



2008

## Schedule of Presentations

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# *Colby Undergraduate Research Symposium*

*April 30 - May 2, 2008*

*Colby College, Waterville, Maine*

## *Research Presentations*

*Wednesday, April 30th*

### **SESSION I: BIOLOGY**

***Behavior and Physiological Ecology Presentations***

*Olin 335*

***Session Chair: Cathy Bevier***

*11:00 AM*

**Jessica Harold ('08)**

Assessment of the dose-effect response of atrazine on behavior, oxygen consumption, and gonadal malformations in *Xenopus laevis*

### **SESSION II: SCIENCE, TECHNOLOGY, AND SOCIETY**

***Science, Technology, and Society Studies***

*Diamond 242*

***Session Chair: James Fleming***

*1:00-3:00 PM*

**1:00 pm** **Noah Bonnheim ('11) and Caitlin Dufraine ('09)**, Science, Technology, and Society  
Feasibility Study: Solar Water Heating at Colby's Harold Alfond Athletic Center

**1:20 pm** **Katherine Klepinski ('08)**, Science, Technology, and Society  
Kennebec Valley Co-op: All Local, All Affordable

**1:35 pm** **Stephen Erario ('10)**, Science, Technology, and Society  
Moving Toward a Sustainable Waterville

**1:50 pm** **Megan Browning ('10) and Alice Evans ('10)**, Science, Technology, and Society  
Climate Change Education and Action in Local High Schools

**2:10 pm** **Brooke Wanlass ('11) and James Pinkston ('08)**, Science, Technology, and Society  
The State's Benefits from the Maine Solar Rebate Program

**2:45 pm** **Benjamin Many ('09)**, Science, Technology, and Society  
Visualizing Energy Use: 10,000 Whatts?

### **SESSION III: ENVIRONMENTAL STUDIES**

***Environmental Studies Presentations***

*Smith Room*

***Session Chair: Russell Cole***

*1:30-5:00 PM*

**1:30 pm** **Bethany Darling ('08)**  
Smart Growth and Quality of Place: Options and Opportunities in Planning for Rural Maine

**2:00 pm** **Lauren Bizzari ('09)**  
Nitrate Removal in Nitrex(TM) Permeable Reactive Barriers: Investigating Denitrification Using a <sup>15</sup>NO<sub>3</sub> Tracer

2:15 pm BREAK

**Environmental Studies Honors Presentations Follow**

2:30 pm **Alaina Clark** ('08)

Designing a Green Graduation at Colby College

3:00 pm **Courtney Larson** ('08)

Separating People and Wildlife: Zoning as a Conservation Strategy for Large Carnivores

3:30 pm **Jamie O'Connell** ('08)

Carbon Neutrality at Colby College

4:00 pm **Kerry Whittaker** ('08)

Using Variable Stomatal Sensitivity to CO<sub>2</sub> in Conifers to Reconstruct Ancient Atmospheres and Predict Future Implications of Climate Change

4:30 pm **Charles Carroll** ('08)

An Analysis of Carbon Sequestration Potential in Maine

**SESSION IV:  
General Session**

**Hurd Room  
Session Chair: Suzi Cole**

1:45-3:30 PM

1:45 pm **Yin Li** ('08), East-Asian Studies

The Relationship Between Unreality and Strength in 'Kafka on the Shore'

2:00 pm **Annelene Fisher** ('08), African Studies

Coloured Identity and Experience in South African Theatre (Goldfarb Center Student Research)

2:30 pm **Daniel Franklin** ('10), German/Russian

Revenge, Relocation, Integration, and Recovery: The Expulsion of Germans from Eastern Europe and their Role in West Germany's Post-WWII Reconstruction

2:45 pm **Andrei Roman** ('08), Economics

Living Arrangements and Subjective Well-being of Older Adults: A Comparison Between China and Japan

3:15 pm **Ivan Balbuzanov** ('09), Economics

Thou Shalt Not Kill... Thyself: The Effect of Religious Participation on Suicide

**SESSION V: LATIN AMERICAN STUDIES**

**Whitney Room  
Session Chair: Ben Fallaw**

**Latin American Studies**

4:00-5:30 PM

4:00 pm **Stephanie Bowman** ('08), Latin American Studies

In the Absence of Family: How Private Honduran Childrens Homes Meet the Needs of At-Risk Youth

4:30 pm **Abigail Hall** ('08), Latin American Studies

The Penguins' Revolution: An Analysis of Student Response to the Multi-Dimensional Chilean Educational Crisis.

**SESSION VI: ART**

**Hurd Room  
Session Chair: Veronique Plesch**

**Art**

4:00-5:30 PM

- 4:00 pm** **Justine Ludwig** ('08)  
From the Kunstkammer to the Art Museum
- 4:20 pm** **Laure-Helene Caseau** ('10)  
Jean-Honoré Fragonard: A Sentimental Affair
- 4:40 pm** **Virginia Robbins** ('09)  
Written on the Face: The Grotesque Physiognomy in Northern Renaissance Art
- 5:00 pm** **Grant Netzorg** ('08)  
If it's the Devil's Music, Satan Must Be Awfully Proud

**SESSION VII: GERMAN**

*Sex, Madness, and Transgression in German Literature*

*Hurd Room  
Session Chair: Arne Koch*

5:15-6:30 PM

- 5:15 pm** **Michael Hempel** ('11), German/Russian  
'Der Reigen als kritisches Bild der Wiener Gesellschaft' (Der Reigen as a Critical Image of Viennese Society)
- 5:45 pm** **Gretchen Markiewicz** ('08), German/Russian  
Eine zu große Rolle: Zufall in 'Das Versprechen: ein Requiem auf den Kriminalroman' und Dürrenmatts Warnung, ihn in der Wirklichkeit anzuerkennen (Too Great a Role: Chance in Dürrenmatt's 'Das Versprechen')
- 6:15 pm** **Melanie Ungar** ('08), German/Russian  
Die Frauen in Schnitzlers 'Reigen': Widerstehen gegen stereotype Geschlechtsrollen und gesellschaftliche Heuchelei (The Women in Schnitzler's 'Reigen': Resisting Stereotypical Gender Roles and Societal Hypocrisy)

## *Thursday, May 1st*

**SESSION VIII: ANTHROPOLOGY**

*Asia Pacific Modernities Presentations*

*Session Chair: Mary Beth Mills*

11:00 PM

- Diana Sternberg** ('09)  
The Sex Trade in Thailand and its Effect on Gender Roles
- Katie-Elyse Turner** ('09)  
Narratives of China: Bodies and the 2008 Beijing Olympics
- Silas Gill** ('09)  
Localization in Chinese Rock Music
- Ethel Chou** ('10)  
Taiwan's Foreign Brides

**SESSION IX: RELIGIOUS STUDIES**

*Death and Spirituality Presentations*

*Lovejoy 319  
Session Chair: Debra Campbell*

11:00 AM

**Fran Still ('10)**

Families, the State, and the Church of Christ, Scientist: Balancing Religious Autonomy and Child Welfare

**Becky Feldman ('08)**

The Complicated Relationship between Music, Religion, and Suicide

**SESSION X: AMERICAN STUDIES**

**Hurd Room**

**American Studies Honors Presentations**

**Session Chair: Margaret McFadden**

11:00-12:45 PM

**11:00 am Julie Bero ('08)**

Coalitions for Victory: The Necessity of Alliance Creation for Progressive Ballot Initiative Campaigns

**11:30 am William Fong ('08)**

Kung Fu Fighting and Masculinity

**12:00 pm Carolyn Lovejoy ('08)**

Portrayal of Masculinity in American Society as seen Through The Pickup Artist

**12:15 pm Lindsay Tolle ('08)**

Seeing Through Color-Blindness: Negotiations of Multiracial Relationships on 'Six Feet Under,' 'The L Word,' and 'Ugly Betty'

**SESSION XI:**

**Smith Room**

**General Session**

**Session Chair: Clem Guthro**

1:00-3:30 PM

**1:45 pm Meaghan Jerrett ('08), Religious Studies**

Western Converts to Eastern Religious Traditions: Authenticity or Escapism

**2:00 pm William Kinder ('08), Geology**

Societal Implications and Management of Coastal Erosion in Chatham, Massachusetts

**2:15 pm Escar Kusuma ('09), Kirsten Duda ('09) and Jennifer Myers ('09), Biology**

Cellular Mechanisms of Melatonin-Induced and Calmodulin-Inhibited Neurite Growth in *Uca pugilator* X-Organ Cells.

**2:30 pm T. U ('08), East Asian Studies**

Advocating at the Margins: Women's NGOs in China

**2:45 pm Nahita Nishmin ('08), East-Asian Studies**

The West's Impact on the East: Perceptions of Women through Times

**3:00 pm Melyn Heckelman ('08), Anthropology**

The Language of Sex: Moral Socialization and Reproductive Education in Public Schools

**SESSION XII: WOMEN, GENDER, AND  
SEXUALITY STUDIES**

**Whitney Room**

**Women, Gender, and Sexuality Studies**

**Session Chair: Lisa Arellano**

1:00-3:00 PM

**1:00 pm Lindsay Tolle ('08), Women, Gender, Sexuality**

'I'm a Carrie' becomes 'I'm a Cutter': Selling Girls Self-Harming Behavior in Young

- Adult 'Issue Lit'
- 1:30 pm** **Patrick Sanders** ('08), Women, Gender, Sexuality  
Failing Women and the Failures Who Dress Them: How Gay Male Hosts of Lifestyle Makeover Shows Fail to address the True Failure, Heteronormativity
- 2:00 pm** **Laura Webb** ('08), Women, Gender, Sexuality  
Creating PIP: Conveying the Feminist Movement to the Next Generation

**SESSION XIII: BIOLOGY**

**Olin 234**

***The Cell Cycle and Cancer Symposium***

***Session Chair: Paul Greenwood***

**1:00 PM**

**Dylan Perry** ('09)

Familial adenomatous polyposis (FAP) and Lynch syndrome: two forms of hereditary colorectal cancer

**Jessica Egan** ('08)

Improving treatment of ALL in adults and infants

**Megan Watts** ('08)

Surviving pediatric acute myeloid leukemia: Emily's story of relapse and remission

**Jennifer Zuar** ('08)

Proteasome inhibitors: a treatment for multiple myeloma and applications to other cancers

**Richard Katz** ('08)

Viruses, parasites, and cancer: a critical interplay between Epstein-Barr virus, malaria, and Burkitt lymphoma with implications on public health

**Cadran Cowansage** ('08)

Ewing's sarcoma: an overview of symptoms, treatment, and current research

**SESSION XIV: RELIGIOUS STUDIES**

**Lovejoy 344**

***Women in American Religion Presentations***

***Session Chair: Debra Campbell***

**2:30 PM**

**Nicole Raheja** ('10)

The Struggles and Triumphs of Muslim Women In America

**Amanda Burgess** ('10)

The Habit: Official Vatican Position, Impact of Vatican II, Modern Roadblocks to Wearing It

**SESSION XV: ECONOMICS**

**Diamond 341**

***Advanced Topics in Environmental Economics***

***Session Chair: Tom Tietenberg***

**2:30 PM**

**Brett McNeice** ('08)

Electricity Deregulation: Theory and Evidence

**Bobby Gorman** ('08)

The Economics of Green Architecture

**SESSION XVI: FRENCH**

**Hurd Room**

*The Other French Empire, Then and Now*

*Session Chair: Adrianna Paliyenko*

2:30-5:00 PM

- 2:30 pm** **Kristin Weigle** ('08), French/Italian  
Catholic Missionary Efforts in the Antilles and French Guyana Under Colonial Rule:  
History, Motivation, and Methods
- 3:00 pm** **Nathalie-Claire Chiavaroli** ('08), French/Italian  
The Black Napoleon: Post-Colonial Figures of Toussaint Louverture
- 3:30 pm** **Alexandra Kenyon** ('08), French/Italian  
War on the Seas: Franco-British Scramble for Mauritius Island
- 4:00 pm** **Amber Collins** ('08), French/Italian  
Rhetoric and Reality: Changing Principles and Ambivalent Implementation of Colonial  
Policy in French Indochina
- 4:30 pm** **Sarah Goldstein** ('08), French/Italian  
The Role of Gender in French Colonial Indochina

*SESSION XVII: ENVIRONMENTAL  
STUDIES*

*Diamond 223*

*Session Chair: Peter Sly*

*Dammed Maine Biographies*

2:30 PM

- Hannah Lafleur** ('11)  
Edwards Dam
- Anders Nordblom** ('10)  
Passamaquoddy/ St Croix
- Amanda Lindsay** ('11)  
Veazie Dam and Penobscot River Restoration Project
- Sarah Stevens** ('09)  
Harris Station
- Megan Saunders** ('09)  
Churchill Dam

*SESSION XVIII:*

*Whitney Room*

*General Session*

*Session Chair: Jim Terhune*

3:45-6:00 PM

- 3:45 pm** **Emily Parker** ('08), English  
Moral Philosophy in Twentieth-Century Legal Dramas
- 4:00 pm** **Hillary Smith** ('08), English  
Representations of Grief in Akhmatova's Requiem and Pushkin's The Bronze Horseman
- 4:30 pm** **Julie Casper** ('08), Religious Studies  
A Comprehensive Examination of New Immigrants: The Reverse Diaspora of  
Argentinean Jews to Israel
- 5:00 pm** **Kristen Kouttab** ('08), International Studies  
Urban Islamists: Reshaping Moroccan Politics in the 21st Century
- 5:20 pm** **Evan Phelps** ('08), International Studies

The Informal Economy in Urban Dakar: What Role Can Formalization Play?

**SESSION XIX: HISTORY**

**History Honors**

4:00-5:00 PM

**4:00 pm Caroline Brooks ('08)**

A Movement in Moments: Exploring Women's Rights and The Iranian 1979 Revolution

**4:15 pm Laura Perille ('08)**

Fashioning an Ideal: Constructions of Honor Leading Up to the English Civil War

**4:30 pm Jason Hayes ('08)**

Western Missionary Perspectives of the Taiping Rebellion (1850-1864)

**4:45 pm Timothy Regele ('08)**

A Difficult Beginning: American Educational Reform in Post-World War II Germany

**Smith Room**

**Session Chair: Raffael Scheck**

***Friday, May 2nd***

**SESSION XX: BIOLOGY**

**Behavior and Physiological Ecology Presentations**

11:00 AM

**Lauren Bizzari ('09)**

The effects of melatonin on thermoregulation in the nocturnal gecko, *Hemidactylus turcicus*

**Olin 335**

**Session Chair: Cathy Bevier**

**SESSION XXI: CHEMISTRY**

**Senior Chemistry Presentations**

11:00 AM

**Katie Harris ('08)**

Hydrogen Peroxide Production in Deep, Suboxic Lake Waters

**Doug Rooke ('08)**

The Synthesis Of Oxacalixarenes Using Nucleophilic Aromatic Substitution Catalyzed By Cesium Fluoride

**Tyler Schleicher ('08)**

The Inhibition of Thioredoxin Reductase by the Anticancer Drug Cloretazine

**Arey 5**

**Session Chair: Rebecca Conry and Das**

**Thamattoor**

**SESSION XXII: ECONOMICS**

**Economics Honors Presentations**

12:30-3:00 PM

**12:30 pm Andrei Roman ('08)**

Developing Reliable Estimates of Poverty and Inequality for Chile's Ethnic Groups

**1:00 pm Joerose Tharakan ('08)**

**Smith Room**

**Session Chair: David Findlay**



Demographic Differences in Household Expenditure for Low Income Families:  
Evidence from the United States

**1:30 pm** **Ishan Singh** ('08)

Stock Markets and Household Wealth: Can a Stock Market Crash Cause a Recession  
in The US Economy?

**2:00 pm** **Yauheniya Sidarchuk** ('08)

How Widely Watched Stock Market Indexes Predict Future Economic Activity: Two  
Centuries of Evidence Since 1800 Until Present

**2:30 pm** **Kyle Smith** ('08)

An Incumbent's Guide to Reelection: Economic Voting by State in U.S. Presidential  
Elections

**SESSION XXIII: BIOLOGY**

**Olin 1**

**Biology Honors Presentations**

**Session Chair: Frank Fekete**

**1:00-4:15 PM**

**1:00 pm** **Leslie Wardwell** ('08)

Pervasiveness of Heavy Metal and Antibiotic Resistance Due to Co-selection in  
Sphagnum Core Samples Dating Back 2000 Years

**1:15 pm** **Sarah Clark** ('08)

The Identification of a Chloramphenicol Inducible Multidrug Efflux Pump in  
*Flavobacterium johnsoniae*-like Isolates

**1:30 pm** **Victoria Work** ('08)

The Antibiotic Chloramphenicol Induces Bacterial Slime and Biofilm Formation in  
*Pseudomonas putida*

**1:45 pm** **Megan Watts** ('08)

Cytotoxicity of Diepoxybutane and Epichlorohydrin in Relation to Stages of the Cell  
Cycle

**2:00 pm** **MaryClaire McGovern** ('08)

The Effects of Alcohol and Training on Exercise Recovery Metabolism and Sprint  
Performance in the Brown Anole (*Anolis sagrei*)

**2:15 pm** Fifteen Minute Break

**2:30 pm** **Timothy Miller** ('08)

The Pollination Biology of a Peripheral Population of *Witheringia solanacea*  
(Solanaceae)

**2:45 pm** **Emily Lyczkowski** ('08)

Microhabitat Selection by the Tortoiseshell Limpet, *Tectura testudinalis*, in Tide Pools  
on the Mid-Maine Coast.

**3:15 pm** **Joshua Lord** ('08)

Movement Patterns and Feeding Behavior in the Limpet *Tectura testudinalis* Along  
the Mid-Maine Coast

**3:45 pm** **Jennifer Mizen** ('08)

Spring Arrival Dates of Maine Migratory Breeding Birds: 1896-1911 vs. 1994-2006

**SESSION XXIV: EAST ASIAN STUDIES**

**Hurd Room**

***Between Tradition and Modernity: Reconfiguration  
of Public Spaces in Urban China***

***Session Chair: Hong Zhang***

***1:00-2:30 PM***

- 1:00 pm**     **Jessie Tang** ('08), **Thomas Huff** ('08), **Robert Ferriter** ('08), **Hye Kim** ('08) and **Keane Ng** ('08), East-Asian Studies  
Between Tradition and Modernity: Reconfiguration of Public Spaces in Urban China

***SESSION XXV: PSYCHOLOGY***

***Whitney Room***

***Research in Psychology***

***Session Chair: Thane Pittman***

***1:30-3:15 PM***

- 1:30 pm**     **Walter Campbell** ('08)  
Movement Coordination in Joint Action
- 1:45 pm**     **Stacey Dubois** ('08)  
Stereotype Threat Affects False Memory Susceptibility in Older Adults
- 2:00 pm**     **Cheryl Hahn** ('08)  
The Effects of Reproductive Experience and Maternal Behaviors on Mother Rats' Cognitive Abilities and Anxiety Responses
- 2:15 pm**     **Linsey Walker** ('08)  
The Effects of Contextual Backgrounds of Natural and Artificial Images on ERPs
- 2:45 pm**     **Madeline Ragan** ('08)  
Group Decision Making in the Dictator Game: The Effect of Gender and Offer Method
- 3:00 pm**     **Raven Adams** ('08)  
The Effects of Prenatal Choline Availability on Behavioral and Neural Reactions to Social Isolation Rearing in the Rat

***SESSION XXVI: EDUCATION AND HUMAN  
DEVELOPMENT***

***Diamond 122***

***Research and Practice in Education and Human  
Development***

***Session Chair: Mark Tappen***

***2:00-4:00 PM***

- 2:00 pm**     **Justin Dunn** ('08), Education and Human Development  
Prospects for Reauthorization of the No Child Left Behind Act
- 2:20 pm**     **Terri Bello** ('10), Education and Human Development  
Learning Differences and Higher Education
- 2:40 pm**     **Jake Obstfeld** ('09), Education and Human Development  
Teach for Who? Teach for America's Effects on Inner City Schools
- 3:00 pm**     **Heidi Donahue** ('08) and **Sophia Newbury** ('08), Education and Human Development  
Panel on Student Teaching and Portfolio Presentation

***SESSION XXVII: HISTORY***

***Smith Room***

***History Honors***

***Session Chair: Raffael Scheck***

***3:00-5:00 PM***

- 3:00 pm**     **Evan Kaplan** ('08)  
 Revolutionary Hijackers in Russia and Iran: How Lenin and Khomeini Seized Control of their Respective Revolutions
- 3:20 pm**     **Brian Sweeney** ('08)  
 'A System of Silence': Philadelphia Orphanages and the Limits of Benevolence, 1780s-1830s
- 3:45 pm**     **Adam Boss** ('08)  
 A City at War: Daily life and society in Orléans during the 1428-1429 English Siege
- 4:10 pm**     **Hannah Coleman** ('08)  
 Jeane Kirkpatrick, the Committee of Santa Fe, and the Origins of the Reagan Administration's Complicity in the Nicaraguan Counterrevolution
- 4:30 pm**     **Lucia Giordano** ('08)  
 Lessons on Labor and Loss: Organization, Education, and the Women's Trade Union League of America, 1900-1930

***SESSION XXVIII: CHEMISTRY***  
***Senior Chemistry Presentations***

***Keyes 105***  
***Session Chair: Rebecca Conry and Das  
 Thamattoor***

3:00 PM

- Danny Herrick** ('08)  
 New Frontiers in Reactions of Atomic Carbon
- Jenn Bushee** ('08)  
 The Effects of Cloretazine, an Anticancer Agent, on Human Apurinic/Pyrimidic Endonuclease-1
- Matt Stein** ('08)  
 Determination of the Cytotoxic Mechanism of Epihalohydrins and Diepoxybutane
- Leanne Powers** ('08)  
 Reactivity of Superoxide in Natural Waters
- Michael Finnerty** ('08)  
 Molecular Dynamics Conformational Study of p-Sulfonatocalix[6]arene with Various Guest Molecules

***SESSION XXIX: INTERNATIONAL STUDIES***  
***International Studies Presentations***

***Hurd Room***  
***Session Chair: Jennifer Yoder***

3:00-5:30 PM

- 3:00 pm**     **Christina Feng** ('08)  
 Microfinance through a Governance Lens
- 3:30 pm**     **Nicole Terrillion** ('08)  
 Cultivating Urban Ecological Citizenship: NGOs and Environmental Perception in Quito, Ecuador
- 5:00 pm**     **Gautam Nair** ('08)  
 The Crisis of Liberalism in Egypt: Workers and the Wafd Party (Goldfarb Center Student Research)

**SESSION XXX: GOVERNMENT**

**Government Studies**

**Whitney Room**  
**Session Chair: Joe Reisert**

3:30-5:00 PM

**3:30 pm**     **Randi Arsenault ('09)**

Predicting Presidential Performance: What Must a Voter Know?

**3:45 pm**     **Jacqueline Grady ('08)**

Decisions to Abrogate Personal Liberty: The Ethics of Conscription in the United States

**4:00 pm**     **Andrei Roman ('08)**

Banco Palmas: Towards a Concept of "Solidarity Economics" - Research Report on a Goldfarb Student Research Grant

**4:30 pm**     **Andrei Roman ('08)**

Bom Conselho? - A Case Study of Community Involvement Mechanisms in the FUMAC Design of the World Bank Rural Poverty Alleviation Project (RPAP) in Pernambuco, Northeastern Brazil

**SESSION XXXI: SOCIOLOGY**

**Sociology Honors Presentations**

**Diamond 122**  
**Session Chair: Terry Arendell**

4:00-5:00 PM

**4:00 pm**     **Sara Benjamin ('08)**

A Macro-Sociological Perspective on the No Child Left Behind Act of 2001: Why Reauthorization is Not the Issue

**4:30 pm**     **Carolyn Curtis ('08)**

Self-Destructive Behaviors of Adolescent Boys and Girls