19th Annual Robyn Rafferty Mathias Student Research Conference

Saturday, April 4, 2009
8:30 a.m. – 5 p.m.
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
- Cross-Cultural Conflicts and Communication
- Getting Treatment Right
- The Promise and Cost of Development
- Mathematics and the World
- The Roles of Religion and Ethics
- Science and the Senses
- Creative Writing: Readings by the Authors

Session Two
10:45 a.m. – 12:15 p.m.

- Culture, Gender, and Interpretation
- The Inner Workings of Culture
- Developing the Right Policies, the Right Definitions
- Gender and the Generation of Culture
- Addiction and Reward
- How the Value of Literature Is Defined
- Cover-ups and Transatlantic Crossings

Morning Poster Session
Battelle-Tompkins Atrium
9:30 a.m. – 11:30 a.m.

Break
10:30 a.m. – 10:45 a.m.

Session Three
1:45 p.m. – 3:15 p.m.

- Politics at Home, Abroad, in the Streets, in Music, and in the Theater
- The Art (and Business) of Interpreting and Performing Art
- Methodology and the Social Sciences
- Trade, Pricing, Migration, and Capitalism
- Chemistry and the Environment
- The Idea of Woman on Stage, in Magazines, in Toys, and in Poetry
- Education in the Classroom and in Music
- Dance and Theater Performances

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
- Representations of Women: Dead, Free, Fashionable, Witchy, & Killer
- Economic Recession: Today and Yesterday
- Violence and Redemption: Religion, Class, Race, and Gender
- Molecules and Ecology
- From Rednecks to the Post-Colonial: The History and Culture of Race
- Music Performances

Luncheon
Mary Graydon Center, Tavern
12:30 p.m. – 1:30 p.m.

Robyn Rafferty Mathias Student Research Conference | 3
**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)

*Pontormo’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)

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)

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)
### 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

- **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
Thaís 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 Allewa, 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 chrysenteron 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)

**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)

---

**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)
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 Arenicia, Sociology & Film and Media Arts (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)

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)

From Rednecks to the Post-Colonial: The History and Culture of Race (Kay Spiritual Life Center, Lounge)

**Chair:** Professor Andrew Lewis, History

  Samantha D. Gibson, History (Senior)

- **“The Tragic Mixing of Blood”: British Perceptions of Anglo-Egyptian Relationships, 1862-1923**
  Caitlin Aber, History (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)

Physics (Battelle-Tompkins Atrium)

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 β-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)

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)
The organizers of the Robyn Rafferty Mathias Student Research Conference wish to express their gratitude to the following persons and organizations for their support of the conference.

Kay Mussell  
Dean

Thomas Husted  
Associate Dean for Academic Affairs

Kathleen Kennedy-Corey  
Associate Dean for Budget and Administration

Mary Schellinger  
Assistant Dean for Program Development

Chemi Montes  
Professor of Graphic Design

Lamine Laimeche, Graphic Design (Junior)  
Program Designer

Special thanks to the members of the awards committee and to all our presiding officials, commentators, presenters, and volunteers who contributed to the success of this conference.
19th Annual Robyn Rafferty Mathias Student Research Conference
Saturday, April 4, 2009
8:30 a.m. – 5 p.m.
COLLEGE of ARTS & SCIENCES