

LA COLLEGE of ARTS & SCIENCES - 19th Annual Robyn Rafferty Mathias Student Research Conference



**Saturday,**  
**April 4, 2009**  
**8:30 a.m. – 5 p.m.**



**19th Annual**  
**Robyn Rafferty**  
**Mathias**  
**Student**  
**Research**  
**Conference**



# Conference Schedule

## Participant Registration

**Battelle-Tompkins Atrium**

8:30 a.m. – 3:45 p.m.

## Session One

9 a.m. – 10:30 a.m.

Political Questions, Political Possibilities	Battelle-Tompkins <b>248</b>
Cross-Cultural Conflicts and Communication	Battelle-Tompkins <b>148</b>
Getting Treatment Right	Battelle-Tompkins <b>T48</b>
The Promise and Cost of Development	Battelle-Tompkins <b>130</b>
Mathematics and the World	Battelle-Tompkins <b>T30</b>
The Roles of Religion and Ethics	Kay Spiritual Life Center, Lounge
Science and the Senses	Battelle-Tompkins <b>203</b>
Creative Writing: Readings by the Authors	Kay Spiritual Life Center, Chapel

## Morning Poster Session

**Battelle-Tompkins Atrium**

9:30 a.m. – 11:30 a.m.

## Break

10:30 a.m. – 10:45 a.m.

## Session Two

10:45 a.m. – 12:15 p.m.

Culture, Gender, and Interpretation	Battelle-Tompkins <b>248</b>
The Inner Workings of Culture	Battelle-Tompkins <b>148</b>
Developing the Right Policies, the Right Definitions	Battelle-Tompkins <b>T48</b>
Gender and the Generation of Culture	Battelle-Tompkins <b>130</b>
Addiction and Reward	Battelle-Tompkins <b>T30</b>
How the Value of Literature Is Defined	Kay Spiritual Life Center, Lounge
Cover-ups and Transatlantic Crossings	Battelle-Tompkins <b>203</b>

## Luncheon

**Mary Graydon Center, Tavern**

12:30 p.m. – 1:30 p.m.

## Session Three

1:45 p.m. – 3:15 p.m.

Politics at Home, Abroad, in the Streets, in Music, and in the Theater	Battelle-Tompkins <b>248</b>
The Art (and Business) of Interpreting and Performing Art	Battelle-Tompkins <b>148</b>
Methodology and the Social Sciences	Battelle-Tompkins <b>T48</b>
Trade, Pricing, Migration, and Capitalism	Battelle-Tompkins <b>130</b>
Chemistry and the Environment	Battelle-Tompkins <b>T30</b>
The Idea of Woman on Stage, in Magazines, in Toys, and in Poetry	Kay Spiritual Life Center, Lounge
Education in the Classroom and in Music	Battelle-Tompkins <b>203</b>
Dance and Theater Performances	Kay Spiritual Life Center, Chapel

## Afternoon Poster Session

**Battelle-Tompkins Atrium**

2:30 p.m. – 4:30 p.m.

## Session Four

3:30 p.m. – 5 p.m.

Literature and History	Battelle-Tompkins <b>248</b>
Representations of Women: Dead, Free, Fashionable, Witchy, & Killer	Battelle-Tompkins <b>148</b>
Economic Recession: Today and Yesterday	Battelle-Tompkins <b>T48</b>
Violence and Redemption: Religion, Class, Race, and Gender	Battelle-Tompkins <b>130</b>
Molecules and Ecology	Battelle-Tompkins <b>T30</b>
From Rednecks to the Post-Colonial:	Kay Spiritual Life Center, Lounge
The History and Culture of Race	
Music Performances	Kay Spiritual Life Center, Chapel

# Session One:

9 a.m. – 10:30 a.m.

## Political Questions, Political Possibilities (Battelle-Tompkins 248)

**Chair:** Professor Max Paul Friedman, History

**On the Borders of Evangelicalism: Radicalized Evangelical Missionaries in Central America during the 1970s and 1980s**

Rod Coeller, History (Graduate Student)

**El Salvador and the Vietnam Syndrome**

Aaron Bell, History (Graduate Student)

**Was Tito a Tito? The Dilemma of “National Communism” for an Anti-Communist Foreign Policy in the Soviet-Yugoslav Split, 1948–1958**

Louie Milojevic, History (Graduate Student)

**Pontorno’s *Vertumnus* and *Pomona* at Villa Medici: A Meditation on Transformation**

Corey Cripe, Art History (Graduate Student)

**Hollywood and the State Department in Western Europe, 1944–1954**

Nicholas Ercole, History (Graduate Student)

## Cross-Cultural Conflicts and Communication

(Battelle-Tompkins 148)

**Chair:** Professor Kim E. Butler, Art

**“Scapegoating” the Other: The Use of the Djinn in *Midnight’s Children* and *The Wasted Vigil***

Aia Hussein, Literature (Graduate Student)

**Josephine Baker: The Woman Beyond the Icon**

Catherine Johnson, Literature (Graduate Student)

**The Garifuna: A Mobilizing and Exemplary Ethnic Group**

Andrea Mesa, International Affairs (Graduate Student)

**One of These Things is NOT Like the Other**

Lucretia Young, Art History (Graduate Student)

## Getting Treatment Right

(Battelle-Tompkins T48)

**Chair:** Professor Brian T. Yates, Psychology

**Introduction of the Program Evaluation Research Lab**

Jose Hermida, Psychology (Graduate Student)

**Gender Sensitive Substance Abuse Treatment Procedures: The Costs and Benefits**

Sarah Hornack, Psychology (Graduate Student)

**Cost of Recidivism among Juvenile Delinquents: How Can Psychological Tests Lower Future Monetary Costs?**

Jennifer Cintrón, Psychology (Graduate Student)

**Finding a Comparative Model: A Case Study of the Future Leaders Exchange Program**

Amy Simms, International Training and Education (Graduate Student)

**From Spectacles and Monument Construction to Forced Displacement in the Context of Project ZACA in Ouagadougou (Burkina Faso)**

Michel Tinguiri, Anthropology (Graduate Student)

## The Promise and Cost of Development (Battelle-Tompkins 130)

**Chair:** Professor Mieke Meurs, Economics

**Poverty to Vulnerability: The Case for Measuring Vulnerability Instead of Poverty to Indicate Household Well-Being in the United States**

Jill Janocha, Economics (Graduate Student)

**Estimating Lost GDP During Electricity Rationing in Brazil**

Brandon Tracy, Economics (Graduate Student)

**The Potential of Permaculture: Addressing Subsistence Farming and Food Security in Malawi**

Abigail Conrad, Anthropology (Graduate Student)

**Putting a Price Tag on Humanity: Development-Forced Displaced Communities’ Fight for More than Just Compensation**

Julie Maldonado, Anthropology (Graduate Student)

**Third Place or Marketplace? Language, Spatiality, and Consumption in Neoliberal Coffee Shops**

Deborah Murphy, Public Anthropology (Graduate Student)

Mahri Irvine, Anthropology (Graduate Student)

# Session One: (cont.)

9 a.m. – 10:30 a.m.

## Mathematics and the World (Battelle-Tompkins T30)

**Chair:** Professor Dan Kalman, Mathematics and Statistics

### **Approximating the Zeta function by Using the S-th Powerfree Numbers**

Zhi Li, Mathematics (Sophomore)

### **Combat Evolved**

Jacob Choi, Mathematics & Secondary Education (Senior)

### **A Brief Discussion of Companion Matrices**

Alexander Jones, Mathematics (Senior)

### **Projective Limits and Galois Theory of Infinite Extensions**

Erik Borke, Mathematics (Senior)

### **Vector Field Calculus Applied to the Complex Plane**

Matthew Manopoli, Mathematics (Senior)

### **Mathematical Exploration of JPEG Image Compression Scheme**

Xiaojing Huang, Applied Mathematics (Senior)

## The Roles of Religion and Ethics (Kay Spiritual Life Center, Lounge)

**Chair:** Professor Farhang Erfani, Philosophy and Religion

### **Gender and the Performance Practice of Chant**

Thais Miller, Literature (Senior)

### **The Expressivity of Prenatal Diagnosis and Selective Abortion for Disability**

Kiersten Batzli, Philosophy & Physics (Senior)

### **An Existential Analysis of the “Spiritual, but Not Religious”**

Charles Corbett, Philosophy (Senior)

### **The Mississippi Meets the Tiber: Catholic-Confederate Relations during the American Civil War**

Justin Broubalow, History (Senior)

## Science and the Senses

(Battelle-Tompkins 203)

**Chair:** Professor Teresa Larkin, Physics

### **Sight for Life**

Logan D'Alessandro, Law and Society (Sophomore)

### **Expect the Unexpected: How Expectations Shape Our Hearing**

Sara Bahraini, Psychology (Senior)

### **Audio Compression Using Incommensurate Sampling Rates**

Erik Taubeneck, Mathematics (Graduate Student)

### **Harnessing the Latent Processing Power of Mobile Devices**

William Edgar, Computer Science (Graduate Student)

### **Computer Models of Spacetime Dynamics**

Erek Alper, Physics (Senior)

## Creative Writing: Readings by the Authors

(Kay Spiritual Life Center, Chapel)

**Chair:** Professor Kyle Dargan, Literature

### **Claude**

Shawn Frazier, Creative Writing (Graduate Student)

### **Credit Transfer: A Creative Project Exploring the Nexus of Visual and Textual Art**

Ryan Tanner-Read, History & Literature (Junior)

### **Whakapapa**

Sarah Caffey, Anthropology (Junior)

# Session Two:

10:45 a.m. – 12:15 p.m.

## **Culture, Gender, and Interpretation** (Battelle-Tompkins 248)

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

### **Blind Love, Fickle Fortune and Woe-men: John Florio's Thematic Influences on Shakespeare's Italian Plays**

Tara Schupner, Literature (Graduate Student)

### **GI Joe in American Childhood**

Josh Mattingly, History (Graduate Student)

### **The Nationalism of Amazons and Angels**

Katherine Masters, History (Graduate Student)

### **Titian's *Danaë*: Romance or Rape?**

Angel Reed, Art History (Graduate Student)

### **Nineteenth-Century African-American Women and Life, Liberty, and the Pursuit of Whiteness**

Steven Sondheimer, American Studies (Senior)

## **The Inner Workings of Culture** (Battelle-Tompkins 148)

**Chair:** Professor Max Paul Friedman, History

### **"Something New Under the Sun": The Cultural Impact of the USS Nautilus, the First Nuclear-Powered Submarine**

Stefanie Peskosky, History (Graduate Student)

### **Consumer Culture in Alexandria, Virginia**

Meghan Rafferty, History (Graduate Student)

### **Food Fight: Fighting for America through the National School Lunch Program**

Bethany Power, History (Graduate Student)

## **Developing the Right Policies, the Right Definitions** (Battelle-Tompkins T48)

**Chair:** Professor Jill Niebrugge Brantley, Sociology

### **Exploring the Purpose, Equity, and Impact of Education for Indigenous Students in Southern Mexico**

Amalie Gorbold, International Training and Education (Graduate Student)

### **Is There an Alternative? Examining the Effects of Teach for America on American Public Education**

Alesandra Sandin, Teaching (Graduate Student)

### **The Need for Assessment: Alzheimer's Disease and Family Caregivers**

Courtney Shahan, Sociology (Graduate Student)

### **The Effects of Debilitating, Extended Illness on the Gender/Family Nexus in the Home**

Laura Whiston, Sociology (Senior)

Ellen Whiteman, Sociology (Graduate Student)

### **Defining Organic Food through Human Experiences**

Dvera Saxton, Anthropology (Graduate Student)

### **Ethnicity and Nationalism in India: An Examination of Ethno-lingual Communities in Tamil Nadu, India**

Shamira Abdulla, Anthropology (Graduate Student)

## **Gender and the Generation of Culture** (Battelle-Tompkins 130)

**Chair:** Professor Celine-Marie Pascale, Sociology

### **Adoption by Same-Sex Couples**

Joanna Carmusciano, Law and Society (Senior)

### **College Students with Learning Disabilities' Use of Support Services Based on Gender**

Connie Smith, Political Science & Women's and Gender Studies (Senior)

### **The Right Start: Consuming Produced Gender in the Family Home**

Sarah Bernal, Sociology & Women's and Gender Studies (Junior)

Jessica Staff, Sociology (Junior)

### **Displacing the Dominant "Down Low" Discourse: An Exploration of the "Down Low" on Craigslist.org**

Brandon Robinson, Women's and Gender Studies & Sociology (Senior)

### **Pretty Dresses and Privilege: Gender and Heteronormativity in Weddings**

Alissa Tombaugh, Sociology (Graduated December 2008)

# Session Two: (cont.)

10:45 a.m. – 12:15 p.m.

## Addiction and Reward

(Battelle-Tompkins T30)

**Chair:** Professor Anthony Riley, Psychology

### Testing a Computational Model of Addiction

Katie Marks, Psychology (Graduate Student)

### Assessment of Individual Differences in the Aversive and Rewarding Effects of Morphine

Andrey Verendeev, Psychology (Graduate Student)

### Roles of Impulsivity Control, Novelty Seeking, and the Dopamine D4 Receptor in Psychopathy and Drug Addiction

Rachel Rosenthal, Biochemistry & Psychology (Senior)

### Conditioned Place Preference and Reward in Zebrafish (*Danio rerio*)

Mary Swears, Biology & Psychology (Senior)

### Contagious Yawning and Empathy: An Experimental Approach

Maria Antoshina, Psychology (Graduate Student)

## How the Value of Literature Is Defined

(Kay Spiritual Life Center, Lounge)

**Chair:** Professor Keith Leonard, Literature

### Life in Cartoon: Autobiographical Comics

Christian Swalling, Literature & Theatre (Senior)

### Modern Spiritual Writings Concerning the Dark Night of the Soul

Genevieve Cervantes, Literature (Senior)

### Value, Texture, and Facets: Resurrecting the Dead in Literary Giants

Elsa Anderson, Literature (Junior)

### Plasticity

Thais Miller, Literature (Senior)

## Cover-ups and Transatlantic Crossings (Battelle-Tompkins 203)

**Chair:** Professor April Shelford, History

### In the Name of Science: Human Subjects in United States Nuclear Testing, 1950-1992

Jenn Englekirk, History (Senior)

### A Transatlantic Interpretation of Bernard Mandeville

Zachary Faden, History & Philosophy (Senior)

### Answering the Pretender's Declaration: The Impact of the 1745 Jacobite Rebellion on American British Identity

Laura O'Friel, History (Senior)

### Consumption and Learning: How Ancient Egypt Became Essential Knowledge to Victorian Britons

Holly Polish, History (Senior)



# Session Three:

1:45 p.m. – 3:15 p.m.

## **Politics at Home, Abroad, in the Streets, in Music, and in the Theater** (Battelle-Tompkins **248**)

**Chair:** Professor Anita Sherman, Literature

### **The Evolution of Grassroots Politics in South Carolina's Nullification Controversy: An Upcountry Perspective**

Emily Feldstein, History (Senior)

### **Caesar's Political Seesaw: The Bard, the Prince, and the Founding Fathers**

Rachel Tardiff (Junior)

### **Identity Persistence and Adaptation in Tuareg Guitar Music**

Eric Schmidt, Music (Senior)

### **Articulating a Movement: A Discourse Analysis of the Pingüino Student Movement in Chile**

Andrew Wolf, International Studies & Philosophy (Senior)

## **The Art (and Business) of Interpreting and Performing Art** (Battelle-Tompkins **148**)

**Chair:** Professor Marc Medwin, Performing Arts

### **Shakespeare's *Romeo and Juliet*: Why Do We Love Such an Unrealistic Play?**

Christina Alleva, Literature (Junior)

### **Modality and Improvisation in Modal Jazz and Classical Hindustani Music**

Zabie Sharify, Music & Audio Production (Junior)

### **Challenges in Practicing the Performance of Live Electronic Music**

Farley Miller, Audio Technology (Senior)

### **The Business of Acting**

Jennifer Cumberworth, Public Communication & Theatre (Senior)

## **Methodology and the Social Sciences** (Battelle-Tompkins **T48**)

**Chair:** Professor Brett Williams, Anthropology

### **Blind Spots: What Anthropologists Don't Ask about Science**

Elizabeth Hopkins, Anthropology (Senior)

### **The Significance of Running in Human Evolution**

Alexandra Papagno, Anthropology (Senior)

### **Roundtable: "Avoiding Madness: Let's Talk About Methods"**

Emily Channell, Anthropology & French Studies (Senior)

Kara Newhouse, Anthropology (Senior)

Elizabeth Smith, Anthropology (Senior)

## **Trade, Pricing, Migration, and Capitalism** (Battelle-Tompkins **130**)

**Chair:** Professor Kara Reynolds, Economics

### **Does Trade Adjustment Assistance Make a Difference?**

John Palatucci, Mathematics & Economics (Senior)

### **Price Discrimination in WMATA Fares**

Tyler Case, Political Science & Economics (Senior)

### **Commodity Price Volatility and Monetary Policy Uncertainty: A GARCH Estimation**

Claire Lunieski, Economics & International Relations (Senior)

### **Chinese Student Migration to the US**

Kun Zhao, Mathematics & Economics (Senior)

### **Capitalism: Seeds, Branches, Leaves, and the Changing Seasons**

Sam Goldstein, Political Science & Sociology (Junior)

# Session Three: (cont.)

1:45 p.m. – 3:15 p.m.

## Chemistry and the Environment (Battelle-Tompkins T30)

**Chair:** Professor Monika Konaklieva, Chemistry

**Design and Synthesis of Novel Antimicrobials**  
William Lustig, Chemistry (Junior)

**Synthesis of Inhibitors of the Novel Enzyme N-acetyl-L-ornithine transcarbamylase to Disrupt Arginine Biosynthesis in *Stenotrophomonas maltophilia***  
Tim Beck, Postbaccalaureate Premedical Certificate

**Evolution, Chemistry, and Use of Marine Bioluminescence**  
Catherine Nickels (Non-Degree Graduate Student)

***Xerocomus chrysesteron* Is a Potential Bioremediator to Break Down DDT in Soil**  
Althea Mickiewicz, International Relations & Environmental Science (Senior)  
Jenn Fantasia, Biology (Senior)

**The Effects of Sunscreen Runoff on Zebrafish Embryonic Development**  
Ashlie Cipriano, Marine Science & Biology (Junior)

**Role of Estrogens in Hyperprolactinemia as a Possible Cause of Acyclicity in African Elephants**  
Natalia Prado-Oviedo, Biology (Graduate Student)

## The Idea of Woman on Stage, in Magazines, in Toy Boxes, and in Poetry (Kay Spiritual Life Center, Lounge)

**Chair:** Professor Kate Haulman, History

**“She Stoops to Conquer”: Gender Transgressions in American Burlesque Theatre, 1870–1910**  
Ashley Joyce (Sophomore)

**Foreign Is Fabulous, Unless You’re an Immigrant: Foreign Women in 19th-Century Beauty Manuals**  
Emma Wimmer (Junior)

**Desdemona’s Potential for Infidelity: The Role of Sex and Scandal in the Venice of Shakespeare’s *Othello***  
Helen Christian, History (Junior)

**The Emergence of the American Girl Collection: A Social History**  
Caroline Basile, History (Senior)

**Female Romantic Irony**  
Emily Cottrell, Literature (Senior)

**The Treatment of Identity in Shakespeare’s *As You Like It***  
Justin Wojtkowski, Literature (Senior)

## Education in the Classroom and in Music (Battelle-Tompkins 203)

**Chair:** Professor Stacie Tate, Education

**Injustices in the Classroom: The Urban Education Crisis, Why It Happened, and What to Do**  
Katherine Streit, Sociology & Psychology (Sophomore)

**The Theoretical and Practical Implications of Critical Pedagogy: Transformation, Student Organizing, Community Change**  
Rachel Harlich, Anthropology (Senior)

**Revisiting Aid Targeting Practices by the States: How and Why Does Money Get to Our Nation’s Schools?**  
John Debaun, Political Science (Senior)

**Calypso: Hear the Caribbean Voices through Social and Political Commentary**  
Arliene T. Penn, Journalism (Senior)

## Dance and Theater Performances (Kay Spiritual Life Center, Chapel)

**Chair:** Professor Caleen Sinnette Jennings, Performing Arts

**Not One, But Two**  
Jackie Atrio, Sociology (Senior)

**Singing Flowers, Talking Clothes, and Personified Seasons: Children’s Theatre as an Educational Tool**  
Victoria Golden, Spanish Studies (Senior)  
Cassandra Hannan, Theatre (Junior)  
Ezree Mualem, Psychology (Senior)



# Session Four:

3:30 p.m. – 5 p.m.

## Literature and History (Battelle-Tompkins 248)

**Chair:** Professor Anita Sherman, Literature

**Examining the Social Impact of Political Theater in the United States: Post World War I through the Great Depression**

Meghan Libman, History (Senior)

**The Re-emergence of the Mozart Noir, Joseph Boulogne**

Alexandra Lane, History (Senior)

**Macbeth and the Gunpowder Plot**

Aleksandr Gorokhov, Literature & Russian Studies (Senior)

**Evolving Fictional Visions of Josephine Bonaparte**

Dayna Wells, International Studies & History (Senior)

**“Tell Me Your Past, Present, and Future”: Examining Magical Realism in African-American Literature**

Sean Hampton, Literature (Senior)

## Representations of Women: Dead, Free, Fashionable, Witchy, and Killer (Battelle-Tompkins 148)

**Chair:** Professor Madhavi Menon, Literature

**Signifying Nothing: Semiotics, the Feminine and Ophelia**

Lindsay Zoladz, Literature & Film and Media Arts (Senior)

**Godey’s Magazine and the Gender Power Structure**

Ellen Leoni, Psychology & American Studies (Junior)

**Misogynist Witchery**

Becky Cook, Political Science & Literature (Senior)

**“The Most Feminine Way to Be Free”: A Historical Perspective on Menstrual Product Advertisements**

Christina Padron, Women’s and Gender Studies & Business Administration (Senior)

**Flinch: Planning Violence in Macbeth and Crash**

Lowell Rudorfer, Philosophy (Junior)

## Economic Recession: Today and Yesterday

(Battelle-Tompkins T48)

**Chair:** Professor Robert Blecker, Economics

**Nowhere to Fall: Poor People Facing the Economic Crisis**

Katie Beran, Sociology (Senior)

**Foreclosure Crises of the 1930s and Today**

Andrew Freeman, Economics (Senior)

**Is Broadway Recession-proof?**

Allison Gosney, Economics & Music (Senior)

**Forgotten Children: The Flaws of the Adoptive and Foster Care System**

Jessica Arencibia, Sociology & Film and Media Arts (Senior)

**College Graduates and Economic Downturns**

Marylynn Diallo, Economics & Law and Society (Senior)

## Violence and Redemption: Religion, Class, Race, and Gender (Battelle-Tompkins 130)

**Chair:** Professor Andrea Brenner, Sociology

**An Exhibit of Ethnic Conflict ... But Is It Genocide?**

Gen Yoshikawa (Sophomore)

**Gender and Sexuality in Santería**

Ivonne Ramirez, Spanish Studies (Senior)

**Understanding Violence in the Anti-Abortion Movement**

Jennifer Burke, Women’s and Gender Studies & Sociology (Senior)

**Class on the Black Burner: The Role of Socioeconomic Status in Capital Cases**

Josh Loigman, Law and Society & Political Science (Junior)

**The Impact of Ethnic Identity on the Bosnian Genocide**

Jill Ravey, Sociology (Junior)

# Session Four: (cont.)

3:30 p.m. - 5:00 p.m.

## Molecules and Ecology

(Battelle-Tompkins T30)

**Chair:** Professor Kathleen DeCicco-Skinner, Biology

### **Sodium Translocation by the Na/K ATPase**

Josh Levitz, Physics & Biology (Senior)

### **A Tpl2 Knockout Enhances Tumorigenesis and Affects Tumor Phenotype during Promotion**

Tejaswini Reddi, Biology (Senior)

### **Neurotransmitters of Hyperglycemic Zebrafish**

Grenye O'Malley, Biology (Senior)

### **Phylogenetic and Chemical Diversity of Three Chemotypes of Bloom-Forming Lyngbya (Cyanobacteria: Oscillatoriales) from Reefs of Southeast Florida**

Genelle Harrison, Biology (Graduate Student)

### **Temperature Effects on Microbial Communities of Sea Fan Coral as an Indicator of Disease Susceptibility**

Walker Timme, Biology (Graduate Student)

### **Mapping the Hypotelminorheic Habitat by Studying the Population Structure of Amphipods in Seeps**

Karen Kavanaugh, Biology (Graduate Student)

## From Rednecks to the Post-Colonial: The History and Culture of Race

(Kay Spiritual Life Center, Lounge)

**Chair:** Professor Andrew Lewis, History

### **"Double Consciousness" in the Early Republic: Philadelphia's Free Black Community and the Response to Colonization, 1790-1830**

Samantha D. Gibson, History (Senior)

### **"The Tragic Mixing of Blood": British Perceptions of Anglo-Egyptian Relationships, 1862-1923**

Caitlin Aber, History (Senior)

### **The Writing of an Indian Culture**

Courtney Lyons, Literature (Senior)

### **Progress of a Race?: African-American Perspectives on Eugenics, Birth Control, and Sterilization**

Ayah Nuriddin, International Studies & History (Senior)

### **You Know You're a Redneck if ... Road Kill Is Not a Joke**

Cassandra Passinault, American Studies (Senior)

### **The Afro-American Woman's Expatriation in Africa**

Lindsay Andreas, History (Senior)

## Music Performances

(Kay Spiritual Life Center, Chapel)

**Chair:** Professor Nancy Jo Snider, Performing Arts

### **"Can't Replace the Love"**

Tremayne Matthews, Audio Production (Senior)

### **Building an 8-Bit Digital Synthesizer**

Josh Reese, Audio Technology & Computer Science (Senior)

### **Fantasia on Sussex Folk Tunes: Vaughan Williams' Lost Gem**

Adam Hansen, Music (Senior)

# Morning Poster Session:

9:30 a.m. – 11:30 a.m.

## Chemistry

(Battelle-Tompkins Atrium)

### **The Activating Compounds of Sunscreen**

Ashlie Cipriano, Marine Science & Biology (Junior)  
Clare Donaldson, Postbaccalaureate Premedical Certificate  
Kimberly Fitzgibbons, Biology (Junior)

### **Beta-Lactams as Neuroprotective Agents**

Terena Herbert, Psychology (Graduate Student)

### **A Better Understanding of Melamine**

Karen Armstrong, Postbaccalaureate Premedical Certificate  
Julie Buekens, Postbaccalaureate Premedical Certificate  
Sarah Lichtenstein, Postbaccalaureate Premedical Certificate

### **Design and Synthesis of Novel Beta-Lactams with Anti-Microbial Activity**

Katherine Baugh, Biochemistry (Senior)

### **Farnesyl-Transferase Inhibitors Diminish Hutchinson-Gilford Progeria Syndrome (HGPS) Characteristics in Both HGPS Cells and a HGPS Mouse Model**

Cecilia Blair (Non-Degree Graduate Student)

### **“Green” Plastics**

Jarad Francis, Postbaccalaureate Premedical Certificate  
Wyatt Kupperman (Non-Degree Graduate Student)

### **Hybrid Plastics Using Modified Nanocomposites of Cellulose**

Jieun Lee, Biochemistry (Sophomore)

### **Methotrexate and Its Effect on DNA Synthesis and Cancer Treatment**

Amy Carothers, Liberal Studies (Senior)  
Nikita Donti, Biology (Sophomore)

### **Organic Light Emitting Diodes**

James Lawler, Postbaccalaureate Premedical Certificate  
Richard Marble (Non-Degree Graduate Student)

### **Polymer and Clay: Bound Catalysis for Biodiesel Production**

Laetitia N’dri, Chemistry (Sophomore)

### **Radicals in the Ozone**

Erica Ford, Biology (Sophomore)

### **Synthesis and Design of Neuroprotective $\beta$ -lactams**

Cherie Richards, Biochemistry (Senior)

### **The Organic Chemistry Behind Sex**

Kaylor Garcia, Interdisciplinary Studies: Sociology:  
Health Education (Senior)

### **The Synthesis and Chemical Effects of Prednisone**

Jordan Maidman, History (Sophomore)

### **Utilization of Microwave Synthesis in the Carbamoylation of DL-Norvaline**

Shirin Karimi, Literature (Junior)

## Physics

(Battelle-Tompkins Atrium)

### **Air-Based LIDAR: Construction and Testing**

David Menasche, Physics (Junior)

### **Entanglement Mechanics of the Quantum Harmonic Oscillator**

William Flynn, Mathematics & Physics (Senior)

# Afternoon Poster Session:

2:30 p.m. – 4:30 p.m.

## Biology

(Battelle-Tompkins Atrium)

### **Evolution of Opsin Gene Family in Cave and Spring Population of *Gammarus minus***

Suma Satish Chandra, Biology (Graduate Student)

## Computer Science

(Battelle-Tompkins Atrium)

### **Developing a Computational Space Heater**

David Plassmann, Computer Science (Senior)

## Environmental Science

(Battelle-Tompkins Atrium)

### **Feeding Patterns of Leaf Beetles (*Chrysomelidae*) on the Genus *Sabal* and Their Similarities to the Fossil Record**

Joshua Kaplan, Environmental Studies (Sophomore)

## Psychology

(Battelle-Tompkins Atrium)

### **An Economic Analysis of Alcoholic and Nonalcoholic Beer Drinking in Rats Exposed to Daily Restraint Stress or Handling**

Zachary Hurwitz, Psychology (Graduate Student)

### **The Effect of MDMA on Male Rat Sexual Behavior**

Ashley Westerman, Psychology (Graduate Student)

### **The Effects of Antidepressant Drug History on Cocaine-Induced Conditioned Taste Aversions**

Katherine Serafine, Psychology (Graduate Student)

### **The Effects of Nicotine Preexposure during Periadolescence or Adulthood on the Aversive Effects of Alcohol**

Jennifer Rinker, Psychology (Graduate Student)

### **Exposure to Alcohol during Adolescence or Adulthood Alters the Aversive and Locomotor-Activating Effects of Cocaine in Adult Rats**

Mary Anne Hutchison, Psychology (Graduate Student)

### **The Impact of Drug Beliefs on Drug Outcomes**

Paul Harrell, Psychology (Graduate Student)

### **The Impact of Early Environmental Rearing Conditions on the Discriminative Stimulus Effects of Cocaine in Adult Male and Female Rats**

Stephen Kohut, Psychology (Graduate Student)

### **Interpersonal Stress as an Antecedent of Rumination and the Influence of Gender**

Ramaris German, Psychology (Graduate Student)

### **The Role of Injection Cues in Production of the Morphine Preexposure Effect on Morphine-Induced Conditioned Taste Aversions**

Catherine Davis, Psychology (Graduate Student)

## Sociology

(Battelle-Tompkins Atrium)

### **Breaking the Cycle: A Critique on Teen Dating Violence**

Kyrie Bannar, Interdisciplinary Studies: Communication, Legal Institutions, Economics, and Government & Sociology (Senior)

### **Circassian Diaspora**

Ashley Sullivan (Junior)

### **A Divided District**

Laura Vogler, Sociology (Freshman)

### **System Failure: Childhood in Foster Care**

Heather Bauer, Psychology (Senior)

# Notes:

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