were left in the wild. Currently, about 110 Mississippi Sandhill Cranes are left in the wild, including only 20 to 25 breeding pairs. Conservation efforts focus on preserving the remaining wild habitat and improving
population numbers through captive rearing and reintroduction. Challenges arise due to small population sizes and the difficulty of using a crane puppet to raise chicks with the necessary survival and reproductive skills.

Emily is from Bloomington, Indiana. She has been involved in OSCA for two years and is a member of the Recycled Products Co-op. She completed a Drosophila-focused Research Experience for Undergraduates at Indiana University in 2012 and works now as a research assistant for professors Roles and Petersen. Emily is a lifelong animal lover who currently lives with a hamster. She hopes to pursue a career related to avian conservation.

SAM MCCRIGHT

Advisors: Katherine Cullen, Biology
Mentor: Maureen Peters, Biology

Calcium Signaling and Neuropeptide Secretion in the Expulsion Stop of the Caenorhabditis elegans Defecation Motor Program

How does inhibiting communication within a tissue affect communication between that tissue and other parts of the body? In the nematode Caenorhabditis elegans, a three-step motor program is initiated by an intestinal calcium wave. The intestine releases the neuropeptide-like protein NLP-40, which is thought to serve as a message that tells neurons to signal the last muscle contraction. Worms mutant for intestinal intracellular communication channels have faulty calcium waves and lack the last contraction. I have used optogenetic methods and in-vivo fluorescence microscopy to investigate whether faulty calcium waves inhibit release of NLP-40.

Emily has worked with worms since her first year at Oberlin. Between classes, she is a fencing club treasuer and a member of the fencing club. She hopes to continue on to graduate studies in biology.

NICOLE NANCE

Advisors: Pam Brooks, Africana Studies, and Natasha Tessone, English
Mentor: Gillian Jahnson, English

Negotiating Respectability: Black Women’s Struggle for Self-Representation

For African-American women, self-representation is vitally important because socially constructed images have the ability to moderate power relations between the self and society. While black female self-representation adapts to different eras, it is complicated by the ideologies of uplift and the politics of respectability. These ideologies have mutated from a useful tool for undermining racist structures into empty signifiers that promote a classist environment. My project studies three women—Ida B. Wells’ Crusade for Justice, Nella Larsen’s Quicksand, and Toni Morrison’s Tar Baby—and shows the differing statuses of respectability politics: a tool for self-definition, or a barrier that destabilizes it.

Nicole has a part-time job as an intern for the Women’s Center and volunteers for the Ohio Women’s Health Center. She is a member of the Honors Program and the National Society of Leadership and Honor. Nicole is a member of the Black Student Union and has been involved in OSCA for two years.

ANNE NIGRA

Advisors: Mary Garvin, Biology
Mentor: Renee Romano, History

Tree Core Analysis for Heavy Metal Carcinogens in a Childhood Cancer Cluster

To test the hypothesis that heavy metal contamination of groundwater contributed to higher rates of childhood cancer in a rural northwest Ohio cancer cluster, we analyzed cores from eastern cottonwoods (Populus deltoids) for heavy metal contamination via inductively coupled plasma mass spectrometry. We found, first, that cadmium concentrations were greater in cores from trees sampled in the cluster area compared to those sampled in the control area. Second, cadmium contamination in cores collected within the cluster area was highest in growth rings deposited during the years preceding the observed increase in frequency of childhood cancer.

Annie grew up in western Pennsylvania and coordinates Oberlin’s HIV Peer Testing Program, where she has worked as a volunteer tester for three years. Annie has been part of the Garvin lab for three years and has volunteered with harm-reduction programs at the Free Medical Clinic of Greater Cleveland and with the City Fresh Community Supported Agriculture program. After graduation, Annie is headed to the Columbia University Mailman School of Public Health to pursue an MPH in Environmental Health Sciences (Toxicology).

CUYLER OTSUKA

Comparative American Studies and Economics

Advisors: Afta Olioti-Menza, Comparative American Studies
Mentor: Harry Hirsch, Politics

Aloha, Marriage Equality: Unsettling Gay Constructions of Paradise

What does a decolonized queer futurity look like in the post-marriage equality era? Using Hawai’i’s marriage equality 2013 special session as a case study, this project complicates the discourse relationship between marriage equality, Hawaiian Christianity, and decolonization. Tracing neo-imperialism within the LGBT community and evangelicalism in the Hawaiian community, I look to queer and feminist native Hawaiian scholars to articulate the liberation of kānaka ‘ōiwi and queer(ed) people(s).

Cuyler was born and raised on the island of O’ahu. Committed to activist scholarship, Cuyler has worked for the Multicultural Resource Center, the Bonner Center for Service and Learning, and served as a residential assistant in Asia House. While in Stockholm in fall 2012, Cuyler studied the fraught relationship between Swedish feminism and asylum immigration politics. Cuyler hopes to one day find a career in higher education.

REID PALMER

Economics

Advisors: Ellis Tallman, Economics, and Ian Smith, History
Mentor: Renee Romano, History

“You Started Something When You Joined the International Brigade, Papa”:
Alvah Besie, the Spanish Civil War, and the Communist Party of the United States of America

This thesis challenges the traditional narrative of the Communist Party of the United States of America through a microhistory of one of its dedicated members, writer Alvah Besie (1904–1985). By studying the documents, books, and letters Besie left behind, I show how the Spanish Civil War (1936–1939) accelerated the collapse of the organized revolutionary left in the United States. As revealed in Besie’s narrative, the Soviet Union’s military mismanagement and strict anti-revolutionary policies led to a significant number of the most committed American communists being killed, wounded, or disillusioned with Soviet-style communism.
**Insight into Macroalgal Phase Shifts on Coral Reefs**

**Advisors:** Mary Garvin, Biology, and Dennis Hubbard, Geology  
**Mentor:** Angie Roles, Biology

**Response of Herbivorous Fish Communities to a New Resource: Insight into Macroalgal Phase Shifts on Coral Reefs**

Herbivores play a key role in the maintenance of algal and coral communities. Reductions in herbivory can cause a shift to a macroalgae-dominated system, which decreases the biodiversity and restorative capabilities of coral reefs. An understanding of how herbivorous fish communities respond to macroalgae is crucial to the conservation and management of coral reefs. My project examines the response of both coral fish communities and individual fish species to the experimental introduction of a new resource (macroalgae) at a mid-shelf reef in the Great Barrier Reef.

**CHRISTOPHER PICKENS**  
**BIOLOGY AND GEOLOGY**

**Mentor:** Professor Sebastiaan Faber, as a writer and online editorial assistant for *The Volunteer*, a quarterly journal on the Spanish Civil War. Next year, Reid will begin his PhD studies in history at University of Wisconsin-Madison.

---

**Ryan Reynolds**  
**Greek and Latin**

**Advisor:** Kirk Ormand, Classics  
**Mentor:** Drew Wilburn, Classics

**Identity and Commerce along the Maritime Spice Route between Egypt and India**

This project studies the identities constructed by two merchants who traveled through Roman Egypt in the first few centuries CE: Sophos "The Indian" and Hermes "The Adenite Red Sea Merchant." Both men make dedicatory inscriptions to Greek gods, written in the Greek language, and even use Greek names to identify themselves, yet they still consciously identify as non-Greeks. Their self-representation, I argue, is an attempt to integrate into pre-existing economic institutions while at the same time negotiating with Greco-Roman perceptions of their homelands.

**RYAN REYNOLDS**

---

**Pearl Rivers**  
**Biology**

**Advisor:** Roger Laushman, Biology  
**Mentor:** Keith Tarvin, Biology

**Do Eastern Gray Squirrels Eavesdrop on Black-Capped Chickadee Referential Alarm Calls?**

Alarm calls are vocalizations produced by animals in response to a perceived threat and may provide information about the presence of predators to others in the area, including conspecifics and heterospecifics with similar predators. Black-capped chickadees produce alarm calls that convey information about predator size and threat level. For this project, I tested the hypothesis that eastern gray squirrels are more likely to increase alertness in response to chickadee calling larger predators than to calls indicating smaller predators. The results will indicate if squirrels attend to the most squirrel-relevant information, rather than to the urgency of the information for the calling chickadees.

**PEARL RIVERS**

---

**Dyani Sabin**  
**Biology**

**Advisor:** Roger Laushman, Biology  
**Mentor:** Angie Roles, Biology

**The Complete Mitochondrial Genomes of Two Crayfish in the Genus Orconectes: O. Rusticus and O. Sanbornii**

Due to human action, the rusty crayfish (Orconectes rusticus) is now present in local rivers and placing pressure on native Sanborn's crayfish (Orconectes sanbornii). My research looks at the genetic differences within the mitochondrial genomes of the two species to explore the relationship between them. Using the mDNA of other related crayfish, I identify regions of genetic difference between our target species to answer questions of hybridization and evolutionary history.

**DYANI SABIN**
lateral roots would form closer together in roots that have higher concentrations of the plant hormone auxin. I then mechanisms that dictate where lateral roots form and the implications for plant growth efficiency. I predicted that Root system architecture varies in ways that maximize success in different environments. This project examines the
Understanding lateral Root Formation: Genetic Control of lateral Root Spacing and emergence
Mentor: Marta Laskowski, Biology
Advisor: Jane Bennett, Biology

MICHAL SAGAL
GREEK AND LATIN
Advisor: Kirk Ormand, Classics
Mentor: Christopher Trinacty, Classics

Spinning Stories: The Narrative Styles of Ovid’s Minuyeids
This paper focuses on the tales of the daughter of Minyas, a story cycle in book four of Ovid’s Metamorphoses. The first daughter tells the tale of Pyramus and Thisbe, the second of the adultery of Mars and Venus and the rape of Leucippe, and the third of the transformation of Hermaphroditus. Their distinct narrative styles enhance the stories they tell and respond to both their inherent fear of Bacchus, the wine-god, and to each other’s tales. Each is also emblematic of Ovid’s use of multiple genres within stories and internal narrators within the greater epic.
Michal comes from Westfield, New Jersey, where she was introduced to the classics by her collections of Greek myths and the discovery that Latin is the native language of dragons. She is a member of the Oberlin Women’s Chorale and Chalilah capella, and spent spring 2013 studying at the Centre in Rome. After graduation, she plans to attend graduate school for a master’s in classics and eventually teach Latin in high school.

RUBY ROBINA SAHA
ART HISTORY
Advisor and Mentor: Erik Inglis, Art History

The Politics of Display: The Exhibition of Islamic Art in a Post-9/11, Revisionist Context
Since 9/11, the display of Islamic art has witnessed a major revival in museums across the world. These institutions seek to highlight the artistic achievements of centuries of Islamic civilization and to foster constructive cultural dialogue at a time of heightened public interest and fear of “Islam.” My project evaluates the Metropolitan Museum of Art’s 2011 installation of Islamic art as a response to the issues raised by a post-9/11 context, as well as the revisionist Islamic art scholarship that has emerged in the past few decades, in order to question the frameworks, scope, even the very designation of “Islamic art” itself.
Indian by nationality, Ruby was born in Indonesia, grew up in Australia, settled down in Singapore, and speaks French, Arabic, Bengali and Bahasa. Ruby is an associate editor of the Wilder Voice, has written articles for the Oberlin Review, and works at the Clarence Ward Art Library. Last year, she was awarded the Laurine Mack Bongiorno Prize for Art History and studied abroad in Paris, where she began her honors research at the Louvre. After graduation, she plans to attend graduate school for the discovery that Latin is the native language of dragons. She is a member of the Oberlin Women’s Chorale and Chalilah capella, and spent spring 2013 studying at the Centre in Rome. After graduation, she plans to attend graduate school for a master’s in classics and eventually teach Latin in high school.

ARI S CHWARTZ
BIOLOGY
Advisor: Jane Bennett, Biology
Mentor: Marta Laskowski, Biology

Understanding Lateral Root Formation: Genetic Control of Lateral Root Spacing and Emergence
Root system architecture varies in ways that maximizes success in different environments. This project examines the mechanisms that dictate where lateral roots form and the implications for plant growth efficiency. I predicted that lateral roots would form closer together in roots that have higher concentrations of the plant hormone auxin. I then performed multivariate experiments to determine if lateral root patterning changes in mutants that affect the level of auxin. The result shows that the spacing of lateral roots can be controlled by factors that regulate auxin accumulation.
Ari is from Davis, California. He played varsity soccer for four years at Oberlin and served as captain his senior year. For winter term 2011, he helped collect data for ecological research on the impact of crypsis on predation of scree plants in New Zealand. After graduation, Ari hopes to participate in research that maximizes the nutritional value of agriculture to benefit developing countries and to continue pursuing this field in graduate school.

MERIEL STEIN
ART HISTORY
Advisor: Erik Inglis, Art History
Mentor: Deniz Karakas, Art History

Life Imitates Art, When Art Holds the Upper Hand: The Scope of Turkish Contemporary Art and the Aesthetics of Hegemony
This paper analyzes the consequences of Western imperialism by way of the emergent aesthetics of resistance in the art worlds of Turkey. The development of a modern system of artistic production and display reflects initiatives in accordance with Turkey’s ongoing bid to join the European Union. Using case studies of Turkish artists and art institutions within and beyond the borders of Turkey, this project explores how the art of the Middle East both feeds and pushes against Western cultural imperialism in the formation of a national identity and indigenous aesthetic style.
Born and raised in Linwood, New Jersey, Meriel is involved in various circus arts and visual arts collectives around campus. She works at the Allen Memorial Art Museum, compiling a bibliography database and cataloguing inscriptions on objects in the collection. Meriel has also interned for Fung Collaboratives, the American Visionary Art Museum, the Transformer Station, and the Living Machine. Her writing has been accepted at two graduate and post-doctoral conferences this year. After college, she will pursue a career in public art and museum accessibility and further her education in Islamic art.

ARIELLE SWERNOFF
POLITICS
Advisor: Michael Parkin, Politics
Mentor: Chris Howell, Politics

Is Participatory Democracy Possible? A Study of Participatory Budgeting in Porto Alegre, Chicago, and New York
Is an inclusive, empowered participatory democracy possible? For this talk, I developed an ideal-type model of participatory democracy, and then used it to test participatory budgeting projects in Porto Alegre, Chicago, and New York. My model examines whether these experiments in democracy are inclusive and empowering. If so, how can they be expanded? If not, can their shortcomings be overcome? I expect to find that while these participatory budgeting projects have significant failings, they provide hopeful insights into our own ability for empowered self-governance.
Arielle grew up in Northern California, and, during her time at Oberlin, has been involved with political and educational groups. She served as president of the Oberlin College Democrats during the 2012 election and is always working to get her fellow students to vote. She also completed the Cole Scholars Program, during which she worked as a finance assistant for a Boston city council candidate. After college, she hopes to continue to work in progressive politics.
Evan Tinknell
ENVIRONMENTAL STUDIES and PSYCHOLOGY

Advisor and Mentor: Cindy Frantz, Psychology

Effects of Providing Real-Time Feedback About Electricity and Water Consumption
Across the vast majority of human history, people received and depended on direct, immediate, and intimate feedback from the natural environment, but modern technologies and lifestyles have distanced daily activities from their environmental impacts. This research explores behavioral and attitudinal effects of exposure to various types of resource use feedback technologies. These feedback technologies, which are designed to monitor electricity and water consumption and provide real-time feedback to consumers, have the potential to reconnect individuals to the natural environment by promoting understanding of resource flows and awareness of personal impact on the environment.

Evan, who is from western Massachusetts, is a member of the men’s varsity soccer team and serves as chair of the Green EDGE Fund, a student group responsible for allocating student money to support efficiency and sustainability projects at Oberlin. For the past three years, he has been a member of the Great Lakes Protection Fund Research Team, an interdisciplinary group of faculty and students that develops and tests technologies designed to provide real-time feedback about resource consumption. He also served as an academic ambassador and hopes to further pursue social impact marketing or related academic research after graduation.

Tae Kyu (Brian) Uhm
CHEMISTRY and BIOCHEMISTRY

Selection of DNA Aptamers for Ovarian Cancer Biomarker CA125
Ovarian cancer biomarker CA125 is widely used to diagnose and monitor ovarian cancer. In order to develop novel diagnostic and therapeutic tools, nucleic acid aptamers with high affinity to CA125 were selected using One-Pot SELEX, selected aptamers were sequenced using high-throughput sequencing and analyzed. Dissociation constants of selected aptamers were determined using affinity probe capillary electrophoresis and fluorescence anisotropy. This work is supported by the National Cancer Institute.

Brian was originally from Seoul, Korea, and currently identifies as illness as his home. As a sophomore, he joined the design STAFF at WOBC, as a junior, he began his research assignment under the guidance of Professor Whelan. After graduation, he will take a gap year to work as a research assistant. He hopes to attend medical school in the future.

Timothy Woods
RELIGION

Advisor: James Swan Tuite, Religion
Mentor: David Kamitsuka, Religion

Sin in Hiding: Re-Envisioning Contemporary Christian Theology Through Shame-Talk
My project addresses problematic beliefs dominant in contemporary Christian theological anthropology regarding sin and identity. I contend that the incorporation of psychodynamically informed interdisciplinary discourse on shame, a broad network of intractable relational phenomena suffused within Christian theology, better enables the Christian worldview to inclusively confront the inevitable existence of sin. My theological appropriation of shame-talk focuses on four elements: first, due attention to the social dynamics of identity formation; second, discussion of subsequent social exposure and vulnerability, termed “original shame”; third, reexamination of sin as hiding or concealment; and fourth, reconsideration of the particular manifestation of sin within the context of hiding.

Karin Yoshida
BIOLOGY

Advisor: Jane Bennett, Biology
Mentor: Yolanda Cruz, Biology

Histological Changes in Monodelphis domestica Uteri During Pregnancy
Pregnancy is possible because biochemical adjustments prevent immunological rejection of the embryo, which the maternal body recognizes as an alien tissue. A protein called early pregnancy factor (EPF) suppresses the maternal immune system just enough to prevent expulsion of the embryo without harming the mother. Additionally, progesterone modifies the reproductive system to become a more suitable environment for fetal development. I examine prepared and stained slices of uteri from pregnant and non-pregnant opossums (Monodelphis domestica) to determine if the known changes in progesterone and EPF levels in these animals correspond to microanatomical changes in uterine tissues and cells.

Karin is originally from Hiroj, Japan. For two summers, she conducted research on campus as an Oberlin College Research Fellow. She has served as a Japanese tutor since arriving at Oberlin, and as a teaching assistant during her final year in the East Asian Studies Program. She also enjoys cooking and baking in her spare time. After Oberlin, Karin plans to work in a research laboratory while developing her interests in culinary arts.

Elia S Wright
ART HISTORY and RELIGION

Advisor: Susan Kane, Art History, and James Swan Tuite, Religion
Mentor: David Kamitsuka, Religion

Art as Communication Objects in a Practice-Centered Account of Albrecht Durer
I suggest that interpreting Durer’s art objects using a practice-centered interpretation in conjunction with a belief-centered account demonstrates how art objects can communicate and shape social values and structure. I use Erwin Panofsky’s interpretation of Durer’s “St. Jerome in His Study” to articulate the narrative features in a work of art and to examine how Durer’s art objects are placed in a larger artistic practice. From this, I argue that religious art as “representational” can only be understood in conjunction with its status as a shared social form. I investigate the implications and abilities of an “art-object” to serve as a communication object, structuring relationships and changing beliefs and organization in practicing communities.

Elia grew up under the light polluted skies of northern New Jersey. In his time at Oberlin, he has served as the student representative for the art history and religion departments. He has organized and served as head editor for the Senior Studio Catalogue, an interdisciplinary publication that attempts to reshape how we write about art. Elia is interested in the relationship between art, technology, and communication, and how various media forms affect our everyday lives. Upon graduating, he intends to pursue opportunities in digital media outlets.
PLEASE JOIN OUR CONSERVATORY SENIORS FOR THEIR RECITALS IN THE FINAL TWO WEEKS OF THE SEMESTER.

FRIDAY, APRIL 25, 2014

6:30 PM  Joseph Trumbo, voice  Warner Concert Hall
8:00 PM  Cory Todd, bass  Cat in the Cream Coffeehouse
8:00 PM  Jinhua Li, piano  Warner Concert Hall

SATURDAY, APRIL 26, 2014

3:00 PM  Kevin Grasel, horn  Warner Concert Hall
4:30 PM  Francesca Shipsey, voice  Kulas Recital Hall
6:30 PM  Michelle Ellison, voice  Warner Concert Hall
8:00 PM  Emily Peragine, voice  Kulas Recital Hall
8:00 PM  Yi Qiao Li, piano  Warner Concert Hall

SUNDAY, APRIL 27, 2014

1:30 PM  Christian James, composition  Fairchild Chapel
3:00 PM  Nathan Mendelsohn, jazz alto saxophone  Cat in the Cream Coffeehouse
3:00 PM  Owen McTigue, clarinet  Kulas Recital Hall
3:00 PM  Sophia Grabandt, violin  Warner Concert Hall
4:30 PM  Aubry Hagadorn, voice  Kulas Recital Hall
4:30 PM  Clara Yunjoo Lee, piano  Warner Concert Hall
8:00 PM  Jaime Feldman, cello  Kulas Recital Hall

FRIDAY, MAY 2, 2014

6:30 PM  Eric Fischer, voice  Kulas Recital Hall

SATURDAY, MAY 3, 2014

3:00 PM  Danielle Cheiken, voice  Warner Concert Hall
4:30 PM  Ethan Updike, trumpet  Warner Concert Hall
4:30 PM  Hunter Gordon, bassoon  Kulas Recital Hall
8:00 PM  Ethan Philion, bass  Cat in the Cream Coffeehouse
8:00 PM  Joseph Hauer, piano  Warner Concert Hall

WEDNESDAY, MAY 7, 2014

8:00 PM  Sunseray Tabler, jazz drumset  Cat in the Cream Coffeehouse

THURSDAY, MAY 8, 2014

8:00 PM  Hanyi Meng, piano  Warner Concert Hall

FRIDAY, MAY 9, 2014

6:30 PM  Adrian Jewell, piano  Warner Concert Hall
WE ALSO CONGRATULATE THE FOLLOWING SENIOR RELIGION MAJORS,
WHO RECENTLY PRESENTED THEIR CAPSTONE PROJECTS:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>JOHN BERGEN</td>
<td>“Who is My Mother and Who is My Brother?”: Mennonite Identity and</td>
</tr>
<tr>
<td></td>
<td>Undoing Oppressions in the Contemporary United States</td>
</tr>
<tr>
<td>JACK BLUMENTHAL BREWER</td>
<td>Before Affirmation: The Necessity of Tolerance in Sexual Ethics</td>
</tr>
<tr>
<td>STEPHEN BURROWS</td>
<td>Tenrikyo and the Japanese State</td>
</tr>
<tr>
<td>JENNIFER MURDOCK</td>
<td>La Vida Es La Lucha / Una Lucha De Nepantla: Constructing a Mujerista</td>
</tr>
<tr>
<td></td>
<td>Standpoint Ethic Through the Lived Experiences of Latinas</td>
</tr>
<tr>
<td>HALLIE PARKINS</td>
<td>Theologies of Caregiving: Integrating Feminist Pastoral Theology in</td>
</tr>
<tr>
<td></td>
<td>the Wake of Ectopic Pregnancy Loss</td>
</tr>
<tr>
<td>ANITA PEEBLES</td>
<td>Ecotheology and the Parables of Jesus: Creative Re-Readings of Parables</td>
</tr>
<tr>
<td></td>
<td>In Light of the Environmental Crisis</td>
</tr>
<tr>
<td>ETHAN PHILON</td>
<td>Next to the Word of God: A Revised Account of Agency from Martin Luther's</td>
</tr>
<tr>
<td></td>
<td>Musical Texts</td>
</tr>
<tr>
<td>SAMUEL RUBIN</td>
<td>Philosophical Nonviolence in the Student Nonviolent Coordinating</td>
</tr>
<tr>
<td></td>
<td>Committee, 1960-1962</td>
</tr>
<tr>
<td>CHARLOTTE W. VARI</td>
<td>The Sacramentality of Choice: Unplanned Pregnancy in Feminist Theology</td>
</tr>
</tbody>
</table>