

**A Sessions - 9:45-10:45**

<p><b><u>A1 Spanish</u></b>          Moderator: Marina Pérez de Mendiola          Kayla Lemus          Emily Long          Aida Villarreal</p>	<p><b>Humanities 101</b></p>
<p><b><u>A2 Economics</u></b>          Moderator: Roberto Pedace          Juliana Beall          Rosario Bennett          Katherine Goree</p>	<p><b>Humanities 119</b></p>
<p><b><u>A3 Politics</u></b>          Moderator: Mark Golub          Emilie Ho          Corinna Svarlien          Miel Jasper          Kela Caldwell</p>	<p><b>Humanities 120</b></p>
<p><b><u>A4 Neuroscience</u></b>          Moderator: John Milton          Amanda McQuade          Summer Gernon          Hannah Taylor          Rebecca Shope &amp; Emilie Fisher</p>	<p><b>Humanities 105</b></p>
<p><b><u>A5 History</u></b>          Moderator: Cindy Forster          Ashley Achee          Chandra Dickey          Sierra McCormick          Vivienne Muller</p>	<p><b>Humanities 121</b></p>
<p><b><u>A6 Biology &amp; Science and Management</u></b>          Moderator: Patrick Ferree          Sasha Leibholz          Maureen Page          Hallie Byers          Aish Subramanian</p>	<p><b>Humanities 104</b></p>
<p><b><u>A7 Athletics</u></b></p>	<p><b>Humanities Courtyard</b></p>

**B Sessions – 11:00-12:00**

<p><b><u>B1 Latin American Studies &amp; Chican@/ Latin@ Studies</u></b>          Moderator: Rita Cano Alcalá          Elisa Gomez          Xitlaly Sanchez</p>	<p><b>Humanities 101</b></p>
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<b><u>B2 Economics</u></b> Moderator: Kerry Odell Aimee (Sam) Abrams-Widdicombe Nia Gillenwater Emily Long	<b>Humanities 119</b>
<b><u>B3 Biology</u></b> Moderator: Jennifer Armstrong Shravya Raju Michelle Ozaki Charlotte Startin Bethany Ho	<b>Humanities 104</b>
<b><u>B4 French Studies</u></b> Moderator: Eric Haskell Jinna Johnson Sarah Robertson Madison Welsh Lily Sprang	<b>Humanities 120</b>
<b><u>B5 Dance</u></b> Moderator: Ronnie Brosterman Ella Wilson Jacci Yin	<b>Humanities 105</b>
<b><u>B6 Anthropology &amp; Africana Studies</u></b> Moderator: Lara Deeb Lauren Burke Kinzie Mabon Nicole Rufus Lauren Silver	<b>Humanities 121</b>
<b><u>B7 Athletics</u></b>	<b>Humanities Courtyard</b>

**12:00-1:30 Malott Commons – taco bar for lunch, and chocolate bread pudding, strawberries and cream for dessert!**

**C Sessions – 1:30-2:30**

<b><u>C1 Feminist, Gender, and Sexuality Studies (FGSS)</u></b> Moderator: Jih-Fei Cheng Jing Gu Pamela Ng Melissa Montez Ashley Achee	<b>Humanities 119</b>
<b><u>C2 English</u></b> Moderator: Aaron Matz Noor Asif Devan Brett Kelly Alex Copp	<b>Humanities 120</b>

Miel Jasper Stephanie Steinbrecher	
<b><u>C3 Media Studies</u></b> Moderator: T. Kim-Trang Tran Nicole Zweiner Katie Marcus Reker Leah Snider	<b>Humanities 101</b>
<b><u>C4 Music</u></b> Moderator: Anne Harley Francesca Jimenez Melody Ko Ellen Pelos Madhuri Rao	<b>Balch Auditorium</b>
<b><u>C5 Art Conservation &amp; Art History</u></b> Moderator: Mary MacNaughton Abigail Rodriguez Erin Hoey Caroline Nelsen Caitlyn Marianacci	<b>Humanities 105</b>
<b><u>C6 Environmental Analysis/EPP &amp; Geology</u></b> Moderator: Branwen Williams Lizzie Medford Madeline Moulton Sarah Barnes Zoe Dilles	<b>Humanities 104</b>
<b><u>C7 Philosophy &amp; Sociology</u></b> Moderator: Dion Scott-Kakures Maura Duffey Corinna Fukushima Jennie Frishtick	<b>Humanities 103</b>
<b><u>C8 Politics</u></b> <b>Moderator:</b> Sumita Pahwa Reyna McKinnon Maryl Evans Isabel Smith Chiara Moore	<b>Humanities 121</b>

**D Sessions – 2:45-3:45**

<b><u>D1 Art</u></b> Moderator: Susan Rankaitis Noor Asif Chrysanna Daley Tiffany Goncalves Catherine Grace Poole Caroline Thomas Emily Wages	<b>Ruth Chandler Williamson Gallery</b>
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<p><b><u>D2 American Studies</u></b>  Moderator: Rita Roberts  Madeline Pierson  Jinna Johnson  Grace Dahlstrom</p>	<p><b>Humanities 120</b></p>
<p><b><u>D3 Chemistry</u></b>  Moderator: Anna Wenzel  Katie Liu  Mabel Kyinn  Leah Connor  Hannah Chia  Alexie Ogonowsky</p>	<p><b>Humanities 104</b></p>
<p><b><u>D4 Psychology</u></b>  Moderator: Jennifer Ma  Alynn Hembrough  Caroline Joyce  Kelley Ogami</p>	<p><b>Humanities 119</b></p>
<p><b><u>D5 Mathematics</u></b>  Moderator: Christopher Towse  Emma Cranston  Indra Kumar</p>	<p><b>Humanities 102</b></p>
<p><b><u>D6Physics</u></b>  Moderator: Stephen Naftilan  Emiliana Cofell  Ashley Gould  Katherine Tully</p>	<p><b>Humanities 103</b></p>

**3:45-5:00 Scripps Tea “Celebrating Our Seniors” Margaret Fowler Garden**

**5:00-6:00 Seniors vs. Faculty / Staff Soccer Game Tiernan Field**

- **Co-Captains Faculty & Staff:** Thierry Boucquey and Roberto Pedace
- **Co-Captains Students:** Tilly Barnett and Hallie Byers
- **Announcers:** Dorie Bailey and Katherine Goree
- **Student Roster:** Juliana Beall, Kaylee Anderson, Haley Godtfredsen, Kela Caldwell, Emily Long, Liza Ach, Sofie Thixton, Lily Comba, Cassie Go, Lizzie Medford, Maddie Pierson, Janet Uhlir, Tilly Barnett, Hallie Byers

## A Sessions

9:45-10:45

Session A1 Spanish

Humanities 101

Moderator: Marina Pérez de Mendiola

KAYLA LEMUS

Foreign Languages : French and Spanish

Advisor: Marina Pérez de Mendiola

Co-Advisor: Andrew Eisenberg

***Le roman graphique comme lieu propice pour repenser l'identité d'un point de vue postcolonial***

This thesis examines the potential of the graphic novel as a site for rethinking identity from a postcolonial perspective. Beginning with an in-depth analysis of comic theory, this thesis argues how the use of narration, as demonstrated through the interplay between text and image, highlights notions of masculinity, historical references, and memory in the graphic novels *Dois Irmãos* and *l'Arabe du Futur*, thus creating a space to reevaluate binary notions of identity.

EMILY LONG

Economics & Hispanic Studies

Advisor: Roberto Pedace

Co-Advisor: Jennifer Wood

***Economic Assimilation for Immigrants in Chile: An Employment Convergence Analysis***

Blending labor economics and migration studies, this thesis explores immigrants' economic assimilation in Chile, using probit models to test for employment convergence. With census data from 1992 and 2002, we find significant differences in the employment and labor force participation rates for different demographic groups, affected by the immigrants' gender, decade of arrival, and country of origin. Therefore, we recommend reevaluating the existing Chilean migration legislation to better ensure immigrants' economic integration in Latin America.

AIDA VILLARREAL-LICONA

Hispanic Studies

Advisor: Martha Gonzalez

Co-Advisors: Rita Alcalá and Marina Pérez de Mendiola

***"Pa'l Norte," "Sueño Americano" e "Ice El Hielo": Un análisis del video musical en el desmontaje de la retórica anti-inmigrante en los Estados Unidos***

This thesis is a case study of three music videos, "Pa'l Norte" by Calle 13, "Sueño Americano" by Los Rakas, and "Ice El Hielo" by La Santa Cecilia. Through critical analysis, it explores how the visual and lyric narratives of these works challenge anti-immigration rhetoric towards Latino immigrants in the United States in a post-9/11 context, as well as argues that they are vital in dismantling the dehumanizing and criminalizing language prevalent in mainstream discourse.

Moderator: Roberto Pedace

JULIANA BEALL

Economics

Advisor: Professor Flynn

Co-Advisor: Professor Dildar

***Akhuwat: Potential for a Sustainable Islamic Interest Free Microfinance Model***

This study will examine if Akhuwat provides a sustainable Islamic interest-free Microfinance model for potential poverty alleviation. This question is particularly complicated for an organization that relies so heavily on subsidies. Theoretical debates of sustainability and the recognition of donations, cross-market comparisons, and data from audit reports will validate Akhuwat's potential for long term sustainability. Analysis also highlights the discrepancies that plague this opaque industry.

ROSARIO BENNETT

Economics

Advisor: Roberto Pedace

Co-Advisor: Sean Flynn

***Like Daughter, Like Mother?***

***A Closer Look at School Policy Implications on Child & Adult Consumption Behavior***

This thesis seeks to understand how the Healthy, Hunger Free Kids Act of 2010, a policy that drastically changed the requirements of the National School Lunch Program in order to increase nutrition, improved health outcomes for children as well as adults. This paper conducts an empirical analysis of data from the California Health Interview Survey to understand the effects on food consumption of the policy on children and adults. Using theories from Behavioral Economics, the study hypothesizes that child and adult consumption of nutritious food increased following the implementation of this policy. The results of the empirical analysis do not entirely support the hypothesis that children's and adult's consumption of nutritious food increased. Food consumption is highly sensitive to a wide range of influences, and further empirical research accounting for these influences must be conducted to fully understand the potential benefits of public policy on health.

KATHERINE GOREE

Economics

Advisor: Roberto Pedace

***Battle of the Beds: The Economic Impact of Airbnb on the Hotel Industry in Chicago and San Francisco***

This thesis examines hotel room occupancy rates since the birth of Airbnb to determine whether the hotel industries of Chicago and San Francisco have been negatively impacted by the company, which is commonly thought to be a competitor of traditional hotels. The results of statistical analysis suggest that Airbnb has not had a significant negative impact on hotels in San Francisco, but has had a marginally significant negative impact in Chicago.

9:45-10:45

Session A3 Politics

Humanities 120

Moderator: Mark Golub

EMILIE HO

Politics and International Relations

Advisor: Mark Golub

Co-Advisor: Rivka Weinberg

***Can We Really Claim 'Full Responsibility'? The Problem With Luck Egalitarianism in a Luck-Pervasive World***

Luck egalitarianism calls for distribution or assistance when circumstances of disadvantage arise from bad luck that is independent of human influence. Disadvantages that can be traced back to individual choice, however, are left for the sufferer to bear. I argue that luck egalitarianism should be abandoned as a standard for determining whether a disadvantage should be addressed, because the assumption that there are instances of disadvantage completely attributable to individual choice is flawed.

CORINNA SVARLIEN

Politics

Advisor: Mark Golub

Co-Advisor: Vanessa Tyson

***The Influence of Economic Ideologies on U.S. K-12 Education Policy: Testing, Markets, and Competition***

Looking at the 2015 reauthorization of the Elementary and Secondary Education Act (ESEA) I examine the influence of economic ideologies on the policy. Scarcity and competition, free markets, and data collection and distribution shape the kinds of reform that are enacted. Although educational equity has long been a subject for government reports and journalism, the US has made limited progress in resource and outcome inequality. I argue that data based accountability will not fix this.

MIEL JASPER

Politics

Advisor: Mark Golub

***Beyond Dumbledore's Army: Making Space for Fan-Created Content as Fan Activism***

While many validate fan activism only when it engages with traditional political problems via traditional political means, I advocate for the validation of the cultural politics work done by fandom—of the purposefully transgressive narratives individuals create in defiance of typical cultural stories. I examine Harry Potter fanworks and the ways in which they place marginalized identities at center stage, as well as the misogyny and homophobia that underlie the stigmatization and belittlement of fanworks.

KELA CALDWELL

Politics and International Relations

Advisor: Mark Golub

Co-Advisor: Joseph Parker

***Warfare on the Conceptual Battlespace: Third Cinemas Transformation of War on Terror Discourse***

American popular film on the War on Terror plays a powerful role establishing cultural and political discourses surrounding the War on Terror. Furthermore, the attempts of liberal films as a source of critique of American Hollywood conservative War on Terror films are insufficient. I argue that Third Cinema from the Middle East provides a necessary counter-discourse by providing platforms for alternative discussions regarding definitions of terrorism and the production of the Orientalist other.

**9:45-10:45**

**Session A4 Neuroscience**

**Humanities 105**

**Moderator: John Milton**

AMANDA MCQUADE

Neuroscience

Advisor: Melissa Coleman

***Song maintenance in male zebra finches after lesioning auditory nuclei Avalanche or NIf***  
Zebra finches are one of the few species that, similarly to humans, use auditory feedback to learn and maintain their vocal communication. Understanding their neural connectivity helps scientists decode this complex and specialized process integral to the communication of our species. In this experiment, we examine the result of lesioning song-specific auditory nuclei, NIf or Av. We were surprised to discover neither lesion caused significant song degradation, suggesting a homeostatic mechanism in the song system.

SUMMER GERONON

Neuroscience

Advisor: Professor Coleman

Co-Advisor: Professor Spence

***The Relative Importance of Male Song in Mate Selection in the Zebra Finch (Taeniopygia guttata)***

Male zebra finch song has long been used in studies regarding mate selection. The relative importance of song was tested by observing the interactions between four males and one female. Songs were scored, and it was predicted that the male with the highest score for song would also be the most successful in mating interactions. However, this was not observed, and these experiments reveal that mate selection is the result of complex interactions.

HANNAH TAYLOR

Cognitive Neuroscience

Advisor: Michael Spezio

Co-Advisor: Rory Spence

***Are Coloring Books Really Just for Kids? Investigating Possible Effects of Specific Pattern Coloring on Conceptual, Physiological and Behavioral Aspects of Anxiety***

This study examined the role of specific pattern coloring on conceptual, behavioral and physiological measures of anxiety. Participants completed self-report surveys and were connected to electrodes and a respiration belt to measure HRV and RSA. Participants either free colored or colored a mandala. Results from both self-report and physiological data indicated that coloring did not significantly reduce anxiety however it is possible that further studies could produce significant results in support of specific pattern coloring.



REBECCA SHOPE & EMILIE FISHER

Neuroscience

Advisor: Dr. John Milton

***Stick Balancing Survival: Sensory Dead Zones, Transient Micro-Chaos, and Initial Angle***

This thesis investigates the control mechanisms used by the nervous system during voluntary visuomotor tasks, focusing on the paradigm of stick balancing on the fingertip. The existing mathematical model for this task incorporates a time delay and a sensory dead zone, therefore exhibiting transient micro-chaos and a dependence on initial conditions. The effects of initial angle on balance time were surveyed. This study demonstrates the ability of the model to replicate experimentally derived survival statistics.

**9:45-10:45**

**Session A5 History**

**Humanities 121**

**Moderator: Cindy Forster**

ASHLEY ACHEE

History

Advisor: Richard Olson

Co-Advisor: Andrew Aisenberg

***A Deconstruction of the Effects of Race, Gender, and Class in the Nineteenth Century British Asylum Complex***

This thesis will explore the intersectional construction of the British asylum network in the nineteenth century. It will look at gender, race, and class as factors in the diagnostic process, in addition to the confinement and treatment of the insane.

CHANDRA DICKEY

Politics and International Relations' History

Advisor: Rita Roberts

Advisor: Mark Golub

***Bridges Not Pedestals: Purpose, Reactions, And Benefits of Three Black Liberal Arts Institutions In Atlanta, 1880s-1920s***

By the late nineteenth century, white northern missionary societies established a several liberal arts institutions with the premise of educating African Americans. In Atlanta, three of these institutions, Spelman College, Morehouse College, and Atlanta University, were heralded for their liberal arts curriculums. In my thesis, I find that, instead of being the assimilatory institutions their white founders desired, the colleges were integral to improving the social, political, and economic status of African Americans.

SIERRA MCCORMICK

History

Advisor: Julie Liss

***"Blood on the Leaves": Lynchings, Police Murders, and the Narration of Racial Terrorism Against Black Bodies***

This thesis examines the similarities of early 20th century lynchings and more recent police murders. With a focus on narration, I argue that the white media similarly criminalizes, dehumanizes, and invisibilizes black victims in order to justify the acts and maintain white supremacy, fear, and social control over a marginalized and disenfranchised population. This

thesis aims to confront a legacy of continued racial violence and the white innocence discourse that suppresses mobilization.

VIVIENNE MULLER

History; Latin American & Caribbean Studies

Senior Thesis Advisor: Cindy Forster

Co-Advisor: April Mayes

***Bullydikes, Coon-Shouters and Struttin' Black Bottoms: Queer Women as the Center of 20<sup>th</sup> Century Black Diasporic Cultural Production***

One of the quintessential images of blues is the solitary Blues man who sings mournfully with his soulful guitar. However, these blues men were not the first ones to sell records. Instead, we have what are referred to in the history as Classic Blues Women. What has been left unsaid and underemphasized is their relevance as central actors in the production and dissemination of Jazz music and black diasporic culture.

**9:45-10:45**

**Session A6 Biology & Science and Management**

**Humanities 104**

**Moderator: Patrick Ferree**

ALEXANDRA LEIBHOLZ

Molecular Biology

Advisor: Dr. Patrick Ferree

Co-Advisor: Dr. Emily Wiley

***Investigating the chromatin basis of genome elimination caused by a selfish B chromosome in the jewel wasp *Nasonia vitripennis****

Classical genetics assumes all components of the genome function together harmoniously to maximize fitness of the organism. However, there are genetic elements that act 'selfishly' to gain transmission advantage at the expense of the organism. In a jewel wasp, an extra chromosome induces abnormal elimination of the paternal genome to facilitate its transmission. My work highlights that genome elimination in this system represents a unique chromatin basis that is distinct from other known elimination events.

MAUREEN PAGE

Biology

Advisor: Dr. Diane Thomson

Advisor: Angelita Ashbacher

***Effects of Nitrogen and Temperature on Floral Reward Quality in *Brassica rapa*.***

We examined the effects of simulated nitrogen deposition and temperature on nectar and pollen production in *Brassica rapa*. We found that plants grown at 29°C had triple the proportion of infertile pollen grains as plants grown at lower temperatures. However, we found no effect of nitrogen on flower, nectar, or pollen production. We conclude that future studies should investigate the effects and interactions of other climate drivers on floral reward quality for other angiosperms.

HALLIE BYERS

Science and Management: Biotechnology Track

Advisor: John Milton

Co-Advisor: Steven Casper

***Strategic Portfolio Optimization for a U.S. Hospital Network Segment***

This thesis project is a partnership with Hologic, Inc., a medical diagnostic company with strong positioning in molecular diagnostics and women's health. We are assessing Hologic's current positioning in acute care settings to determine the use case of various infectious disease diagnostic instruments. Using both primary and secondary research to define purchasing drivers of lab directors and menu patterns across the point of care market, we are framing potential market entry tactics for Hologic.

WARYA SUBRAMANIAN

Molecular Biology

Advisor: Melissa Coleman

Co-Advisor: Noah Gross

***The Na<sup>+</sup>/K<sup>+</sup>-ATPase Regulates Central Sensitization in a Rodent Model of Migraine***

This thesis examines the pathophysiology of migraine using NTG-triggered CS in rat models. We conducted studies that investigated the effects of inhibition of central NKA with a specific NKA inhibitor, ouabain, on the behavioral symptoms of NTG-triggered CS in rat models and the activation of neuronal circuits. We also attempted to investigate whether inhibition of endogenous ouabain-like components with DigiFab caused a similar behavioral response to that of NTG-triggered CS. We found that infusion of ouabain protects against NTG-triggered sensitization, and that infusion of DigiFab produced behavioral symptoms and neuronal activation similar to NTG-triggered CS, suggesting that modulation of endogenous ouabain-like compounds may play a role in triggering CS.

**9:45-10:45**

**Session A7 Athletics**

**Humanities Courtyard**

**B Sessions**

**11 am – 12 pm**

**Session B1 Latin American Studies  
& Chican@/Latin@ Studies**

**Humanities 101**

**Moderator: Rita Cano Alcalá**

ELISA GOMEZ

Chicanx/Latinx Studies

Advisor: Miguel Tinker Salas

Advisor: Martha Gonzalez

***Deconstructing Mexicanidad: How Mestizaje Excludes Morenos and Indigenas***

To challenge the dominant Mexican narrative of racial democracy that traditionally invisibilizes and delegitimizes those who have been affected by racism, it is imperative to deconstruct the discourse on mestizaje as a central component of Mexican national identity. The uncritical celebration of mestizaje needs to be supplanted with a reexamination of colonialism and capitalism, both of which influenced ideological theories and racial formation from the late sixteenth century through the twentieth century in the Americas.

XITLALY SANCHEZ

Latin American and Caribbean Studies and Sociology

Advisor: Cindy Forster

Co-Advisor: Roberta Espinoza

***Shifting Relations with Cuba Suggest the Start of a "New Chapter"—Or Do They?: Portrayal of Cuba in the New York Times, January 2014-July 2015***

The United States and Cuba restored diplomatic relations on July 20, 2015 after fifty-four years of political estrangement. How, if at all, did the representation of Cuba in The New York Times change after both countries announced this shift in December 2014? A qualitative content analysis of 117 articles reveal that the thaw in foreign relations did not produce a different portrayal of Cuba. Cuba continued to be characterized as an undemocratic, unfree government.

**11 am – 12 pm**

**Session B2 Economics**

**Humanities 119**

**Moderator: Kerry Odell**

AIMEE (SAM) ABRAMS-WIDDICOMBE

Economics

Advisor: Roberto Pedace

Co-Advisor: Yasemin Dildar

***The Impact of State-Provided Paid Family Leave on Wages: Examining the Role of Gender***

The U.S. is the only OECD country that does not offer any form of federal paid parental leave. Only three states—California, New Jersey and Rhode Island—have paid leave policies. Through regression analyses of the wages of childbearing age individuals in those states, we assess whether the programs effected wages, and whether these effects vary depending on gender; highlighting the lacking support for working parents, and offering recommendations to create more equitable and effective policies.

NIA GILLENWATER

Economics

Advisor: Sean Flynn

Co-Advisor: Roberto Pedace

***Why Are We Still Listening To This Dead British Guy: An Analysis of Emergency Liquidity Assistance in Germany During the Sovereign Debt Crisis***

This thesis investigates the usefulness of Walter Bagehot's recommendations for lenders of last resort (LLRs) in modern Germany. Specifically analyzing how two systemically important banks (Commerzbank and BayernLB) received emergency liquidity assistance (ELA). I conclude that Bagehot's recommendations are out of date. I also aim to empirically prove a stigma or public distrust of ELA but cannot.

EMILY LONG

Economics & Hispanic Studies

Advisor: Roberto Pedace

Co-Advisor: Jennifer Wood

***Economic Assimilation for Immigrants in Chile: An Employment Convergence Analysis***

Blending labor economics and migration studies, this thesis explores immigrants' economic assimilation in Chile, using probit models to test for employment convergence. With census data from 1992 and 2002, we find significant differences in the employment and labor force

participation rates for different demographic groups, affected by the immigrants' gender, decade of arrival, and country of origin. Therefore, we recommend reevaluating the existing Chilean migration legislation to better ensure immigrants' economic integration in Latin America.

**11 a.m. - 12:00 p.m.**

**Session B3 Biology**

**Humanities 104**

**Moderator: Jennifer Armstrong**

SHRAVYA RAJU

Molecular Biology

Advisor: Gretchen Edwalds-Gilbert

***The Role of Vacuolar H<sup>+</sup>-ATPases in Phenol Stress Response in *Saccharomyces cerevisiae****

Phenols are potentially dangerous compounds that are found in many common household items. We determined specific genes in the yeast vacuolar H<sup>+</sup>-ATPase that are key to resistance to three phenols, BPA, BHA, and BHT, and using fluorescence microscopy found that all three compounds caused vacuolar fragmentation. However, further studies are required to determine if this is due to osmotic stress and will elucidate the impact that prolonged exposure to these compounds will have.

MICHELLE OZAKI

Molecular Biology

Advisor: Zhaohua Irene Tang

Co-Advisor: Gretchen Edwalds-Gilbert

***Dsk1 and Kic1 Protein Kinases Affect Pre-mRNA Splicing of Important Cell Cycle Genes***

Kinases Dsk1 and Kic1 regulate pre-mRNA splicing and nuclear export in fission yeast. In addition, the kinases have been found to play important roles in cell cycle regulation. Is it possible that they regulate cell cycle by modulating pre-mRNA splicing? Preliminary results indicate Dsk1 and Kic1 affect splicing of the gene transcripts involved in cell cycle. We propose novel mechanism for the kinases functions' in the interplay between cell cycle regulation and pre-mRNA splicing.

CHARLOTTE STARTIN

Environmental Science

Advisor: Dr. Elise Ferree

Co-Advisor: Dr. Donald McFarlane

***The effects of light pollution on the foraging behavior of *Calypte anna* and *Selasphorus sasin****

This thesis examines the effects of artificial light on the timing of foraging in *Calypte anna* and *Selasphorus sasin*, two species of hummingbird native to Southern California. Using camera traps, we recorded feed timing at sites with high artificial light compared to dark, natural sites. We predicted that birds would feed earlier and later in the day at light sites, but determined that artificial light had no effect on the timing of foraging.

BETHANY HO

Biology

Advisor: Dr. Kevin Deane

Co-Advisor: Elise Ferree

***Subject Factors Associated with Anti-CCP Positivity in Rheumatoid Arthritis Health Fair Screening***

This thesis analyzed results from health fair rheumatoid arthritis (RA) assessments to identify subject factors that are significantly associated with the positivity of anticyclic citrullinated peptide (anti-CCP), an autoantibody frequently found in patients with or at high risk for developing RA. Given the association between anti-CCP positivity and the risk of developing RA, these characteristics could be used to prioritize testing certain subjects in health fair screens that are at high risk for developing RA.

**11 am – 12 pm**  
**Moderator: Eric Haskell**

**Session B4 French Studies**

**Humanities 120**

JINNA JOHNSON

American Studies, French Studies

Advisor: Thomas Koenigs

Co-Advisors: Bill Anthes, Claire Nettleton

*"Dans le pays des Hurons": Female Spirituality, French Jesuits, and the Huron nation in France and New France during the Seventeenth Century*

This thesis examines the relationship between French female Catholicism during the 17th century and representations of Huron women's spirituality in Relations des Jésuites. I argue that the nuances of French dévôte culture highlight the elevated status of women in Huron indigenous society. These portraits of Huron women by the Jesuits inspired French women to breach the cloister and become missionaries, resulting in newfound religious freedoms for dévôtes achieved through imperialistic efforts against the Huron nation.

SARAH ROBERTSON

French

Advisor: Eric Haskell

Co-Advisor: France Lemoine

*L'art et L'amour à Travers un Amour de Swann de Macel Proust*  
*(translated: Art and Love Through Marcel Proust's Swann in Love)*

Marcel Proust revolutionized the way that literature fuses with visual art. This thesis explores the intrinsic connection of painting and literature to love through Proust's treatment of Botticelli's fresco, Les Épreuves de Moïse. In expanding Proust's advice beyond the words of his novel, his guidance is universalized through further analysis of Gustav Klimt's famous painting, The Kiss. For Proust, art truly was a way of life, this thesis seeks to embody just that.

MADISON WELSH

French Studies & Politics/International Relations

Advisor: Mark Golub

Co-Advisor: Nathalie Rachlin

*Charlie Hebdo: The Politics of French Identity & Exclusion*

Following the 2015 terrorist attack on the offices of Charlie Hebdo in Paris, millions around the world defended the magazine's right to free speech by declaring "Je Suis Charlie." Offering an alternative angle to the ensuing discourse on free speech and hate speech, this thesis discusses narratives of French identity at play within the Je suis Charlie movement. What did it mean to declare oneself Charlie? Who was not Charlie, and why? These are the questions I seek to answer in my thesis by placing the event within the historical context of French Enlightenment, Revolution, and colonialism.

LILY SPANG

French Studies

Advisor: Nathalie Rachlin

Co-Advisor: Dalton Krauss

***L'Identité Déracinée: La Traduction de la Mémoire Culturelle dans l'Art de Zineb Sedira***

This thesis examines the element of translation and mediation in the transmission of cultural memory in the work of contemporary artist Zineb Sedira. Analyzing two installations, Mother Tongue and Mother, Father and I, this project argues that through the translation of the “irrepresentable” nature of uprooted identities, Sedira's work challenges a unidimensional conception of identity rooted in geographic singularity, undermining a mentality of exclusion that contributes to the marginalization of migrant histories and identities.

**11 am – 12 pm**

**Session B5 Dance**

**Humanities 105**

**Moderator: Ronnie Brosterman**

ELLA WILSON

Dance Movement Studies

Advisors: Kevin Williamson and Ronnie Brosterman

***Inner Connectivity and Outward Expressivity: A Phenomenological Investigation of Dancers' Psychological Experiences***

This thesis examines the psychological processes dancers experience while learning choreography through a phenomenological hermeneutic lens. By measuring a psychological experience of flow, the research identifies when dancers do or do not experience flow. Data was collected using the Event Experience Scale (FSS-2) and the Performance Competency Evaluation Measure (PCEM), as well as additional comments from the participants. This thesis challenges the notion that the psychological experiences of creating dance cannot be investigated qualitatively.

JACCI YIN

Dance (Movement Studies)

Advisor: Kevin Williamson

Co-Advisor: Joyce Lu

***Awakening the Mind-Body Connection: Yoga as Embodied Knowledge in the K-5 Curriculum***

In an attempt to address the disregard for holistic practices in much of Western culture and education, my thesis examines yoga in its content and methodology as an alternative learning strategy to banking instruction often used in current educational practices. Drawing from research based in the field of somatics and feminist/critical pedagogy, I present a yoga curriculum designed for K-5 students that supports bodily knowing and encourages the cultivation of self-/social awareness and empathy.

**11 am – 12 pm**

**Session B6 Anthropology & Africana Studies**

**Humanities 121**

**Moderator: Lara Deeb**

LAUREN BURKE

Anthropology and Science, Technology, and Society

Advisor: Lara Deeb

Co-Advisor: Laura Perini

***Computer Science Education at The Claremont Colleges:  
The Building of an Intuition***

In this thesis, I discuss how the undergraduate computer scientist is trained, and how they learn what I call computational intuition. Computational intuition describes the methodology in which computer scientists approach their problem solving using heuristics and trained judgement. I draw on the pedagogy of cognitive apprenticeship to understand the interactions between the professors, tutors, and other students to help learners gain an understanding of the “computer science intuition.”

KINZIE MABON

Anthropology

Advisor: Lara Deeb

***Making Community: Student Subculture and Cultural Variance in the Harvey Mudd College  
Inner Dormitories***

This thesis is a study of the student subculture at Harvey Mudd College and the practices of the inner dorms (North, South, East, and West) that work to reproduce and support the larger student subculture. Through observations and interviews with students at Harvey Mudd College, four shared values were identified and used to view the values, behaviors, and traditions of Harvey Mudd students both as a student subculture and as dorm communities.

NICOLE RUFUS

Africana Studies

Advisor: Lara Deeb

Advisor: Martha Arguello

***Moving Towards Home: An Exploration of Black American & Palestinian Solidarity***

This thesis is an exploration of the relationship between Black Americans and Palestinians. I trace the historical relationship between Black Americans and Israel/Palestine, as well as the relationships between Black Americans and American Jews and Black Americans and Arab Americans in order to show how Black Americans move from large, overwhelming support for Israel to solidarity with Palestine and the Palestinian people.

LAUREN SILVER

Anthropology

Advisor: Lara Deeb

Co-Advisor: Jih-Fei Cheng

***Alcatraz and the Contemporary Carceral Landscape: A Counter-Visual Analysis***

This thesis engages in a counter-visual ethnography, using Alcatraz as a site to examine the workings of U.S. memorialization practices and visuality, specifically regarding carcerality. In examining the U.S.’s most popular site of penal tourism, this ethnography aims to provide new



vantages to conceptualize Alcatraz in relation to the contemporary carceral moment. This is done in part by analyzing the processes of visibility through which hegemonic meanings of carcerality are circulated at the site.

11 am – 12 pm

Session B7 Athletics

Humanities Courtyard

**12:00-1:30 Malott Commons – taco bar for lunch, and chocolate bread pudding, strawberries and cream for dessert!**

### C Sessions

**1:30 pm – 2:30 pm Session C1 Feminist, Gender, and Sexuality Studies Humanities 119**  
**Moderator: Jih-Fei Cheng**

JING GU

Philosophy and Feminist, Gender, Sexuality Studies

Advisor: Jih-Fei Cheng

Co-Advisor: Dion Scott-Kakures

#### *Sensing Feminist Epistemology: A Formal and Material Analysis*

This project asserts the importance of alternative modes of knowledge production for feminist epistemology while implicitly critiquing universalized assumptions of standard epistemology. Following an overview, I elucidate the relational contingency between form and knowledge through a formal analysis. Additionally, I analyze the relationship between body, material, and knowledge. Theorizing along lines of relationality renders the limits of epistemology perceivable, a perception which can reconstitute how we know and what we can know.

PAMELA NG

Asian American Studies

Advisor: Warren Liu

#### *WTF is #modelminoritymutiny?: solidarity, embodiment, and practice in subverting ascribed Asian American racial positioning*

My project is divided into two components: a theoretical overview and case study, and a creative course syllabus. Utilizing historical and theoretical groundings, I engage with current discourse surrounding Asian American racial politics, representation, and organizing, in both mainstream media and within Asian American studies, to complicate and contextualize ideas of justice beyond insular identity politics. I complicate what it means to pursue #modelminoritymutiny, and the implications it holds within larger people of color organizing spaces.

MELISSA MÓNTEZ

Chicanx-Latinx Studies

Advisor: Dr. Martha Gonzalez

Advisor: Dr. Piya Chatterjee

#### *Let Your Panza Be Your Guide: Decolonizing Fat in Chicanx Art and Literature*

Through Chicana, queer, and fat studies, my research bridges a gap between Chicana feminist work and fat studies. I argue that *The Panza Monologues* and “Nature Self-Portrait #4” are sites of fat Chicana activism that call for body liberation, respond to the “normative body” required by a colonial legacy of symbolic and physical violence against Chicana women, and create possibilities for further creative artistic and literary work centered on fat Chicanas.

ASHLEY ACHEE

History

Advisor: Richard Olson

Co-Advisors: Andrew Aisenberg and Jih-Fei Cheng

*A Deconstruction of the Effects of Race, Gender, and Class in the Nineteenth Century British Asylum Complex*

This thesis will explore the intersectional construction of the British asylum network in the nineteenth century. It will look at gender, race, and class as factors in the diagnostic process, in addition to the confinement and treatment of the insane.

**1:30 pm – 2:30 pm**

**Session C2 English**

**Humanities120**

**Moderator: Aaron Matz**

NOOR ASIF

English

Advisor: Aaron Matz

Advisor: Michelle Decker

*Women Surrealists: Muses or Seekers?*

Surrealism has often been labeled as a misogynistic movement that limited and exploited women. Using the work of Leonora Carrington and Dorothea Tanning, I seek to show the ways in which Surrealist women dismantled patriarchal values and embraced their identity as of women and creators. In order to further my argument, I incorporate the research of scholars like Gloria Orenstein and Whitney Chadwick.

DEVAN BRETTKELLY

English

Advisor: Warren Liu

Advisor: Kimberly Drake

*The V Formation*

This thesis is a novelette which explores second-person narration, complex familial relationships, and grief. It questions what standards society sets for families, parents in particular, and what happens when your kin does not conform to these standards. As you grow older, how are you limited or how do you have agency in who constitutes your family?

ALEXANDRA COPP

English- Creative Writing Tract

Advisor: Kevin Moffett

*The Connection & We Learned It From the Birds*

My Thesis consisted of two short stories. In *The Connection* every person has an intangible red line protruding from their stomach connecting them to another person. Alice is a young detective

hired to track down these connections. The second story We Learned It From the Birds follows two men as they patrol JFK airport, shooting down any birds which might interfere with airspace.

MIEL JASPER

English

Advisor: Aaron Matz

Advisor: Michelle Decker

***Appropriating Austen: Pride and Prejudice and the Feminist Possibilities of Adaptation***

In this thesis, I discuss critics who seem to believe that adaptations that fail to adhere to a certain interpretation of Austen are disrespectful. *Pride and Prejudice* and *Zombies and the Lizzie Bennet Diaries* name this criticism and claim protection from it. Nevertheless, claiming to be feminist adaptations cannot shield them from scrutiny, especially since these adaptations fall short of feminist possibilities and of feminist engagement with the spaces in which they place themselves.

STEPHANIE STEINBRECHER

English

Advisor: Michelle Decker

Advisor: Thomas Koenigs

***The Philosophy of Ecology in John Steinbeck's The Grapes of Wrath***

This thesis explores ecocritical interpretation of John Steinbeck's *The Grapes of Wrath*. I contend that Steinbeck's emphasis on social justice contains philosophical principles of environmental justice. This narrative's Judeo-Christian spirituality and humanistic discourse expand collectivism and compassion beyond the social order to include the broader ecological community. The novel makes a single narrative of the natural and human worlds and considers attitudes towards human and non-human others; it thereby both enacts and represents an ecologically-minded ethic.

**1:30 pm – 2:30 pm**

**Session C3 Media Studies**

**Humanities 101**

**Moderator: T. Kim-Trang Tran**

NICOLE ZWIENER

Media Studies (Digital/Electronic)

Advisor: T Kim-Trang Tran

***One in Four***

*One in Four* is an ad campaign targeted at raising awareness of on-campus sexual assault and the effects that assault has on survivors. This ad campaign will include testimonies of survivors of sexual assault within the Claremont Colleges. This thesis will explore how marketing strategies, such as, social norms marketing, has the potential to change the audiences behavior in relation to their peers' behavior. It will also explore the work of the Guerrilla Girls and Barbara Kruger.

KATHERINE BETH MARCUS REKER

Media Studies

Advisor: T. Kim-Trang Tran

Co- Advisor: Mark Andrejevic

***“Why Can’t Run ‘Like a Girl’ Also Mean Win The Race?”: Commodity Feminism and Participatory Branding as Forms of Self-Therapy in the Neoliberal Advertising Space***

This thesis proposes a critical study of commodity feminist advertising, particularly marketing campaigns that appropriate feminist ideology to sell empowerment through the use of the “young girl” as a symbol of the feminist cause. These campaigns aim to develop brand loyalty by prompting consumers to believe that their purchases can make significant social change, when in actuality, these “feminist” purchases are simply forms of consumer self-therapy in a modern socio-political climate of systemic gender discrimination.

LEAH SNIDER

Media Studies

Advisor: T Kim-Trang Tran

Co-Advisor: Sarah Gottesdiener

***To Fill the Void With Color***

This thesis conveys a parent’s experience raising an autistic child in the late 1980’s their autistic child’s view of the world. Despite major scientific advances in autism of the time, there still remains a sociological void in parent’s experiences. Although one work cannot speak for two decades of personal experience, this thesis aims to start to fill the void with words, color and understanding.

**1:30 pm – 2:30 pm**

**Session C4 Music**

**Balch Auditorium**

**Moderator: Anne Harley**

FRANCESCA JIMENEZ

Music

Advisor: Cynthia Fogg

Co-Advisors: David Cubek, Rachel Huang

***Senior Recital, Viola***

This senior recital showcased the viola performing skills of Francesca Jimenez through works from the baroque, classical, romantic, and contemporary time periods. The program included Suite No. 3 in C Major by Johann Sebastian Bach, Divertimento by Joseph Haydn, From My Garden by Ursula Mamlok, and Piano Quartet No. 3 in C Minor Op. 60 by Johannes Brahms. Other musicians featured include Stephan Moss, Matthew Bae, Anya Kwan, and William Wang.

ELLEN PELOS

Psychology and Music

Advisor: Jennifer Ma

Co-Advisor: Anne Harley

***The Influence of Advertisement Music on Gender Identity and Sex Stereotyping in Young Girls***

This proposed study investigates whether manipulating pitch and tempo in children’s toy advertisement music has an effect on gender identity and sex stereotyping in preschool-aged girls. Nine experimental conditions are proposed that have different pitch and tempo manipulations. Higher pitch and faster tempo are expected to facilitate the effects of persuasive gender messages and be associated with heightened stereotypical gender identity and sex stereotyping in participants.

MADHURI RAO  
Music (Composition)  
Advisor: Bill Alves  
Co-Advisor: David Cubek

***Senior Composition Recital***

This thesis is a presentation of several musical compositions, featuring works for strings, winds, Carnatic violin, Carnatic voices, and prepared piano. This recital presents Carnatic elements incorporated with Western Art music traditions in a novel way, serving as a commentary on orientalism in Western Art music and as a nod to the dualities of the Indian-American identity.

**1:30 pm – 2:30 pm          Session C5 Art Conservation & Art History          Humanities 105**  
**Moderator: Mary MacNaughton**

ABIGAIL RODRIGUEZ  
Art Conservation  
Advisor: Frances Pohl

***Playing With Fire: An Examination of the Context and Conservation of Jose Clemente Orozco's Prometheus***

This research looks at Jose Clemente Orozco's Prometheus, the Mexican muralist's first work in the United States. The fresco, situated in Frary Hall on the campus of Pomona College, was created in 1930. Over the past 86 years, the mural has been subjected to many instances of vandalism and general neglect by students. This thesis examines the role of conservation in the process of reactivating the mural and promoting discussions about the preservation of this cultural treasure.

ERIN HOEY  
Art Conservation  
Advisor: Professor Michelle Berenfeld  
Co-Advisor: Professor Eric Doehne

***Out of Site, But Not Out of Mind:***

***The Conservation and Display of Ancient Roman Floor Mosaics In Situ and in Museums***

This thesis explores how ancient Roman floor mosaics have been treated and conserved since the early 1800s. What is the best way to preserve both the original material and its architectural context?

CAITLYN MARIANACCI  
Art History  
Advisor: Mary MacNaughton  
Co-Advisor: George Gorse

***Old Masterpieces, New Mistress-pieces: Cindy Sherman's Reinterpretations of Renaissance Portraits of Women***

This thesis examines eight photographs by contemporary American artist, Cindy Sherman that are part of her History Portraits, a series of photographic reinterpretations of portraits of European history. As a late twentieth-century female artist reimagining portraits of women by male artists of the Renaissance, Sherman subverted the idealization of the paintings with

humorous and grotesque distortions to reveal the suppression of women and return power and individuality to the female subjects of the paintings.

**1:30 pm – 2:30 pm**

**Session C6 Environmental Analysis/EEP  
& Geology**

**Humanities 104**

**Moderator: Branwen Williams**

ELIZABETH MEDFORD

Environmental Analysis

Advisor: Dr. Thomson

Co-Advisor: Dr. Thines

***Using Cleaved Amplified Polymorphic Sequence (CAPS) Genetic Markers to Determine the Extent of Hybridization between *Castilleja affinis* and *Castilleja mollis* as a Mechanism for Adapting to Climate Change on Santa Rosa Island***

The California Channel Islands are a biodiversity hotspot with high levels of endemism. Climate change is one threat to biodiversity. Hybridization may be occurring between *Castilleja mollis* and *Castilleja affinis* in response to climate change on Santa Rosa Island. For this project I have developed a cleaved amplified polymorphism (CAPs) marker to differentiate between the two species and hybrids. After processing many samples, records will be connected with genotypes to determine population trends.

MADELINE MOULTON

Physics

Advisor: Branwen Williams

Co-Advisor: Diane Thompson

***Assessing variability between gridded marine products through building a proxy system model of algal  $\delta^{18}O$  at Attu Island***

Encrusting coralline algae can live for hundreds of years and have a solid skeleton that develops annual growth bands which can be used to reconstruct past climate.  $\delta^{18}O$  data measured in the algal skeleton can be used as a proxy for sea temperature, but must be calibrated against measured sea temperatures. Using sea temperature data sets to develop a “pseudo algal” record of  $\delta^{18}O$ , the impact of variability between datasets on climate models is assessed.

SARAH BARNES

Major: Biology

Sr. Thesis Advisor: Branwen Williams

Co-advisor: Sarah Gilman

***Stable Isotopes ( $\delta^{13}C$  and  $\delta^{15}N$ ) in Two Depth-Segregated Species of Deep-Sea Gorgonian Octocorals from the Eastern Pacific***

Changes in  $^{13}C:^{12}C$  and  $^{15}N:^{14}N$  ratios across the growth rings of coral skeletons record changes in surface water nutrient sources with time. Here, interspecies and depth variability in coral records of nutrient sources were studied using  $\delta^{13}C$  and  $\delta^{15}N$  analysis. Results indicate that *Acanthogorgia* sp. and *Eugorgia rubens* in the Channel Islands feed on suspended marine particulate organic matter and suggest either increasing nitrate use by phytoplankton or decreasing available nitrate due to reduced upwelling.

ZOE DILLES

Geology

Advisor: Jade Star Lackey (Pomona)

***Geochronologic and Petrologic Context for Deep Crustal Metamorphic Core Complex Development, East Humboldt Range, Nevada***

The East Humboldt Range is a metamorphic core complex in Northeastern Nevada exposing some of the deepest continental crust in North America. It affords a rare look into long-lived processes of continental evolution including magmatism, mountain-building events, and extensional tectonics. Field mapping of complex, outcrop-scale relationships between metamorphic rock units was paired with radiometric dating of zircon crystals to understand the early ductile development of the range and its exhumation history.

**1:30 pm – 2:30 pm**

**Session C7 Philosophy & Sociology**

**Humanities 103**

**Moderator: Dion Scott-Kakures**

MAURA DUFFEY

Philosophy

Advisor: Rivka Weinberg

Co-Advisor: Yuval Avnur

***The Non-Identity Problem: Finding a Narrow-Person-Affecting Solution to a Narrow-Person-Affecting Problem***

The non-identity problem is the problem of explaining our intuition that certain procreative acts, which lead to a future person's otherwise worthwhile existence, are morally wrong. In this thesis, I argue against solutions proposed by Derek Parfit, Elizabeth Harman, and Justin McBrayer. I argue in favor of a narrow-person-affecting solution to the non-identity problem which explains the moral wrong done to the future person in terms of violation of their rights.

CORINNA FUKUSHIMA

Bioethics; Biology

Advisor: Professor Rivka Weinberg

Co-Advisor: Professor Dion Scott-Kakures

***Autonomy and Distributive Justice at the End of Life***

Discussions of autonomy at the end of life is no new phenomenon. However, issues of autonomy in health care seem to have shifted to cases where patients demand more treatment when medical professionals may not agree or be able to provide them with the medical treatment. Some key competing interests impacting patient autonomy include beneficence and resource limitations. Here, I explore distributive justice theories that impact patient autonomy at the end of life.

JENNIE FRISHTICK

Sociology (Pitzer)

Advisor: Phil Zuckerman (Pitzer)

***Liberal Arts, Religion, and Irreligion: A Cross-Sectional Analysis of Student Religiosity and Secularity at the Claremont Colleges***

This study uses data from an online survey addressing students' (ir)religious affiliations, beliefs, and practices to measure levels of religiosity and secularity among students at the Claremont

Colleges. The results show that the Claremont Colleges sample population is much less religious than the U.S. as a whole, underlining the shifting religious landscape in the U.S. and the significance of the young adult population in the current trends.

**1:30 pm – 2:30 pm**

**Session C8 Politics**

**Humanities 121**

**Moderator: Sumita Pahwa**

REYNA MCKINNON

Politics and International Relations

Advisor: Nancy Neiman Auerbach

Co-Advisor: Cindy Forster

***Indigenous Rights Policy and Terrorist Discourse: A Strategy to Stifle Mapuche Self-Determination in Chile***

This thesis attempts to disentangle to the modern Chilean government's contradictory treatment of the Mapuche indigenous people. Despite the government's human rights rhetoric, it continues to violently punish Mapuche activists who protest logging corporations' presence on their ancestral land as part of their struggle to gain self-determination as an indigenous people. I found that, in an effort to protect corporate profitability, President Sebastián Piñera used policy and discourse to delegitimize Mapuche demands for self-determination.

MARYL EVANS

Politics and International Relations

Advisor: Thomas Kim

Co-Advisor: Gary Gilbert

***The Divided People: How Perceptions of Israel Influence Jewish American Political Party Identification***

This thesis employs logistic regression analysis to assess the likelihood that Jewish American respondents identify as Republicans or Democrats based on four measures of Jewish American perception of Israel. The analysis indicates that Jewish American respondents who express emotional attachment to Israel, disapprove of Barack Obama's handling of United States policy toward Israel, encourage increased United States support of Israel, or positively perceive the Israeli government are more likely to identify as Republicans.

ISABEL SMITH

Politics and International Relations

Advisor: Thomas Kim

Co-Advisor: Vanessa Tyson

***Did the Curtailing of the "Stop, Question, and Frisk" Policy Lead to An Increase in New York City's Homicide Rate in 2015?: An Examination of the Relationship Between Stop-and-Frisk and Violent Crime Rates***

During the first two months of 2015, the homicide rate in New York City spiked by 20% as compared to the same period in the previous year. Reports of this increase sparked a media frenzy in the city, with news outlets and political elites claiming without evidence that the repeal of stop-and-frisk the year before had led to this latest "crime wave." In this article, I examine statistical data culled from the New York Police Department's extensive reports on both the city's crime rates and the numbers of stops conducted by law enforcement officers to assess



whether or not there is any relationship between implementation of stop-and-frisk and the homicide rate. Historical crime data suggests that there is no discernible relationship between the number of stops conducted per year and the annual homicide rate in New York City. Additionally, national crime statistics confirm that the homicide rates in many cities across the United States increased in the early months of 2015, suggesting this spike was part of a national trend.

CHIARA CELESIA MOORE

Politics and International Relations

Advisor: Nancy Neiman Auerbach

Advisor: Sue Castagnetto

***The War on Drugs and Public Safety Realignment in California: Shifting Incentives, Persistent Problems***

This thesis examines AB 109, “Public Safety Realignment”, enacted in California in 2011 to address the SCOTUS mandate to reduce overcrowding in California’s prisons. Though California’s prison population declined considerably in 2011 and 2012, the CDCR estimated that state prison population would increase by more than 10,000 inmates by 2018. This thesis suggests that Realignment failed to deliver groundbreaking reform due misaligned incentives and prosecutorial and policing power at the county level.

## D Sessions

**2:45 pm –3:45 pm**

**Session D1 Art**

**Ruth Chandler Williamson Gallery**

**Moderator: Susan Rankaitis**

NOOR ASIF

Art

Advisor: Susan Rankaitis

Co-Advisor: Kasper Kovitz

***Understanding Post-Colonial South Asian Communities Through Bollywood//Love, Dust, and Darkness in Lahore***

I have created a series of paintings about my time in Lahore, a city that is now in a state of deterioration. I seek to reflect on the state of being that occurs when the electricity would go out throughout the day. I hope these paintings capture the essence of nostalgic love and sadness, both of which run deep in the minds of Lahore’s people.

CHRYSANNA DALEY

Art

Advisor: Susan Rankaitis

Co-Advisor: Adam Davis

***The Ceramic Body: Concepts of Violence, Nature, and Gender***

This thesis aims to question the Western personification of “Mother Nature” while exploring the similar forms of violence both women and the environment have endured throughout history. My mixed media sculpture entreats the viewer to challenge the stereotypical iconography of a passive, nurturing "earth goddess" and respond to the injuries both women and nature are

sustaining as a result of this association, the current sociopolitical system, and the institutions that support it.

TIFFANY GONCALVES

Art

Advisor: Susan Rankaitis

Co-Advisor: Ken Gonzales-Day

***A Personal Navigation of the In-Between***

Through a series of ninety-six dark room prints, I explore concepts of mixed race identity and the microaggressions accompanied with this experience. Beginning with colored drawings, I portray various images from my Argentine, Portuguese, Mexican and American identity and cultures. I later remove color and simply remain in grey scale, representing the varying levels of the multiracial experience. This multimedia instillation covers a variety of my personal experiences, including microaggressions, confusion, in-betweenness and personal development.

GRACE POOLE

Studio Art

Advisor: Susan Rankaitis

Co-Advisor: Ken Gonzales-Day

***Dissociative Anonymity:***

***Performative Photography and the Use of Uncanny Disguise***

Costumes offer a safe space: a place of refuge and protection from difficult feelings and parts of a complex identity. A costume allows one to create a character. A character that separates itself from the external self they present to the world. This creature-like character allows them to perform parts of themselves they would otherwise keep hidden.

Through this series, I aim to explore the ways in which I can perform parts of my identity by hiding my body or obscuring my physical presentation through the use of performative disguises. Each character is created using materials (grass, pantyhose, rope, fake fur and burlap) that evoke the memory of certain experiences or specific feelings where in which I wanted to seek refuge from feelings of isolation, loneliness, etc.

CAROLINE THOMAS

Art

Advisor: Susan Rankaitis

Co-Advisor: Ken Gonzales-Day

***Performing the Uncanny:***

***An Exploration of Self Through Alternate Process Photography***

This thesis considers how the tradition of self-portraiture and alternative process photography can be used in conjunction with one another to perform the uncanny. Hal Foster defines the uncanny as “the return of the familiar made strange by repression.” In this work, I use this intersection between self-portraiture and alternate process to distort and complicate formalistic images of my body. My exploration of alternative processes includes instant film, cross processing, color film and multiple exposures. This series developed into not only a performance but a true exploration of self. Performing in front of my camera gave me a new sense of agency within my work.

EMILY WAGES

Art & Psychology

Advisor: Susan Rankaitis

Co-Advisor: Kasper Kovitz

***Boundless: Macro Self-Portraiture and the Feminine Grotesque***

Oil paintings of details of my body fragment and distort the natural into grotesque absurdity and ugliness. The images focus on the mouth, due to its complicated nature as sexualized yet functional for speech and consumption. Magnification and fragmentation reference the insufficient representation of female bodies art historically and in contemporary media. Viewers' disgust questions the politics of how beauty standards are established and whether beauty is a valuable concept when judging the female form.

**2:45 pm –3:45 pm**

**Session D2 American Studies**

**Humanities 120**

**Moderator: Rita Roberts**

MADELEINE PIERSON

American Studies

Advisor: Professor Rita Roberts

Co-Advisor: Professor Julia Liss

***A Model For Empowerment: Lugenia Burns Hope's Community Vision Through the Neighborhood Union***

This thesis examines reformer Lugenia Burns Hope and her community organization, the Neighborhood Union, as a case study to unpack scholarly characterizations of the early 20th century black elite. Hope's vision of democratic communities that diminished class barriers and the Union's multi-class leadership structure provide a counter narrative to characterizations of the black elite as paternalistic, or engaging in respectability politics. Hope's work also challenges narratives of the Progressive Era and the Social Gospel movement.

JINNA JOHNSON

American Studies, French Studies

Advisor: Thomas Koenigs

Co-Advisors: Bill Anthes, Claire Nettleton

***"Dans le pays des Hurons": Female Spirituality, French Jesuits, and the Huron nation in France and New France during the Seventeenth Century***

This thesis examines the relationship between French female Catholicism during the 17th century and representations of Huron women's spirituality in Relations des Jésuites. I argue that the nuances of French dévôte culture highlight the elevated status of women in Huron indigenous society. These portraits of Huron women by the Jesuits inspired French women to breach the cloister and become missionaries, resulting in newfound religious freedoms for dévôtes achieved through imperialistic efforts against the Huron nation.

GRACE DAHLSTROM

American Studies

Advisor: Victor Silverman

Co-Advisor: Susan Castagnetto

***The War on Drugs: Competing Ideologies of Libertarianism, Racial Control, and Rational Choice***

This thesis examines the underlying ideologies present in the debate over the drug war. Based on oral histories, there are three key ideological frameworks. First is Libertarianism, which argues the federal government should not impinge upon civil liberties to punish the consensual use or dealing of drugs. Second is racial control, which argues drug arrests are based on race. Third is rational choice, which argues that drug involvement is a crime that must be punished.

**2:45 pm –3:45 pm**

**Session D3 Chemistry**

**Humanities 104**

**Moderator: Anna Wenzel**

KATHERINE LIU

Chemistry

Advisors: William Gelbart & Charles Knobler, UCLA

***Synthesis of fluorescent poly(U) for studies of self-assembly of virus-like particles***

Viral and non-viral RNA molecules are packaged by viral capsid protein with different efficiencies depending on many properties, including their secondary-structure- determined 3D size. To test the dependence of packaging efficiency on the presence and absence of base-pairing interactions, we synthesized fluorescently labeled, viral-length poly(U). In competition experiments between RNA1 of the Brome mosaic virus and poly(U) of equal length, it is found, surprisingly, that poly(U) appears to be packaged with three times the efficiency.

MABEL KYINN

Biochemistry

Advisor: Mary Hatcher-Skeers

Co-Advisor: Aaron Leconte

***Analyzing Line Width Data to Determine Patterns in B-DNA Structure and Dynamics for Ideal Drug Binding: A Preliminary Study with CreACAG***

The purpose of this thesis is to continue an ongoing project in the Hatcher-Skeers lab that studies DNA-drug binding and specifically aims to identify trends in backbone structure and dynamics for ideal drug binding. Structure and dynamics are characterized by the fluctuations of the backbone between the BI to BII sub-states. This study finds that dinucleotide effects may be insufficient for studying structure and dynamics, and perhaps tetranucleotide effects provide a better characterization.

LEAH CONNOR

Biochemistry

Advisor: Kathleen Purvis-Roberts

***Particulate matter formation in response to alcohol amine and reduced sulfur-alkyl amine reactions***

Gaseous amines from industry and agriculture are increasingly prevalent and can form particulate matter. Experiments were carried out in an environmental chamber to probe the products of an alcohol amine or an amine with a reduced sulfur compound and an oxidant. Particle-into-liquid sampler- dual ion chromatography was utilized to determine the products and their concentrations.

The most PM formed during reactions with nitrate at increased humidity, including 9,867  $\mu\text{g}/\text{m}^3$  trimethylamine and 1,998  $\mu\text{g}/\text{m}^3$  ammonium.

HANNAH CHIA

Chemistry

Advisor: Dr. Aaron Leconte

***Engineering Taq Polymerase I Recognition of Modified Substrates***

This study examines whether three previously evolved Taq polymerase enzymes (AA40, SFM19, and SFR3) recognize a greater range of 2'-modified nucleotides than previously described, and additionally utilizes rational design to improve the enzymes' abilities to generate longer polymers with unnatural nucleotides.

**2:45 pm –3:45 pm**

**Session D4 Psychology**

**Humanities 119**

**Moderator: Jennifer Ma**

ALYNN HEMBROUGH

Psychology

Advisor: Jennifer Ma

Co- Advisor: Stacey Wood

***“Just Because I’m an Only Child Doesn’t Mean I Can’t Have Siblings:” Psychological Kinship Within Social Support Networks***

This research primarily examined the differences between individuals who are only children and individuals who have siblings in their formation of social support networks. Results indicated that while only children did not match people with siblings in their levels of social support and resilience, they did report experiencing equal amounts of psychological kinship. Overall, psychological kin relationships appear to be an important aspect of social support networks and therefore meaningfully contribute to one’s resiliency.

CAROLINE JOYCE

Psychology

Advisor: Stacey Wood

Co-Advisor: Alan Hartley

***The Role of Chronic Sugar Consumption as a Moderating Variable on Acute Sugar Consumption and Aspects of Executive Function***

This study examines the effect of both acute and chronic sugar consumption on executive function (EF). It was hypothesized that acute and chronic sugar intake would predict scores on measures of aspects of EF. Neither acute nor chronic sugar consumption predicted EF. This effect was not changed by including chronic sugar consumption as a moderating variable upon acute sugar consumption and EF. This research provides greater evidence about what effect sugar consumption has on EF.

KELLEY OGAMI

Psychology

Advisor: Michael Spezio

Co-Advisor: Jennifer Ma

***Persuasion in the Health Field: Framing the Message for Attitude Change***

The aim of this thesis was to understand how psychological persuasion can be most effectively applied to health communication. To address this question, the study manipulated aspects of a persuasive message to affect the likelihood of attitude change and behavioral intent. The research found that certain combinations of message framing, intervention target, and verb mood in a persuasive appeal could influence individuals' cognitions, attitudes, and behavioral intentions with regard to the health issue of hypertension.

**2:45 pm –3:45 pm**  
**Moderator: Christopher Towse**

**Session D5 Mathematics**

**Humanities 102**

EMMA CRANSTON

Mathematics

Advisor: Lenny Fukshansky

Co-Advisor: Christopher Towse

***NP- Hard Lattice Problems and their Cryptographic Applications***

This paper is a literary review of NP-hard lattice problems, their solutions, and the associated properties of lattices. We will first discuss the definition of a lattice and its properties; then we will delve into the NP-hard Shortest Vector and Closest Vector Problems and approximations of their solutions. Finally, we will discuss specific applications of lattice problems, focusing mainly on cryptography and optimization problems.

INDRA KUMAR

Mathematics

Advisor: Christopher Towse

***Graphical Applications of Complex and Quaternionic Fractional Linear Transformations***

The geometric properties of the complex numbers and the quaternions, particularly their behavior under fractional linear transformations, make them very useful for modeling certain types of geometric objects. In this thesis, we will connect the characteristics of fractional linear transformations to the problem of developing and modifying discrete surfaces for problems in computer graphics and engineering.

**2:45 pm –3:45 pm**  
**Moderator: Stephen Naftilan**

**Session D6 Physics**

**Humanities 103**

EMILIANA COFELL

Physics

Advisor: Professor David Tanenbaum

Co-Advisor: Professor Scot Gould

***Laser Interference Lithography for Plasmonic Solar Cells***

Thin film solar cells are a promising, inexpensive alternative to traditional silicon wafer cells. However, thin film cells still lag behind traditional cells in efficiency. To address this, plasmonics research focuses on directing light into the solar cell by the addition of metal nanoparticles. I investigated the method of Interference Lithography (IL) to create these nanoparticles. I created a micron-scale grid on samples which can later be tested on the surface of solar cells.

ASHLEY GOULD

Physics

Advisor: Professor Melissa Coleman

Co-Advisor: Professor Adam Landsberg

***Analysis of Neural Synchrony in the Zebra Finch Brain***

This analysis investigated synchronization between areas in the zebra finch brain with known synaptic connects by comparing distilled spike data from simultaneous recordings of two nuclei, including spontaneous and song-stimulated activity. Comparing HVC with Nif and Av showed clear synchrony with non-zero delays. Comparing left and right HVCs and HVC with MMAN did not demonstrate synchronization. In conjunction with prior work, this suggests that MMAN provides weaker input to HVC than either Nif or Av.

KATHERINE TULLY

Physics

Advisor: Adam Landsberg

***Evaluation of a novel random spatial network model for utility in modeling edge correlations***

Many random network models ignore spatial characteristics and solely consider topological qualities. Topological characteristics of the model relate to the nodes and the edges, while spatial characteristics also consider spatial locations of nodes. Edge correlation is one spatial metric that assesses spatial correlation along edges. This project introduces and evaluates the utility of a novel random network model that combines proximity based edge probabilities and a shortened distance measurement method to create edge correlations.

**3:45 p.m. – 5 p.m.      Scripps Tea “Celebrating Our Seniors”      Margaret Fowler Garden**

**5 p.m. – 6 p.m.      Seniors vs. Faculty / Staff Soccer Game      Tiernan Field House**

**Co-Captains (Faculty & Staff):** Thierry Boucquey and Roberto Pedace

**Captain (Students):** Tilly Barnett and Hallie Byers

**Announcers:** Dorie Bailey and Katherine Goree

**Student Roster:** Juliana Beall, Kaylee Anderson, Haley Godtfredsen, Kela Caldwell, Emily Long, Liza Ach, Sofie Thixton, Lily Comba, Cassie Go, Lizzie Medford, Maddie Pierson, Janet Uhler, Tilly Barnett, Hallie Byers