arts & sciences

2014

ROBYN RAFFERTY MATHIAS
STUDENT RESEARCH CONFERENCE

Katzen Arts Center | 9 AM-5 PM | March 29
SESSION ONE | 9:00-10:30 AM

Art Beyond the Works Themselves
The Meaning Behind the Words
Rationality, Substance, and Emotion
The Science of Life
Wind and Waves

MORNING POSTER SESSION
9:00-11:30 AM
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BREAK | 10:30-10:45 AM

SESSION TWO | 10:45 AM-12:15 PM

Authors and Language
Health and Environment
It’s Beautiful, But What Does it Mean?
The Meaning Behind Plays, Films, and Music
Signals, Space, and Energy

LUNCHEON | 12:30-1:30 PM

AFTERNOON POSTER SESSION
12:45-3:45 PM
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SESSION THREE | 1:45-3:15 PM

Born in the USA
Humans Behaving Badly
Making it Work Better
Performance
Princesses and Feminism
Race in Media

SESSION FOUR | 3:30-5:00 PM

Gender and Sexuality
How Money Affects Us
Learning from Foreign Cultures
Politics and Policy
The Role of Race
SESSION ONE | 9:00-10:30 AM

Art Beyond the Works Themselves (Katzen 151)
Chair: Professor Helen Langa, Art

Johannes Vermeer: the Camera Obscura, Control, and Clarity
Becca Ljungren, Senior, Art History

Politics of Space in the Venetian Church of San Salvador
Jill Oakley, MA Candidate, Art History

Depicting Motion: Figurative Art vs. Static Art
David Salgado, Junior, Studio Art & Communication Studies

Composition and Geopolitical Readings of Andrea del
Verrocchio's Christ and Saint Thomas at the Orsanmichele
Gennie Stegner-Freitag, Junior, Art History

Grace Hartigan: Identity and the Artist
Rachel Thornton, MA Candidate, Art History

The Meaning Behind the Words (Katzen 123)
Chair: Professor Jonathan Loesburg, Literature

If You Wanna Be My Lover: Margaret Cavendish’s Capacious
Vision of Compassionate Marriage
Buddy Cassidy, MA Candidate, Literature

Misery Meets the Ideal: Suicide and the Roman Dream in Victor
Hugo’s Les Miserables
Megan Fraedrich, Senior, Literature

Disjointed Time and Experience: A Simulacrum of Simulacrum’s of
“Truth”
Christina Geissman, Senior, Literature

Inclusion Through Exclusion: The Gossip Narrative in Toni
Morrison’s Jazz
Michelle Merica, Senior, Literature & Journalism

The Representation of the Caribbean in Kingdom of this World
Daniela Mojica, MA Candidate, Spanish: Latin American Studies
SESSION ONE | 9:00-10:30 AM

Mothers and Monsters: Monstrosity as Performance in Angela Carter's *The Bloody Chamber*
Emily Olsen, Senior, Literature

*Rationality, Substance, and Emotion (Katzen 115)*
Chair: Professor Jin Park, Philosophy and Religion

The Walls That Contain Me: The Paradox of the Self In *We* and *Brave New World*
Kaylee Mchugh, Senior, Literature

Continental Philosophy, Deaf Studies, and Postcolonial Theory: An Interdisciplinary Exploration of Visual Language
Jessy Murgel, Senior, Philosophy & History

Tracing Conceptions of Rationality as Human Nature in Early Economic Thought
Melissa O'Brien, Senior, Economics

Nishida Kitaro: A Study on Comparative Philosophy
Jeffrey Pucci, MA Candidate, Philosophy

Oscar Wilde's Redefinition of "Surface" in *The Importance of Being Earnest* and *The Picture of Dorian Gray*
Lindsay Williams, Senior, Literature

The Stoicism of William Wordsworth
Michael Young, Senior, Literature
SESSION ONE | 9:00-10:30 AM

The Science of Life (Katzen 128)
Chair: Professor Katie DeCicco-Skinner, Biology

Coffee: Carcinogen or Cure?
Duaa Abdelhameid, Junior, Biology

Adipocytes, Obesity, and the Multiple Myeloma Microenvironment
Gervaise Henry, MS Candidate, Biology

The Effects of Methimazole on the Development of Retinal Vascularization
Alfred Mabika, MS Candidate, Biology

A Novel Screen for Genes Involved in Antibiotic Resistance and Biofilm Formation in MRSA
Kev Mlynek, MS Candidate, Biology

The Role of Aromatase following Brain Injury in Male and Female Zebra Finches
Alyssa Pedersen, PhD Candidate, Behavior, Cognition, and Neuroscience

Effect of Age on Methylphenidate-Induced Conditioned Taste Avoidance and Related BDNF/TrkB Signaling in the Insular Cortex
Bradley Wetzell, PhD Candidate, Behavior, Cognition, and Neuroscience

Wind and Waves (Katzen 112)
Chair: Professor Michael Robinson, Mathematics and Statistics

Using Sheaves to Analyze Asynchronous Logic Circuits
Morgan DeHart, MA Candidate, Mathematics

Validation of Maritime Spectral Features
Matt Hubler, MA Candidate, Mathematics

Analysis of Ocean Winds
Mark Verdi, Senior, Applied Mathematics

High Resolution Wind Direction Measurement From Space
Zhu Zhu, MA Candidate, Mathematics
SESSION TWO | 10:45 AM-12:15 PM

Authors and Language (Katzen 112)
Chair: Professor Richard Sha, Literature

Ilíana Espinal, Senior, Literature

First As Farce, Then As Tragedy: Echoes and Agency in Ken Kesey's Sometimes a Great Notion
Melanie Germond, Senior, Literature

Why Nothing Matters: Maria Wyeth and Existentialism
Molly Harbage, Senior, Literature & Economics

Strangers in the Fiction of Edgar Allan Poe and Julio Cortázar: A Revised Theory of Authorial Influence
Elaina Hundley, Senior, Literature

Reporting on Hate: Analysis of Washington Post's Hate Crime Articles
Tori Vogel, Senior, Sociology

Digital Fiction and the Evolution of Aesthetic Form
Rachel Whitmeyer, Senior, Literature

Health and Environment (Katzen 115)
Chair: Professor Lynne Arneson, Biology

Different Bodies, Different Lives: the Experience of Disability in Lebanon
Mohammed ali Loutfy, PhD Candidate, Anthropology

The Consequences of Sewering a Coastal Cottage Community on Cape Cod
Daniel Pasquale, Senior, Environmental Studies
SESSION TWO | 10:45 AM-12:15 PM

The Geography of Health Disparities: An Exploration of Health Care Deserts in Santiago, Chile
Hannah Schiff, Senior, Spanish: Latin American Studies

Using the Fractional Logit Model to Assess the Impact of Transportation-Related Particulate Matter Pollution on the Abundance of Epiphytic Communities: What's Not to Lichen?
Joshua Wayland, MA Candidate, Global Environmental Policy
Shea T. Caspersen, MA Candidate, Environmental Science

It's Beautiful, but What Does it Mean? (Katzen 123)
Chair: Professor Kim Butler Wingfield, Art History

Beyond Humansim: Fra Angelico, Giovanni Dominici and "The Mocking of Christ" at San Marco
Brittney Bailey, MA Candidate, Art History

For Her to Eat: Andrea del Castagno's Last Supper at the Convent of Sant Apollonia
Caitlin Hoerr, MA Candidate, Art History

Desiring the Gaze: Donatello's Bronze David
Josh Kamins, MA Candidate, Art History

Our Lady of the Holy Belt Painting and Fra Filippo Lippi’s Psyche: A Psychological and Iconographic Interpretation
Sara Nieves-Grafals, PhD, Clinical Psychology, 1980

Virtuous Exemplars: Giovanni di Paolo's Quattrocento Nativity Altarpiece and Female Viewership
Dani Sensabaugh, MA Candidate, Art History

The Meaning Behind Plays, Films, and Music (Katzen 151)
Chair: Professor Ana Serra, World Languages and Cultures

Unmasking AIDS: The Advent of the Broadway Production Rent in the Face of an Epidemic
Tony Cohn, Junior, Public Communication

Behind the Scenes: “Parallel Cities”, the Artist as a Sociologist
Caroline Duchin, MA Candidate, Spanish: Latin American Studies
SESSION TWO | 10:45 AM-12:15 PM

"Don't Dream It, Be it!" Experimenting With the Formal Apparatuses of Dramaturgy
Jeff Gan, Senior, International Studies and Theatre

Music and the Afghan Refugee: Identity, Memory, and Place
Sydney Krieck, Senior, Music & Anthropology

Gentleman, Be Seated: Black Blackface Minstrelsy in the 19th Century
Madeline Steiner, Senior, History and Musical Theatre

**Signals, Space, and Energy (Katzen 128)**
**Chair:** Stephen Casey, Mathematics and Statistics

A New Local Indicator of Spatial Association
Jess Chen, PhD Candidate, Economics

Acoustic Multipath Echo Detection (AMPED)
Brian Dizio, Junior, Business Administration

Shaping Light to Control Ultracold Atoms and the Quantum World
Jessie Hirtenstein, Senior, Physics & Mathematics

Fourier Analysis in Non-Euclidean Geometries
Tim Watkins, Senior, Mathematics

Computational Analysis of the Riemann Zeta Function
Andreas Wiede, Senior, Mathematics
SESSION THREE | 1:45-3:15 PM

**Born in the USA (Katzen 151)**

**Chair:** Professor Katharina Vester, American Studies

The Variation of Educating Through "Whiteness" in the Movies *Freedom Writers* and *Stand and Deliver*

Estephanie Amaro, Sophomore, American Studies

How Did the Iconic Volkswagen Beetle, First Manufactured in Germany in 1934, Become a Symbol of the ‘American Dream’ During the 1960s?

Matthew Cekuta, Senior, American Studies

Anatomy of a Television Show: How Grey's Anatomy Defies Normal Cultural Representations on Television

Nora Engelman, Senior, American Studies & Secondary Education

"The Adventures of Robin Hood" as an Allegory of the Blacklist

Laura Gibson, PhD Candidate, History

The Founding Fathers in Pop Culture: Subversion of Hegemony through Video Games

Allison Pierce, Senior, American Studies

Selling Nonconformity: Hipster Culture and Consumerism

Lindsay Sandoval, Senior, American Studies & Public Communication

**Humans Behaving Badly (Katzen 112)**

**Chair:** Professor Aleka Kapatou, Mathematics and Statistics

Killing From Afar: Mental Distance and the U. S. Navy's WWII Drone Program

Alex Calta, MA Candidate, Public History

Riding the Gut Bucket: Language, Coping, and Identity Among Rescue Workers

Cayla Jakubowski, Junior, International Studies

Ignored, But Not Forgotten: A History of First Nations Residential Schools

Cameron Roman, Sophomore, Journalism
SESSION THREE | 1:45–3:15 PM

Questioning German Expressionism: Nazi Reception and Contradiction in the Art of Käthe Kollwitz
Madeline Ullrich, Senior, Art History

Human Sex Trafficking: The Need for More Data
Eden Waller, MS Candidate, Quantitative Analytics

Making it Work Better (Katzen 115)
Chair: Professor Ximena Varela, Arts Management

DNA, Commercialism, and Identity: The Impact of Genetic Ancestry Testing on Contemporary Quests for Ethnicity
Clara Bacmeister, Senior, Biology

Tourism Runs on Commission: Risks and Strategies of Small Entrepreneurs in Taj Ganj, Agra
Riddhi Bhandari, PhD Candidate, Anthropology

The Art of "Having it All": Women and Work-Life Policies in Performing Arts Administration
Yolanda Davis, MA Candidate, Arts Management

Event Attendance in Performing Arts Centers: A Study of Digital Audience Engagement in Professional Sports
Stephanie Hollingsworth, MA Candidate, Arts Management

The Effects of Digital Government on Civic Participation
Alex Karmazin, Senior, Sociology & Political Science

Transparency in Global Health: Universal Best Practice?
Scott Weathers, Junior, Public Health

Performance (Katzen 154)
Chair: Professor Caleen Jennings, Performing Arts

Tragedy of the Commons
Afua Busia, Senior, BA Environmental Science, December 2013

Hiroshima Through the Eyes of Three Girls
Fu Hamabe, Senior, International Studies

Oh, What Can't a Woman Do?
Hilary Morrow, Senior, Musical Theatre
SESSION THREE | 1:45–3:15 PM

Princesses and Feminism (Katzen 123)
Chair: Professor Teresa Larkin, Physics

Draining the Blood of the Patriarchy: Lesbian Vampire Erotica as a Response to Feminism
Jared Kroening, Senior, Philosophy & History

Performing Domesticity, Practicing Rebellion: Gender and Power Theory in the Grimms' Fairy Tales
Lilly Mcgee, Senior, Literature

The Only Thing We Have to Queer is Queer Itself
Kylie Musolf, Senior, Philosophy

Julia Child, Feminist
Samantha Theriault, Junior, History & American Studies

A Phenomenological Study of Factors Influencing the Gender Gap in Physics and Other STEM-Related Fields
Tori Vogel, Senior, Sociology

Race in Media (Katzen 128)
Chair: Professor Richard Sha, Literature

The Thin Line Between Black Girlhood and Black Womanhood; The Visibility of Black Girls in Danielle Evans' "Virgins"
Morgan Harding, MA Candidate, Literature

League of (White) Legend
Saeyoon Jeong, Senior, Non-degree International Student

“Lust in Paradise”: Race, Sex, and the Unwritten Law in the 1932 Massie Affair
Amy Langford, PhD Candidate, History

Black Barbies: Perceptions of Friendship and Beauty in Black Reality TV
Nicole Piquant, Senior, Sociology

Indifference to Difference: The Experience of Multiculturalism in Zadie Smith's White Teeth
Christine Weidner, Senior, Literature
SESSION FOUR | 3:30-5:00 PM

Gender and Sexuality (Katzen 112)  
Chair: Professor Kate Haulman, History

The Role Economic Inequality in K-8 Mathematics Scores  
Aurora Arop, Senior, Washington Semester

Being Asexual in a Sexual World: Asexual Identity Negotiation among Sexual Peers and in Public Spaces  
Cienna Breen, Senior, Sociology

From the Classroom to the Dormroom: How Ghanaian University Women are Redefining Their Sexuality in a Changing Society  
Lauren Croll, Senior, Sociology & Political Science

Queer Embodiment in Post-War American Avant-Garde Cinema  
Sean Donovan, Senior, Literature

The Home Front: Gender, Authority, and the Intimacies of Occupation, Philadelphia, 1777-1778  
Lauren Duval, PhD Candidate, History

Masculinity in Country Music  
Daylyn Weppner, Junior, Public Communication

How Money Affects Us (Katzen 115)  
Chair: Professor Simon Sheng, Economics

The Effects of Defense Spending and Defense-related Research and Development on Private Domestic Investment in the United States  
Christian Cavender, Senior, Mathematics and Economics

Information Rigidity in Macroeconomic Forecasts: An International Empirical Investigation  
Jonathan Wallen, Senior, Mathematics and Economics

Has Intellectual Property Rights Protection for Developing Countries Ultimately Promoted Long Term Economic Growth?  
Hina Zaidi, BA, Economics, 2013
SESSION FOUR | 3:30–5:00 PM

Learning from Foreign Cultures (Katzen 128)
Chair: Professor Núria Vilanova, World Languages and Cultures

The Documentary Genre and Its Limitations: Venezuela, April 11, 2002
Leslie Barrett, MA Candidate, Spanish: Latin American Studies

Changing Spaces of [In]security: Surveying the Urban Imaginary of Monterrey's Young Adults
Jacquelyn Dolezal, MA Candidate, Spanish: Latin American Studies

The Delinquents of Today are the Leaders of Tomorrow
Julie King, MA Candidate, Spanish: Latin American Studies

Culinary Transculturation and the Chinese Diaspora to Peru
Rachel Mancini, MA Candidate, Spanish: Latin American Studies

Uganda and the Democratic Republic of Congo: Children at War
Toby McCarroll, Sophomore, History

Unique Views of Internment: An Analysis of Visual Representations of the Japanese American Relocation
Ada Thomas, Senior, Graphic Design

Politics and Policy (Katzen 128)
Chair: Professor Eric Lohr, History

State Capitalism and the Medical Device Industry in Brazil: Industrial Policy as a Sovereignty Matter
Soraia Abreu, MA Candidate, Spanish: Latin American Studies

Containment on the Railroad: The Inter-Allied Railway Committee, 1917-1922
Paul Behringer, PhD Candidate, History

From Sky Rivers to Concrete Streets: Hybrid Origins of Indigenous Resistance in Contemporary Mapuche Poetry
Ginny Cross, Senior, Spanish: Latin American Studies & Literature
SESSION FOUR | 3:30–5:00 PM

Fluid Identity in the Land before Lincoln: French Colonizers, American Settlers, and the Transition from Territory to Statehood
Zach Kopin, Senior, Music & History

“In Informal Approach”: American and Austrian Cooperation in the Policing of Communism, 1922-1938
Lindsay Macneill, PhD Candidate, History

Electoral Politics as an Extension of Activism in the 1970s
Erin Randall, Senior, Women's, Gender, & Sexuality Studies

Telling the Arabs What to Do with Their Money: Petrodollars, Planning, and the October 1973 Oil Shocks
Evan Taylor, MA Candidate, History

The Role of Race (Katzen 151)
Chair: Professor Dan Kerr, History

Race in the NFL
Matiss Batarags, Senior, Public Communication

Between a Rock and a Hard Place: Untold White Desegregation Narratives from Oxford, Mississippi
Anna Kaplan, PhD Candidate, History

"The Complicated Relationship with Baltimore's NAACP"
Jacob Levin, PhD Candidate, History

Guaman Poma's Identity Crisis: How Race Affected Identity in Early Colonial Peru, 1551-1615
Alex Parody, Senior, History

Biological Anthropology on Display at the Turn of the Last Century
Caitlyn Sellar, Senior, History
MORNING POSTER SESSION

Evaluation of Participation Barriers for Child and Adult Food Care Program (CAFCP) in Community Child Care Homes
Tahmina Ahmed, Senior, Public Health
Maram Alfi, Senior, Public Health
Jessica Gioe, Senior, Political Science & Public Health
Amanda Lynen, Senior, Public Health
Diana Williams, Junior, Public Health & Sociology

Individual Differences in Emotional Reactivity
Kat Allen, MA Candidate, Psychology

Taste Tests Increase Vegetable Consumption in DC Schools
Devin Ellsworth, MS Candidate, Health Promotion Management

Vaccines and Socioeconomics
Andrew Episcopo, Sophomore, Undeclared
Hannah Lappin, Freshman, Undeclared
Alix Braun, Freshman, Undeclared

Society's Perspective on Fruits and Vegetables and the Affects of Luminescent Food
Nina Kaplan, Freshman, Undeclared
Sarah Kravetz, Freshman, Undeclared
Andrew Long, Freshman, Undeclared

The Correlation Between Sexual Health Awareness and Availability of Resources on DC College Campuses
Morgan Grant, Freshman, Undeclared
Karl Laubacher, Sophomore, Undeclared
Julia Norman, Freshman, Undeclared
Roshan Thomas, Sophomore, Undeclared
Julia Eigner, Freshman, Undeclared

Comparing the Availability of Healthy Food Options and the Choices Made by Freshmen College Students at American University, University of Maryland, College Park, and the George Washington University
Delaney Balderas, Sophomore, Undeclared
AmiLin Mcclure, Freshman, Undeclared
Allie Preston, Freshman, Undeclared
MORNING POSTER SESSION

Gender and Power Politics in Tudor Historical Fiction
Valerie Nadal, Senior, Literature & Political Science

Psychological/Social Factors are Not Robust Predictors of Face Recognition Biases
Joyce Oates, PhD Candidate, Behavior, Cognition, and Neuroscience

Individual Differences in Emotional Reactivity
Leah Rothschild, PhD Candidate, Clinical Psychology
Maggie Stoeckel, PhD Candidate, Behavior, Cognition, and Neuroscience
Annie Sykes, MA Candidate, Psychology

Health and Academic Performance in DC Public Schools
Hugo Van Dyke, MS Candidate, Statistics

Experiencing Artistic Healing and Empowerment: Using the Performing Arts as a Psycho-social Tool for Youth Development in Nairobi, Kenya
Colin Wick, Senior, Music and International Studies
The Diffusion Testing and Development of a Water Filtration System Using Biodegradable Crosslinked Modified Polymeric Films
Karlena Brown, MS Candidate, Chemistry

Temporal Sensitivity of the Chromatic Visual System
Venice Cowardin, Senior, Mathematics

Fibroblasts Increase Keratinocyte Invasion and Metastasis in Tpl2 Knockout Mice
Alexander Cvitan, Senior, Biochemistry

The Effects of Hyperglycemia on Zebrafish Retina
Elizabeth Davidson, Senior, Biology

Role of Polysaccharide in Root Colonization by Pseudomonas Fluorescens
Jessica Dawson, Junior, Business Administration & Biology

Cerebellar Grey Matter Correlates with Early Language Delay in ASD
Anila D'Mello, PhD Candidate, Behavior, Cognition, and Neuroscience

Moira Esson, Senior, Chemistry

Investigating Thermal Noise for Gravitational Wave Detection
Hannah Fair, Senior, Physics

An Assessment of the Effects of Norbinaltorphimine, a Potent Kappa Opioid Receptor Antagonist, on Δ9-tetrahydrocannabinol (THC)-induced Conditioned Taste Avoidance in Adolescent Rats
Shaun Flax, PhD Candidate, Behavior, Cognition, and Neuroscience
AFTERNOON POSTER SESSION

Synthesis of dithiol β-lactam dimer active Against Mycobacterium Tuberculosis
Monika Gasiorek, Senior, Biochemistry

Felid SINEs: Tools for Conservation, Beacons of Diversity, and Markers of Hybridization
Alex Gotowski, Senior, Mathematics & Philosophy

Fischer and Lewis Rats Do Not Differ in Methyleneedioxyparavalerone (MDPV)-Induced Taste Aversions
Heather King, PhD Candidate, Behavior, Cognition, and Neuroscience

The Effect of Sulfur on Interstellar Extinction
Dhanesh Krishnarao, Senior, Physics & Mathematics

Detection and Authentication of Classical and Non-Classical Steroid Receptors in the Songbird Brain
Ben Kussin-Shoptaw, Senior, Biology & History

Effect of Methylphenidate Preexposure on Methylphenidate-Induced Conditioned Taste Avoidance
Bella Muller, Senior, Psychology

Brain Injury Increases Glial Aromatase and Neural Estradiol
Lars Nelson, Senior, Biology

Analysis of Myoglobin's Catalytic Ability in Methanol
Dhea Patel, Senior, Biochemistry

Peripheral Administration of Lipopolysaccharide Increases Neural Aromatase Expression in a Songbird
Alyssa Pedersen, PhD Candidate, Behavior, Cognition, and Neuroscience

Stereotype Threat, Positivity Bias, and Subjective Age Perception: Examining Recall and Recognition Moderation Effects in Older Adults
Christina Pierpaoli, Senior, Psychology
AFTERNOON POSTER SESSION

Conditioned Taste Avoidance Induced by Δ9-tetrahydrocannabinol in the Fischer (F344) and Lewis (LEW) Inbred Rat Strain
Alison Presley, PhD Candidate, Behavior, Cognition, and Neuroscience

Optimized Basis Transformations for the Symmetrization of a Few Ultra-Cold Atoms in a Harmonic Trap
Jarrett Revels, Senior, Physics

The Effects of Hyperglycemia on Zebrafish Retina
Carly Slack, Senior, Biology

The Effects of Processing Differences on Melody Recognition in Unfamiliar Music
Nia Tannis, Junior/Senior, Psychology & French Studies

Symmetry Methods for Five Bodies in a One-dimensional Harmonic Trap
Jenny Verniero, Senior, Physics & Mathematics

The Effects of Adipocytes and Obesity on the Multiple Myeloma Microenvironment
Nick Watson, Senior, Biology