May 4th, 8:00 AM - 5:00 PM

Celebration Schedule 2013 (Saturday)

Provost's Office
Gettysburg College

Follow this and additional works at: http://cupola.gettysburg.edu/celebration

Part of the Higher Education Commons

Share feedback about the accessibility of this item.

http://cupola.gettysburg.edu/celebration/2013/Panels/51

This open access event is brought to you by The Cupola: Scholarship at Gettysburg College. It has been accepted for inclusion by an authorized administrator of The Cupola. For more information, please contact cupola@gettysburg.edu.
Description
Full presentation schedule for Celebration, Saturday, May 4, 2013

Location
Gettysburg College

Disciplines
Higher Education

This event is available at The Cupola: Scholarship at Gettysburg College: http://cupola.gettysburg.edu/celebration/2013/ Panels/51
Abstract Listing By Discipline

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africana Studies</td>
<td>30</td>
</tr>
<tr>
<td>Anthropology</td>
<td>32</td>
</tr>
<tr>
<td>Art and Art History</td>
<td>34</td>
</tr>
<tr>
<td>Asian Studies</td>
<td>40</td>
</tr>
<tr>
<td>Biology</td>
<td>41</td>
</tr>
<tr>
<td>Chemistry</td>
<td>58</td>
</tr>
<tr>
<td>Classics</td>
<td>63</td>
</tr>
<tr>
<td>Computer Science</td>
<td>66</td>
</tr>
<tr>
<td>Economics</td>
<td>68</td>
</tr>
<tr>
<td>Education</td>
<td>71</td>
</tr>
<tr>
<td>English</td>
<td>72</td>
</tr>
<tr>
<td>Environmental Studies</td>
<td>75</td>
</tr>
<tr>
<td>German Studies</td>
<td>77</td>
</tr>
<tr>
<td>Global Leadership Gettysburg College</td>
<td>78</td>
</tr>
<tr>
<td>Globalization Studies</td>
<td>84</td>
</tr>
<tr>
<td>Health Sciences</td>
<td>87</td>
</tr>
<tr>
<td>History</td>
<td>89</td>
</tr>
<tr>
<td>Interdisciplinary Studies</td>
<td>94</td>
</tr>
<tr>
<td>Mathematics</td>
<td>97</td>
</tr>
<tr>
<td>Mellon Summer Scholars</td>
<td>99</td>
</tr>
<tr>
<td>Music</td>
<td>100</td>
</tr>
<tr>
<td>Off Campus Studies Office</td>
<td>105</td>
</tr>
<tr>
<td>Organization and Management Studies</td>
<td>107</td>
</tr>
<tr>
<td>Public Policy</td>
<td>113</td>
</tr>
<tr>
<td>Religious Studies</td>
<td>114</td>
</tr>
<tr>
<td>Sociology</td>
<td>115</td>
</tr>
<tr>
<td>Spanish</td>
<td>117</td>
</tr>
<tr>
<td>Theatre Arts</td>
<td>118</td>
</tr>
</tbody>
</table>
Participants listed by session and time
Participants listed by session and time

### Music Education Teaching Portfolios - Schmucker Hall 222 Recital Hall
8.30am - 9.45am

Emma Sheffer '13
Keith Gromis '13
Kevin Psolka-Green '13
Kristin Staub '13
Matthew Carlson '13
Michelle Stukane '13

### Poster Session III - Science Center 2 and 3 Lobby
8.30am - 9.45am

Adam Poff '16
Albert Vill '16
Alecia Achimovich '16
Amanda Orzechowski '13
Ashley Boone '16
Bethany Holtz '16
Brianne Tomko '16
Cam Nguyen '13
Christina Cochran '13
Christina Jasien '13
David Van Doren '16
Elizabeth Miller '13
Emily Jankowski '16
Emily Kohlbrenner '13
Emily Love '16
Joseph Robinson '15
Katherine Boas '16
Leah Grandi '14
Matthew Dunworth '16
Olivia Ruth '13
Rose Fogliano '16

### Poster Session IV - Science Center 2 and 3 Lobby
10.00am - 11.15am

Anna Cammisa '13
Brendan McCormick '13
Charrisha Watkins '13
Cheryl Olechnowicz '13
Craig Wituszynsky '13
Dana Sahl '13
Daniel McNamara '13
David Laws '13
Erin Becker '13
Harrison Everts '13
Jia Qi Zhou '13
Jonathan Morris '13
Katherine Murphy '13
Kelly Johns '13
Kevin Lugo '13
Kristin North '13
Nicholas Jesteadt '13
Ross Nichols '13
Ryan Becker '13
Samir Lalvani '13
Sarah Alesio '13
Stephanie Gulden '13
Sterling Hallfors '13
Taylor Gaw '13
Theodore Kern '14
Tyler Keith '13

### Poster Session V - Science Center 2 and 3 Lobby
11.30am - 12.45pm

Avani Amin '13
Casina Malinchak '13
Charles Maass '13
Jennifer Middlebrooks '13
Avani Amin '13
Casina Malinchak '13
Charles Maass '13
Jennifer Middlebrooks '13
Jeremiah Johnston '13
Katherine Wilson '13
Nathan Blyer '13
Nikita La Cruz '13
Olivia Ruth '13
R. Joseph Fortenbaugh '13
Robert Weiss '13

### Propaganda in 20th Century Germany - Breidenbaugh Hall 205
11.30am - 12.45pm

Connor Lees '13
Jonathan Hofe '13
<table>
<thead>
<tr>
<th>Participants</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia Grabowski '13</td>
<td>Emma Thomas '13</td>
<td>Margaret Weisman '13</td>
</tr>
<tr>
<td>Anna Schneider '13</td>
<td>Eric Herndon '13</td>
<td>Michael Boyland '13</td>
</tr>
<tr>
<td>Caroline Clark '13</td>
<td>Jordan Swenson '13</td>
<td>Robin Arnold '13</td>
</tr>
<tr>
<td>Cassi Franz '13</td>
<td>Julie Schaub '13</td>
<td>Samir Lalvari '13</td>
</tr>
<tr>
<td>Chase Leonard '13</td>
<td>Katherine Rice '13</td>
<td>Samuel Holmes '13</td>
</tr>
<tr>
<td>Courtney Benn '13</td>
<td>Kavya Kumar '13</td>
<td>Suzanne Englot '13</td>
</tr>
<tr>
<td>Dana Sahli '13</td>
<td>Kelly Madden '13</td>
<td>Valerie Leone '13</td>
</tr>
<tr>
<td>Elizabeth Williams '13</td>
<td>Kelsey Boyce '13</td>
<td></td>
</tr>
<tr>
<td>Emily Constantian '13</td>
<td>Lindsay Menton '13</td>
<td></td>
</tr>
<tr>
<td>Emily Ruhl '13</td>
<td>Linnea Goebel '13</td>
<td></td>
</tr>
</tbody>
</table>
## Panels

### Anthropology 400 Capstone Projects I - Breidenbaugh Hall 205  
**8.30am - 9.45am**

<table>
<thead>
<tr>
<th>8.30am</th>
<th>9.45am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alyssa Foxx '13</td>
<td>Lauren Dunne '13</td>
</tr>
<tr>
<td>Kelsey Gerber '13</td>
<td>Morgan Rouscher '13</td>
</tr>
<tr>
<td>Taylor Osborne '13</td>
<td></td>
</tr>
</tbody>
</table>

### Art and Art History Panel Session I - Schmucker Hall 302  
**8.30am - 9.45am**

<table>
<thead>
<tr>
<th>8.30am</th>
<th>9.45am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Francisco '14</td>
<td>Joanna Myers '13</td>
</tr>
<tr>
<td>Eric Lee '15</td>
<td>Joshua Poorman '13</td>
</tr>
<tr>
<td>Madison Desmond '13</td>
<td></td>
</tr>
</tbody>
</table>

### Classics Senior Capstone Session I - Breidenbaugh Hall 311  
**8.30am - 9.45am**

<table>
<thead>
<tr>
<th>8.30am</th>
<th>9.45am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyson Hitte '13</td>
<td>Michael Walmer '13</td>
</tr>
<tr>
<td>Andrew Monthey '14</td>
<td>William Coates '13</td>
</tr>
</tbody>
</table>

### English Honors Theses I - Breidenbaugh Hall 209  
**8.30am - 9.45am**

<table>
<thead>
<tr>
<th>8.30am</th>
<th>9.45am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Williams '13</td>
<td>Veronica Rosenberger '13</td>
</tr>
<tr>
<td>Joshua Carmel '13</td>
<td></td>
</tr>
</tbody>
</table>

### Notions of Frontier: Literature, Geography and Identity in America's Borderlands - Science Center 151  
**8.30am - 9.15am**

<table>
<thead>
<tr>
<th>8.30am</th>
<th>9.15am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia Grabowski '13</td>
<td>Tricia Runzel '13</td>
</tr>
<tr>
<td>John Nelson '13</td>
<td></td>
</tr>
</tbody>
</table>

### Spiritual Immersion and Cultural Dialogues in Taize, France - Breidenbaugh Hall 112  
**8.30am - 9.45am**

<table>
<thead>
<tr>
<th>8.30am</th>
<th>9.45am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Pence '14</td>
<td>Kristine Harner '16</td>
</tr>
<tr>
<td>George Erl sundson '15</td>
<td>Kurt Mathisen '15</td>
</tr>
<tr>
<td>Linnea Goebel '13</td>
<td></td>
</tr>
</tbody>
</table>

### The Environment and Public Policy - Science Center 153  
**9.00am - 9.45am**

<table>
<thead>
<tr>
<th>9.00am</th>
<th>9.45am</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevin Lugo '13</td>
<td>Valerie Leone '13</td>
</tr>
</tbody>
</table>
### Anthropology 400 Capstone Projects II - Breidenbaugh Hall 205  10.00am - 11.15am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catherine Daniels '13</td>
</tr>
<tr>
<td>Emily Heeren '13</td>
</tr>
<tr>
<td>Falon Deimler '13</td>
</tr>
<tr>
<td>Kaitlin Chiarelli '13</td>
</tr>
<tr>
<td>Rebecca Taormina '13</td>
</tr>
<tr>
<td>Kaitlin Chiarelli '13</td>
</tr>
</tbody>
</table>

### Biology Senior Capstone Panel Session II - Science Center 300  10.00am - 11.15am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alice Kraiza '13</td>
</tr>
<tr>
<td>Cam Nguyen '13</td>
</tr>
<tr>
<td>Christina Jasion '13</td>
</tr>
<tr>
<td>Emily Kohlbrenner '13</td>
</tr>
<tr>
<td>Kaitlin Watrud '13</td>
</tr>
</tbody>
</table>

### Classics Senior Capstones Session II - Breidenbaugh Hall 311  10.00am - 11.15am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander Skufca '13</td>
</tr>
<tr>
<td>Audra Foster '13</td>
</tr>
<tr>
<td>Joshua Carmel '13</td>
</tr>
<tr>
<td>Kelsey Gerber '13</td>
</tr>
</tbody>
</table>

### English Honors Theses II - Breidenbaugh Hall 209  10.00am - 11.15am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia Grabowski '13</td>
</tr>
<tr>
<td>Christina Cochran '13</td>
</tr>
<tr>
<td>Sarah Parker '13</td>
</tr>
</tbody>
</table>

### Socio-Ethnic Conflict and Compromise in Modern Europe - Science Center 200  10.00am - 11.15am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Wemer '14</td>
</tr>
<tr>
<td>John Nelson '13</td>
</tr>
<tr>
<td>Kavya Kumar '13</td>
</tr>
<tr>
<td>Mia Harpel '13</td>
</tr>
</tbody>
</table>

### The Use of Music Technology in South Central Pennsylvania - Schmucker Hall 214  10.00am - 11.15am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alice Broadway '14</td>
</tr>
<tr>
<td>Eva Lorentz '16</td>
</tr>
<tr>
<td>Hudson Gillot '14</td>
</tr>
<tr>
<td>Ian Steege '14</td>
</tr>
<tr>
<td>Jennifer Yealy '14</td>
</tr>
<tr>
<td>Katherine Trautz '14</td>
</tr>
</tbody>
</table>
Participants listed by session and time

Cyberactivism in PRC and Propaganda in Germany - Breidenbaugh Hall 209 11.30am - .45am
Dean Harris '13
Kevin Bond '13

Globalization Studies Honors Thesis Presentations - Science Center 200 11.30am - .45am
Alyssa Bosold '13
Elizabeth Rupert '13
Rose Kane '13
Ross Nichols '13
Sarah Fodero '13

No Treason, Slavery, and Black Nationalism - Science Center 151 11.30am - .45am
Lauren Roedner '13
Melanie Cooper '13
William Segraves '14

Renaissance Wonders - Schmucker Hall 302 11.30am - 12.45pm
Dina Mohamed-Aly '15
Joshua Poorman '13
Lauren Kauffman '14
Rebecca Deffler '13
Sara Ketelsen '14
Shane Swink '13

Game Programming - Science Center 152 1.00pm - 2.15pm
Marcin Malec '13
Ryan Becker '13

Mellon Summer Scholars Panel Session II - Breidenbaugh Hall 209 1.00pm - 2.15pm
Alyssa Foxx '13
John Hill '13
Joshua Griffiths '14
Taylor Smart '13
# Film

**Film Studies - Breidenbaugh Hall 201 Joseph Theater**  
10.00am - 12.00pm

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christina Gallo '13</td>
</tr>
<tr>
<td>David DeBor '13</td>
</tr>
<tr>
<td>Hannah Bollinger '13</td>
</tr>
<tr>
<td>Lee Silver '13</td>
</tr>
<tr>
<td>Rachel Myers '13</td>
</tr>
<tr>
<td>Samantha Bader '13</td>
</tr>
<tr>
<td>Thomas Neufeld '13</td>
</tr>
</tbody>
</table>

**Alumni Then and Now - Breidenbaugh Hall 201 Joseph Theater**  
1.00pm - 2.15pm

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kristi Lowery '15</td>
</tr>
<tr>
<td>Lauren FitzGerald '15</td>
</tr>
<tr>
<td>Shannon Callahan '15</td>
</tr>
<tr>
<td>Shelby Creamer '15</td>
</tr>
</tbody>
</table>
## Music

**Piano Recitals - Schmucker Hall 222 Recital Hall**  
11.30am - 12.45pm

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Watkins '13</td>
<td>Lorela Ciraku '14</td>
<td>Veronika Stare '13</td>
</tr>
<tr>
<td>Jane Best '15</td>
<td>Sarabeth Hamberlin '14</td>
<td></td>
</tr>
</tbody>
</table>
Theatre

Group C - Brua Hall 215 Stevens Theatre  9.00am - 9.40am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benjamin Zepnick '13</td>
</tr>
<tr>
<td>Lawrence DelViscio '13</td>
</tr>
<tr>
<td>Mark Wojcik '13</td>
</tr>
<tr>
<td>Matthew Trepel '13</td>
</tr>
<tr>
<td>Thomas Piccirillo '13</td>
</tr>
</tbody>
</table>

Chrysothemis - Brua Hall 215 Stevens Theatre  10.00am - 10.30am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gregory Scheiber '13</td>
</tr>
</tbody>
</table>

The Balloon Catcher - Brua Hall 215 Stevens Theatre  10.45am - 11.45am

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riley Park '13</td>
</tr>
</tbody>
</table>

<EL TIGRE> - Pennsylvania Hall Outside North  12.00pm - 12.45pm

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avery Lentz '14</td>
</tr>
<tr>
<td>Felicia Pagan '13</td>
</tr>
<tr>
<td>Kierstan DeVoe '16</td>
</tr>
<tr>
<td>Mauricio Novoa '14</td>
</tr>
<tr>
<td>Paul Di Salvo '13</td>
</tr>
<tr>
<td>Yulaikis Garcia '14</td>
</tr>
</tbody>
</table>

Ancient Comedy - College Union Junction  12.45pm - 2.15pm

<table>
<thead>
<tr>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron Donnachie '14</td>
</tr>
<tr>
<td>Alexandra Dunn '14</td>
</tr>
<tr>
<td>Amanda Smith '13</td>
</tr>
<tr>
<td>Audra Foster '13</td>
</tr>
<tr>
<td>Benjamin Zepnick '13</td>
</tr>
<tr>
<td>Charles Reinhardt '13</td>
</tr>
<tr>
<td>Darcy Merrill '14</td>
</tr>
<tr>
<td>Emily Wilson '15</td>
</tr>
<tr>
<td>Joanna Hess '15</td>
</tr>
<tr>
<td>Lauren Roedner '13</td>
</tr>
<tr>
<td>Lawrence DelViscio '13</td>
</tr>
<tr>
<td>Logan Tapscott '14</td>
</tr>
<tr>
<td>Mark Wojcik '13</td>
</tr>
<tr>
<td>Matthew Trepel '13</td>
</tr>
<tr>
<td>Thomas Piccirillo '13</td>
</tr>
<tr>
<td>Tiana Wu '16</td>
</tr>
</tbody>
</table>
Program listed by session and time
Posters

Music Education Teaching Portfolios

**Music**

**Emma Sheffer**
Bachelor of Science in Music Education Portfolio Presentation

**Keith Gromis**
Music Education Student Teaching Portfolio Presentation

**Kevin Psolka-Green**
Music teaching portfolio presentation

**Kristin Staub**
Music Education Portfolio Presentation

**Matthew Carlson**
Music Teaching Portfolio

**Michelle Stukane**
Bachelor of Science in Music Education Portfolio Presentation
**Poster Session III**

8.30am - 9.45am  
Science Center 2 and 3 Lobby  

**Biology**

Adam Poff, Albert Vill, Alecia Achimovich, Ashley Boone, Bethany Holtz, Brianne Tomko, David Van Doren, Emily Jankowski, Emily Love, Katherine Boas, Matthew Dunworth, Rose Fogliano  
Comparative Genome Analysis of Mycobacteriophage BellusTerra

Adam Poff, David Van Doren, Katherine Boas, Matthew Dunworth  
Identification of Immunity Groups within Mycobacteriophage

Albert Vill, Alecia Achimovich, Ashley Boone, Brianne Tomko  
Growth characteristics of six novel mycobacteriophages on Mycobacteria smegmatis and aurum

Amanda Orzechowski  
Control of DNA damage signaling by SSPP/SSPT motifs in Aspergillus nidulans snoARif1

Bethany Holtz, Emily Jankowski, Emily Love, Rose Fogliano  
The Search for Aquatic Mycobacteriophage in Gettysburg, Pennsylvania

Cam Nguyen  
An Anti-checkpoint Role for Aspergillus nidulans snoA31/Rif1

Christina Cochran  
Time-lapse Visualization of Bacteria Growth

Christina Jasion  
Effect of fluoxetine (Prozac) on locomotion of two species of marine snail and one species of freshwater snail.

Elizabeth Miller  
Determining the function of fshr-1 in oxidative stress in Caenorhabditis elegans

Emily Kohlbrenner  
Generation of new snxAHrbl alleles by a non-complementation Assay

Joseph Robinson  
The Expression of an Antimicrobial Protein is Regulated by fshr-1
Leah Grandi
Characterizing the Opposing Functional Domains of GCK-2

Olivia Ruth
Elucidating the FSHR-1 Signaling Cascade in Caenorhabditis elegans
Poster Session IV

10.00am - 11.15am
Science Center 2 and 3 Lobby

Computer Science

Craig Witushynsky, Daniel McNamara, Katherine Murphy, Theodore Kerr
Computer Science Capstone - Android Tour Authoring Tool

David Laws, Samir Lalvani, Sterling Hallfors, Taylor Gaw
Computer Science Capstone: Android Application

Economics

Anna Cammisa
Inflation at the Zero Lower Bound

Jia Qi Zhou
The impact of China's local government debt on economic growth

Kevin Lugo

Nicholas Jesteadt
Modeling Time Trends in Asset Return Directionality

Ross Nichols
On the Orthodox Nature of Heterodox Income Distribution Theory

Mathematics

Nathan Blyler
Searching for Underlying Subpopulations of Silene Spaldingii

Ryan Becker
Playing Games on Graphs

Organization and Management Studies

Brendan McCormick
Personality Traits of ROTC Cadets

Charrisha Watkins
Bipolar Disorder and Occupational Functioning
Cheryl Olechnowicz
Attachment Theory in the Workplace: Comparison of Women’s Father-Figure & Supervisor Relationships in relation to Workplace Performance

Dana Sahli
Do birth-order and extraversion influence compatibility in romantic relationships?

Erin Becker
The Power of Silence: Introversion and Leadership

Harrison Everts
Workaholism and Personality

Jonathan Morris
Do Introverts and Extroverts Have Different Preferences on Class structure and Study habits?

Kelly Johns
Life Events as a Predictor of Personality Traits

Kristin North, Stephanie Gulden
Extraversion, Introversion and Conflict-Handling Styles

Sarah Alesio
What Can We Learn From Asking People Their Thoughts During Personality Testing?

Tyler Keith
New Facet of Introversion: Modesty
Poster Session V

11.30am - 12.45pm
Science Center 2 and 3 Lobby

Chemistry

Avani Amin
DNA Binding of Cobalt Clathrochelates

Casina Malinchak
Iron-Catalyzed Oxidative Cyclizations of Diols

Jennifer Middlebrooks, R. Joseph Fortenbaugh
Photodissociation of Dimethyl Disulfide in Solution

Jeremiah Johnston
The Partitioning of Resveratrol into the Nanorod-bound Surfactant Bilayer of Gold Nanorods

Katherine Wilson
Partitioning 6-methoxy-2-naphthol to the Bilayer of Gold Nanorods

Nikita La Cruz
Evaluating the impact of industrialization on lead levels in soils on the Gettysburg College Campus: A Chemical and Spatial Analysis

Health Sciences

Charles Maass, Robert Weiss
A Double Blind Investigation of Isokinetic Leg Strength both With and Without 200mg of Caffeine

Olivia Ruth
Hispanic Patient-Provider Interactions

Mathematics

Nathan Blyler
A Clustering Approach to Image Compression
Program listed by session and time

Poster Session VI
1.00pm - 2.15pm
Science Center 2 and 3 Lobby

Education

Lindsay Menton
Declining Membership in the Parent Teacher Association: Not Merely Coincidental

Environmental Studies

Emily Ruhl, Robin Arnold
A comparison of Adams County residents to farmers’ market attendees: A question of representation

Global Leadership Gettysburg College

Anna Schneider, Dana Sahli, Jordan Swenson, Julie Schaub, Suzanne Englot
Understanding and Embracing Cultural Differences between America and France

Caroline Clark
Bringing Denmark Back to Gettysburg

Cassi Franz
The role of Chinese aid in Samoa

Elizabeth Williams
Bringing the homeland home: Converting travel experiences into creative nonfiction

Eric Herndon
Studying Abroad in Seville, Spain Spring of 2012

Katherine Rice
My Experience Abroad and Bringing Those Experiences Home: Japan and the Global Leaders of Gettysburg College

Kavya Kumar
A Semester in Switzerland: A Globalized Experience

Kelly Madden
Study Abroad Experience in Copenhagen, Denmark

Linnea Goebel
A Modern Take on an Ancient Place: My Study Abroad Experience in Greece
Samir Lalvani, Samuel Holmes
Incredible Italy!: A Gettysburgian's story on the experiences, exposures, and excitements in one of the most beautiful places in the world.

Valerie Leone
Experiences in Panama Studying Tropical Ecology, Marine Ecosystems, and Biodiversity Conservation from the Perspective of a Global Leader of Gettysburg College

Off Campus Studies Office

Amelia Grabowski
Xenophobia without Borders: A Journey to Social Justice through Global Leadership

Courtney Benn
Returning Home: Sharing the Experiences from Life in Japan (Global Leaders of Gettysburg College)

Emily Constantian
Experiences from Wollongong, Australia, and beyond

Michael Boyland
GLGC
CET Chinese Studies Beijing

Sociology

Kelsey Boyce
Stigma and Intellectual Disability: Sometimes the Best Intentions have the Worst Results

Margaret Weisman
The Perception of Time In American Life: Can We Really Have It All?

Spanish

Chase Leonard
Cómo los inmigrantes se centralizan en las memorias del pasado como una técnica terapéutica

Emma Thomas
La historia y la memoria: Un analisis de La Sombra del Viento de Carlos Ruiz Zafón
Propaganda in 20th Century Germany

*German Studies*

**Connor Lees, Jonathan Hove**  
Propaganda in 20th Century Germany
Panels

Anthropology 400 Capstone Projects I

8.30am - 9.45am
Breidenbaugh Hall 205

*Anthropology*

**Alyssa Foxx, Kelsey Gerber, Morgan Rouscher**
Anth 400 Capstone Projects II

**Lauren Dunne, Taylor Osborne**
"Anth 400 Capstone Projects"

Anthropology 400 Capstone Projects II

10.00am - 11.15am
Breidenbaugh Hall 205

*Anthropology*

**Catherine Daniels, Falon Deimler**
Anth 400 - Capstone Projects

**Emily Heeren, Kaitlin Chiarelli, Rebecca Taormina**
Anth 400 Capstone Projects
Art and Art History Panel Session I
8.30am - 9.45am
Schmucker Hall 302

**Art and Art History**

**Emily Francisco**
Cartoons, Campaigns, and Curating: My Summer as the Exhibits Intern at Musselman Library

**Eric Lee**
Urban Exploration of Red Hook Grain Terminal

**Joanna Myers**
Humor and the Grotesque: The Art of Pieter Bruegel the Elder

**Joshua Poorman**
The Influence of the Italian Renaissance on Early Ottoman Miniature Painting

**Madison Desmond**
Subodh Gupta: Modern art in India

Biology Senior Capstone Panel Session II
10.00am - 11.15am
Science Center 300

**Biology**

**Alice Kraiza**
Measuring Bacterial Growth Curves Under Different Resource Conditions

**Cam Nguyen**
An Anti-checkpoint Role for Aspergillus nidulans snoA

**Christina Jasion**
Effect of fluoxetine (Prozac) on locomotion of one species of freshwater snail and two species of marine snail.

**Emily Kohlbrenner**
Generation of new snxAHrbl alleles in Aspergillus nidulans by a non-complementation Assay

**Kaitlin Watrud**
Effects of deforestation on microhabitat suitability for salamander communities
Classics Senior Capstone Session I

Classics

Allyson Hitte, Andrew Monthey, Michael Walmer, William Coates
Department of Classics - Senior Capstones

Classics Senior Capstones Session II

Classics

Alexander Skufca, Audra Foster, Joshua Carmel, Kelsey Gerber
Department of Classics - Senior Capstones

Cyberactivism in PRC and Propaganda in Germany

Asian Studies

Dean Harris, Kevin Bond
Under the Fading Red Sky: Mao Culture, Government, and Cyberactivism in Today's PRC

English Honors Theses I

English

Elizabeth Williams, Joshua Carmel, Veronica Rosenberger
English Honors Theses, Student Presentations

English Honors Theses II

English

Amelia Grabowski, Christina Cochran, Sarah Parker
English Honors Theses, Student Presentations
Program listed by session and time

**Game Programming**

**Computer Science**

- **Marcin Malec**
  - An Evaluation Function for UCT Search in the Game of Amazons

- **Marcin Malec, Ryan Becker**
  - Poker Squares Challenge

**Globalization Studies Honors Thesis Presentations**

**Globalization Studies**

- **Alyssa Bosold**
  - International Non-Governmental Organizations in Vietnam: A Case Study with Project Gaia, Inc.

- **Elizabeth Rupert, Rose Kane, Sarah Fodero**
  - Globalization Studies Honors Senior Thesis Presentations

- **Ross Nichols**
  - Foreign Direct Investment as a Measure of Disembedding in North Africa

**Mellon Summer Scholars Panel Session II**

**Mellon Summer Scholars**

- **Alyssa Foxx, John Hill, Joshua Griffiths, Taylor Smart**
  - Mellon Summer Scholars 2013 Panel #1
**No Treason, Slavery, and Black Nationalism**

11.30am - .45am
Science Center 151

**Africana Studies**

**Lauren Roedner**  
The Legacy of Slavery at Arlington House, Robert E. Lee Memorial

**Melanie Cooper**  
Black Nationalism Meets Cosmic Philosophy: The Evidence of Garveyist Thinking in the Works of Sun Ra

**History**

**William Segraves**  
No Treason: How Lysander Spooner's Political Works Have Shaped the Modern Libertarian Movement

**Notions of Frontier: Literature, Geography and Identity in America's Borderlands**

8.30am - 9.15am
Science Center 151

**History**

**Amelia Grabowski, John Nelson, Tricia Runzel**  
Notions of Frontier: Literature, Geography and Identity in America's Borderlands

**Renaissance Wonders**

11.30am - 12.45pm
Schmucker Hall 302

**Art and Art History**

**Dina Mohamed-Aly, Joshua Poorman, Lauren Kauffman, Rebecca Deffler, Sara Ketelsen, Shane Swink**  
Renaissance Wonders

**Socio-Ethnic Conflict and Compromise in Modern Europe**

10.00am - 11.15am
Science Center 200

**History**

**David Wemer, John Nelson, Kavya Kumar, Mia Harpel**  
Socio-Ethnic Conflict and Compromise in Modern Europe
Spiritual Immersion and Cultural Dialogues in Taize, France  

8.30am - 9.45am  
Breidenbaugh Hall 112  

*Religious Studies*  

Elizabeth Pence, George Erlandson, Kristine Harner, Kurt Mathisen, Linnea Goebel  
Spiritual Immersion and Cultural Dialogues in Taize, France  

The Environment and Public Policy  

9.00am - 9.45am  
Science Center 153  

*Environmental Studies*  

Kevin Lugo  

*Public Policy*  

Valerie Leone  
The Impacts on Environmental Worldviews on Environmental Risk, Policy Options, and Behavior.  

The Use of Music Technology in South Central Pennsylvania  

10.00am - 11.15am  
Schmucker Hall 214  

*Music*  

Alice Broadway, Eva Lorentz, Hudson Gillot, Ian Steege, Jennifer Yealy, Katherine Trautz  
The Use of Music Technology in South Central Pennsylvania
Film

Alumni Then and Now

Interdisciplinary Studies

Kristi Lowery, Lauren FitzGerald, Shannon Callahan, Shelby Creamer
Alumni Then and Now; A closer look into what makes Gettysburg so great

Film Studies

Interdisciplinary Studies

Christina Gallo
Masculinity in the Hollywood Musical of the Studio Era

David DeBor
The Gentlemen of Hazlett: An Original Short Film

Hannah Bollinger
Adapting Short Stories to Screenplays

Lee Silver, Rachel Myers, Samantha Bader, Thomas Neufeld
Good Morning Today Gettysburg
Music

Piano Recitals

11.30am - 12.45pm
Schmucker Hall 222 Recital Hal

Emily Watkins
Piano Performance

Jane Best
Celebration Piano Concert

Lorela Ciraku
Appassionata

Sarabeth Hamberlin
Debussy's first Arabesque "Arabesque No. 1. Andantino con moto"

Veronika Stare
Piano Concert
# Theatre

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
<th>Show</th>
<th>Cast</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.00pm - 12.45pm</td>
<td>Pennsylvania Hall Outside North</td>
<td><em>&lt;EL TIGRE&gt;</em></td>
<td>Avery Lentz, Felicia Pagan, Kierstan DeVoe, Mauricio Novoa, Paul Di Salvo, Yulaikis Garcia</td>
</tr>
<tr>
<td>12.45pm - 2.15pm</td>
<td>College Union Junction</td>
<td><em>Ancient Comedy</em></td>
<td>Aaron Donnachie, Alexandra Dunn, Amanda Smith, Audra Foster, Benjamin Zepnick, Charles Reinhardt, Darcy Merrill, Emily Wilson, Joanna Hess, Lauren Roedner, Lawrence DelViscio, Logan Tapscott, Mark Wojcik, Matthew Trepel, Thomas Piccirillo, Tiana Wu</td>
</tr>
<tr>
<td>9.00am - 9.40am</td>
<td>Brua Hall 215 Stevens Theatre</td>
<td><em>Chrysothemis</em></td>
<td>Benjamin Zepnick, Lawrence DelViscio, Mark Wojcik, Matthew Trepel, Thomas Piccirillo</td>
</tr>
<tr>
<td>10.45am - 11.45am</td>
<td>Brua Hall 215 Stevens Theatre</td>
<td><em>The Balloon Catcher</em></td>
<td>Riley Park</td>
</tr>
</tbody>
</table>
Abstracts by Academic Department

Africana Studies

Black Nationalism Meets Cosmic Philosophy: The Evidence of Garveyist Thinking in the Works of Sun Ra (Panel)

Student(s): Melanie Cooper

Mentor(s): Scott Hancock

Time/Location:
11:30am - 12:45am
Science Center 151

Black Nationalism Meets Cosmic Philosophy: The Evidence of Garveyist Thinking in the Works of Sun Ra

Sun Ra (1914-1993) was many things to many people. To his childhood friends in Birmingham, Alabama, his birthplace, he was Herman Poole Blount; to his friends in Chicago, and later New York and Philadelphia, he was Le Sony’r Ra; and to his multitude of fans, past and present, he remains Sun Ra, the mystic, the genius, and the fool. Although Sun Ra was a famed performance artist and composer, his days as an activist in the South Side of Chicago are not explored as much by most scholars. The messages that Sun Ra explored on the streets of Chicago, and his later work in New York and Philadelphia, most importantly in his 1973 feature film Space is the Place, share an interesting resemblance to the messages of Marcus Garvey, the late Jamaican Black Nationalist philosopher, and his group the Universal Negro Improvement Association (UNIA) in the areas of rhetorical strategies, the use of pageantry, and the conclusion that full racial freedom can only come when a person is removed from their oppressor. In fact, it is evident that Marcus Garvey, both in ideology and in aesthetics, influenced Sun Ra.
The Legacy of Slavery at Arlington House, Robert E. Lee Memorial (Panel)

Student(s): Lauren Roedner
Mentor(s): Scott Hancock
Time/Location: 11:30am - 12:45am, Science Center 151

The Legacy of Slavery at Arlington House, Robert E. Lee Memorial

Based on extensive genealogical research of the Arlington House slave families after their manumission in 1862, the National Park Service plans to host a reunion for the descendants of Arlington slaves for the sesquicentennial anniversary of their manumission. This event will be the first of its kind in the National Park Service, which has never interpreted slavery through a reunion before. Outlining the three fundamental stories of Arlington House and discussing some of the most prominent Arlington slaves, the historical legacy of slavery at Arlington House can be better understood. This paper explores the possibilities for a reunion as well as realistic interpretive goals that should be met during such an event. Remembering slavery in an interracial environment of descendants can be emotionally difficult, and the National Park Service should take great measures to host this event correctly and effectively. A successful, educational reunion may lead to similar events at other National Park Service sites in the future.
Anthropology

"Anth 400 Capstone Projects" (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lauren Dunne, Taylor Osborne</td>
<td>Amy Evrard</td>
<td>8:30am - 9:45am</td>
</tr>
<tr>
<td></td>
<td>Donna Perry</td>
<td>Breidenbaugh Hall 205</td>
</tr>
</tbody>
</table>

"Anth 400 Capstone Projects"

Anth 400 - Capstone Projects (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catherine Daniels, Falon Deimler</td>
<td>Amy Evrard</td>
<td>10:00am - 11:15am</td>
</tr>
<tr>
<td></td>
<td>Lydia Marshall</td>
<td>Breidenbaugh Hall 205</td>
</tr>
</tbody>
</table>

Anth 400 - Capstone Projects

Catherine Daniels

Communication with God

The desire to have direct communication with God, to feel His spirit and His word, is growing within the United States. Certain Evangelical groups, such as Pentecostals and Baptists, emphasize this relationship through verbal and animated worship and conversion processes. These groups place a large emphasis on religious language, the experience of a trance, and, in the case of Pentecostals, glossolalia, or speaking in tongues, within the process of communication with God. However since the 17th century, the Religious Society of Friends, more commonly referred to as Quakers, has emphasized communication and a direct relationship with God. Though the majority of Quaker worship within the United States is programmed, or run by a minister, it is the silent, unprogrammed services prevalent on the east coast which go about communication with God in a unique way. As opposed to their verbal Evangelical friends, unprogrammed Quaker services rely on silence to understand their relationship with God. Throughout the fall semester, I conducted ethnographic research with the Menallen Monthly Meeting in Biglerville, Pennsylvania to understand the fundamentals of silent worship and how it can lead to communication with God. Numerous differences between the verbal Evangelical groups and the unprogrammed Quakers were found, such as the notion of a trance. However, surprisingly, there were also some similarities between the worship methods of the Religious Society of Friends and their animated, Evangelical counterparts.
Abstracts by Academic Department

Anth 400 Capstone Projects (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Heeren, Kaitlin Chiarelli, Rebecca Taormina</td>
<td>Amy Evrard</td>
<td>10:00am - 11:15am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breidenbaugh Hall 205</td>
</tr>
</tbody>
</table>

Anth 400 Capstone Projects II (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alyssa Foxx, Kelsey Gerber, Morgan Rouscher</td>
<td>Amy Evrard</td>
<td>8:30am - 9:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breidenbaugh Hall 205</td>
</tr>
</tbody>
</table>

Anth 400 Capstone Projects II

Alyssa Foxx

Individual Abstract

Health Literacy in Adams County: Capstone

My research seeks to understand the relationship between structural violence and hegemony as barriers to achieving health literacy in Adams County, Pennsylvania, primarily in the most vulnerable populations to health illiteracy: the elderly and low income women. This research was conducted using ethnographic field methods, a literature review, as well as a critical discourse analysis.

Morgan Rouscher

Individual Abstract

Working Together: Exploring the Use of Public Archaeology in Waynesboro, Pennsylvania

Public archaeology is quickly becoming a focus of archaeological research. This paper examines public archaeology and proposes a template to present archaeological information to future visitors at Stoner Farm, an eighteenth-century site in Waynesboro, PA. I explain what public archaeology is, consider why it is becoming increasingly important, and overview various models proposed by several scholars. This paper tests a public interpretation of Stoner Farm that investigates what life was like at the time of settlement and what kinds of activities were occurring in different areas of the farm. The paper asks: what is the importance of public archaeology at Stoner Farm in particular? What kinds of models work best in this context? How can we communicate and exchange knowledge with visitors? And finally, are the models that work at Stoner Farm appropriate for other archaeological sites?
Cartoons, Campaigns, and Curating: My Summer as the Exhibits Intern at Musselman Library (Art)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Francisco</td>
<td>Felicia Else</td>
<td>8:30am - 9:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 302</td>
</tr>
</tbody>
</table>

In Summer 2012, junior Emily Francisco received the opportunity to be Musselman Library's first Exhibits Intern. Emily, who hopes to pursue the field of Museum Studies after Gettysburg, was thrilled for the chance to explore how art and art objects can reach audiences beyond the traditional museum setting. In addition to researching Civil War genre painters, nineteenth-century sheet music, and the Election of 1860, she maintained two blogs of her experiences and wrote a final paper on Civil War kitsch and its relationship to the modern art history canon. Emily will be presenting on her summer experience, addressing how it has influenced her plans for the future and the value of completing a for-credit internship.
Humor and the Grotesque: The Art of Pieter Bruegel the Elder (Panel)

Student(s): Joanna Myers  
Mentor(s): Felicia Else  
Time/Location: 8:30am - 9:45am  
Schmucker Hall 302

Pieter Bruegel the Elder, a northern Renaissance painter living in the sixteenth-century, is famous for his scenic landscapes and allegorical genre paintings. Closer inspection of his art, however, reveals a comical, droll side to the artist. It requires a magnifying glass to observe the details in his work that expose a mischievous humor and a distinct love for the grotesque. Gruesome hybrid creatures, scatological imagery, and mockery are scattered throughout his paintings and drawings. Living at a time when laughter was viewed as essential for physical well-being, Bruegel adopted the style of his predecessor Hieronymus Bosch and created a humorous, burlesque style uniquely his own. Although Bruegel’s fascination with crude humor challenges the stereotypical religious Renaissance themes, his skill at portraying realistic detail must not be overlooked. His subjects and scenes have a certain charm to them – an aura that is often simultaneously threatening and lighthearted. By further understanding the uses of humor in Bruegel’s art, I will discuss how both sixteenth century viewers may have interpreted his art, and how we as viewers today may understand it. It is perhaps only in the Renaissance that one can find such a provocative blend of humor and the grotesque, and furthermore, one that resonates all the magnificence of a Bruegel masterpiece.
# Renaissance Wonders (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dina Mohamed-Aly, Joshua Poorman, Lauren Kauffman, Rebecca Deffler, Sara Ketelsen, Shane Swink</td>
<td>Felicia Else, Kay Etheridge</td>
<td>11:30am - 12:45pm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 302</td>
</tr>
</tbody>
</table>

## Renaissance Wonders

### Dina Mohamed-Aly

**Individual Abstract**

The Gettysburg Cabinet was a student-curated show inspired by the Curiosity Cabinets of the 15th–18th centuries. In an interdisciplinary art history course titled "Wonders of Nature and Artifice," the relationship between nature and artifact during the Renaissance as being something fluid and intertwined was explored. Students learned about the development of both art and natural history (science) during the Renaissance and how their relationship was embodied in proto-museum collections. The semester concluded with a student-curated exhibit that was based on the Cabinets of Curiosities and was on display in the Schmucker Art Gallery. The exhibit contained an array of "wonders" and "curiosities" loaned by various departments of the college and from the personal collections of generous individuals. While students curated either natural objects or artifacts, the boundaries between these realms were often fused and blurred, changing the perception that art and science were two separate entities. In addition, the arrangement of these objects helped to accentuate their interaction and intrigue the viewer about the history, nature, and value of the objects. Although the objects were more contemporary, they still reflected this interaction. After the exhibit, a website containing more information on selected individual objects and a panorama of the show was released (www.gettysburgwondercabinet.wikispaces.com). This presentation, featuring the panorama, highlights the exhibition as a whole and how the naturalia and artificialia on display embody the spirit of wonder, scholarship, and appreciation for the arts and sciences at Gettysburg College and revive the Cabinet of Wonders from centuries ago.

### Joshua Poorman

**Individual Abstract**

Dutch Maps - Pictorial Symbolism in Willem Blaeu's Asia noviter delineata

This research explores the use of pictorial symbolism in Willem Blaeu’s (Dutch, 1571-1638) map Asia noviter delineata. The use of pictorial paraphernalia—animals, ships, and mythic deities—all serve to promote a subtle message of geographic and natural knowledge of the world. Alongside this subdued message is a more evident claim of Dutch naval supremacy in the Far East. By appropriating pictorial symbolism for these goals, Blaeu not only creates a mesmerizing work of art but also displays an interest in the Renaissance quest for knowledge and its significance within works of art. Much like contemporary Cabinets of Curiosities, Blaeu's Asia noviter delineata is a prime example of how one could display their personal knowledge of the world, or of the "exotic," through their collections or works of art.
Lauren Kauffman

The Significance of Fossil Illustrations in the Renaissance and Beyond: Ammonites as Natural Objects and Artistic Inspiration

Fossils and their counterparts were objects of speculation during the time of the Renaissance curiosity cabinets. Today, similar objects are on display in museums throughout the world. One of the first steps in the process of identifying fossils was and is to study the form. Even now the shapes, colors, and sizes of fossils amaze their audience, and it is no wonder that fossils fascinated the natural historians and artists of the Renaissance. In accordance with the fossils' marvellousness, they were included in great variety in Wunderkammern, Kunstkammern, and curiosity cabinets, including the exhibition featured in Schmucker Art Gallery in fall of 2012. For this exhibition, I studied imagery of fossils (particularly ammonites) and created an oil painting to better understand the process of observing and visually recording fossils.

Rebecca Deffler

The Quest for Undersea Understanding: Corals and Sea Stars in Renaissance Collections

During the Renaissance, there was great fascination with creatures of the sea. There was a longstanding tradition of the oceanic environment mirroring the heavens, because the terrestrial earth was considered to exist between the two at the center of the universe. Additionally, religious beliefs may have contributed to a collector’s desire for oceanic specimens; it is suggested that curiosities from the sea were associated with the great flood, making them spiritually significant. The collector’s ability to obtain and display items from the sea was seen as analogous to God’s power to “overturn nature’s lawful order and turn land into sea.”

Many felt that sea stars in particular exemplified the belief that “whatever is excellent in the Heavens there is a certain resemblance in the Sea, which is as it were the other’s looking glass.” Additionally, sea stars bore extensive religious symbolism related to the Virgin Mary, ‘Star of the Sea,’ and this religious connection would have encouraged collection of sea stars during the Renaissance. The echinoderms were presented in various fashions, such as dried or preserved in jars. Coral presented a dilemma to the naturalists of the Renaissance, because it was viewed as being “between life and death” and seemed to combine the animal, mineral, and vegetable into one. Coral was believed to have various powers, both medical and magical, such as protection from diabolical monsters. These beliefs, coupled with curiosity surrounding coral’s existence, contributed to its display in cabinets in its natural form and with various levels of adornment.

Sara Ketelsen

Fossils: Problematic Objects in Renaissance Cabinets

The cabinets of European aristocrats were frequently adorned with exotic animal specimens, lavish art, and intricate artifacts from foreign lands. Also tucked away in the drawers of collectors were items of disputed identity and origin. These objects were called fossils; however, the term had a different meaning during the Renaissance. The word fossil simply meant ‘dug up,’ so any object that was excavated was considered a fossil. The interest in fossils appeared in the journals of classical scholars, such as Pliny, and these petrified specimens are also mentioned in the journals of Leonardo da Vinci.

There was no single prevailing Renaissance theory as to what the fossils were. Some collectors believed that the fossils were of inorganic origin and were symbols of the unchanging order of the earth. Others believed fossils could be explained by the Great Biblical Flood and forces on the mineral kingdom. Still others thought the fossilized remains were bones of mythological creatures.

The fossils represented in the Gettysburg Cabinet embody different Renaissance thoughts regarding these mysterious creatures. The trilobite is an excellent example of a fossil that puzzled the scholars of the Renaissance because it had no analogous, extant creature. Though some fossils perplexed the collectors, other fossils were at least partly understood. The ammonite itself was known to be a shell-inhabiting creature; however scholars mistook its impression for the underside of a coiled snake. Still other fossils, like the shark teeth were less mysterious because they resembled animals still in existence.
Subodh Gupta: Modern art in India (Art)

Subodh Gupta, a contemporary Indian artist, has created a distinct collection of works focusing on the effects of urbanization and globalization in the rural communities of North India. With “home” as the central focal point, he gives life to issues that have affected India since colonial times, while also conceptually linking pop art with Indian visual culture. As India adjusts to a new era dominated by a global economy, new technologies and the facility of mass transit, the nature of home and family life continues to change.

Whether his materials are milk pails, washing buckets, tiffin boxes, chappati tongs or daal strainers, these durable items are familiar to all stratum of Indian society as an ever-present part of many Indian homes. To Gupta, these pristine, gleaming mass-market commodities symbolize India’s struggle for equilibrium between the dichotomies of urban/rural; wealth/poverty; asceticism/consumerism and low caste/high caste.

Gupta’s post-modernist ideas channel far-ranging influences and connections to artists like Jeff Koons and Ai Wei Wei. He represents a generation of young artists whose commentary tells of a country on the move, fueled by this economic growth and a materialistic mindset. He succeeds in finding an art language that references India and can also be appreciated throughout the world.
The Influence of the Italian Renaissance on Early Ottoman Miniature Painting (Panel)

Student(s): Joshua Poorman
Mentor(s): Felicia Else, Karen Pinto
Time/Location: 8:30am - 9:45am, Schmucker Hall 302

This paper explores the stylistic influence of the Italian Renaissance on Ottoman miniature painting from the reigns of Mehmet II to Suleiman the Magnificent. It seeks to both provide concrete examples of this within the Ottoman paintings themselves, along with providing possible explanations for this cross-cultural link. This paper was supported by a grant from the Middle Eastern and Islamic Studies Mellon fund.

Urban Exploration of Red Hook Grain Terminal (Art)

Student(s): Eric Lee
Mentor(s): Brent Blair
Time/Location: 8:30am - 9:45am, Schmucker Hall 302

I used to think I knew New York; crossing mid-town was impossible, cab drivers never wanted to go to Brooklyn, baristas could be found on any corner in any given neighborhood, and the weekend subway was always broken; never in my life would I feel like I knew nothing about New York. This photo essay will follow my Urban Exploration of the Red Hook Grain Terminal in Brooklyn, New York. Built in 1922, this building was the central port for all grain that came into New York City/Abandoned in 1950, the Terminal provides a unique view on New York glamour.
Asian Studies

Under the Fading Red Sky: Mao Culture, Government, and Cyberactivism in Today's PRC (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dean Harris, Kevin Bond</td>
<td>Frederick Gaenslen</td>
<td>11:30am - 12:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breidenbaugh Hall 209</td>
</tr>
</tbody>
</table>

Under the Fading Red Sky: Mao Culture, Government, and Cyberactivism in Today's PRC

Dean Harris and Kevin Bond will be presenting their individual thesis topics. Dean Harris' topic will be the current day cult of Chairman Mao and nationalist tendencies in China and the implications they may have. Kevin Bond will be focusing on the role of internet in Chinese society and the different tools and methods used by cyber-activists to affect change in China.
Biology

An Anti-checkpoint Role for Aspergillus nidulans snoA (Panel)

Student(s): Cam Nguyen  
Mentor(s): Steven James  
Time/Location: 10:00am - 11:15am, Science Center 300

Eukaryotes respond to DNA damage by activating two major damage-sensing pathways, mediated by ATM and ATR. Once DNA damage is recognized, ATM and ATR phosphorylate, and thereby activate, CHK2 and CHK1 kinases, respectively. Together, CHK1 and CHK2 kinases activate cell cycle checkpoints by phosphorylating a variety of effectors in order to halt DNA synthesis, prevent mitosis, and induce DNA repair. Acting in opposition to these two checkpoint enforcers, the telomere homeostasis regulator, RIF1, in budding yeast may act as an ‘anti-checkpoint’ protein to fine-tune the threshold for ssDNA recognition and to facilitate recovery from checkpoint arrest. In budding yeast, Rif1 anti-checkpoint activity was limited to damage at telomeric DNA sites. Furthermore, an anti-checkpoint role for Rif1 has not been demonstrated in higher eukaryotes. In the filamentous fungus Aspergillus nidulans, we are using chkA/Chk1, chkB/Chk2, and the DNA synthesis regulator nimO/Dbf4 to unravel the anti-checkpoint function of the Rif1 ortholog, snoA (suppressor of nimO). In this study, we show that defects in snoA partly alleviate the DNA damage sensitivity of cells lacking chkA (¿chkA), and largely reverse the checkpoint defect in cells deleted in the BRDF checkpoint domain (BRCT and Dbf4-similarity domain) of nimO. Whereas nimO¿BRDF ¿chkA double mutants confer synthetic lethality, loss of snoA restores viability to these strains. This suggests that snoA may act as a global anti-checkpoint regulator in A. nidulans. To test this idea further, we are continuing to study genetic interactions in cells that lack both major DNA damage response pathways mediated by chkA and chkB.
An Anti-checkpoint Role for Aspergillus nidulans snoA31/Rif1 (Poster)

**Student(s):** Cam Nguyen  
**Mentor(s):** Steven James  
**Time/Location:** 8:30am - 9:45am  
Science Center 2 and 3 Lobby

Eukaryotes respond to DNA damage by activating two major damage-sensing pathways, mediated by ATM and ATR. Once DNA damage is recognized, ATM and ATR phosphorylate, and thereby activate, CHK2 and CHK1 kinases, respectively. Together, CHK1 and CHK2 kinases activate cell cycle checkpoints by phosphorylating a variety of effectors in order to halt DNA synthesis, prevent mitosis, and induce DNA repair. Acting in opposition to these two checkpoint enforcers, the telomere homeostasis regulator, RIF1, in budding yeast may act as an ‘anti-checkpoint’ protein to fine-tune the threshold for ssDNA recognition and to facilitate recovery from checkpoint arrest. In budding yeast, Rif1 anti-checkpoint activity is limited to damage at telomeric DNA sites. Furthermore, an anti-checkpoint role for Rif1 has not been demonstrated in higher eukaryotes. In the filamentous fungus Aspergillus nidulans, we are using chkA/Chk1, chkB/Chk2, and the DNA synthesis regulator nimO/Dbf4 to unravel the anti-checkpoint function of the Rif1 ortholog, snoA (suppressor of nimO). In this study, we show that defects in snoA partly alleviate the DNA damage sensitivity of cells lacking chkA (¿chkA), and largely reverse the checkpoint defect in cells deleted in the BRDF checkpoint domain (BRCT and Dbf4-similarity domain) of nimO. Whereas nimO¿BRDF ¿chkA double mutants confer synthetic lethality, loss of snoA restores viability to these strains. This suggests that snoA may act as a global anti-checkpoint regulator in A. nidulans. To test this idea further, we are continuing to study genetic interactions in cells that lack both major DNA damage response pathways mediated by chkA and chkB.
Characterizing the Opposing Functional Domains of GCK-2

Innate immunity is the first line of defense against pathogens and is conserved across metazoans. To help further our understanding of the interaction between microbial pathogens and animal host cells, we use the nematode *C. elegans* as a model system. *C. elegans* is a useful tool for studying innate immunity because it lacks an adaptive immune response that could complicate experimental interpretations. The paradigm of innate immunity is binding of conserved structures on pathogens by pattern recognition receptors (PRRs) and activation of response pathways that lead to the production of antimicrobial effectors. Multiple signaling pathways in *C. elegans* are known to be critical for this infection response. The most studied pathway includes a p38 MAPK signaling cassette; however, the upstream receptors and modulators are currently unknown.

The protein GCK-2 has been identified as a MAP4K that may modulate the p38 MAPK pathway. Currently, it is thought that GCK-2 has two functional domains that have opposing functions, the N-terminal kinase domain and the C-terminal CNH domain. Despite numerous screenings for innate immune signaling proteins, GCK-2 has not been identified. This may be because of a complex null phenotype due to antagonistic functions of the kinase and CNH domains. However, alleles have recently become available that remove only one domain of GCK-2 without affecting the other. By determining whether mutants lacking only the kinase domain, only the CNH domain or both are sensitive to infection by *P. aeruginosa*, we hope to further characterize the functions of GCK-2.
Abstracts by Academic Department

Comparative Genome Analysis of Mycobacteriophage BellusTerra (Poster)

Student(s):
Adam Poff, Albert Vill, Alecia Achimovich, Ashley Boone, Bethany Holtz, Brianne Tomko, David Van Doren, Emily Jankowski, Emily Love, Katherine Boas, Matthew Dunworth, Rose Fogliano

Mentor(s):
Gregory Krukonis, Veronique Delesalle

Time/Location:
8:30am - 9:45am Science Center 2 and 3 Lobby

Comparative Genome Analysis of Mycobacteriophage BellusTerra

The unique mycobacteriophage BellusTerra was isolated from the Gettysburg College campus, as part of HHMI’s SEA-PHAGES initiative, based on its ability to lyse Mycobacterium smegmatis. BellusTerra was sequenced at the University of Pittsburgh and was assigned to cluster A4. The addition of this new phage to the database of sequenced mycobacteriophages allows further comparison of BellusTerra to all other cluster A phages (N = 157).

BellusTerra’s genome is 51,236 bp long and contains 89 putative genes, with a GC content of 63.9%. Although phages as a whole are incredibly diverse, the members of subcluster A4, including BellusTerra, are highly homogeneous (Average Nucleotide Identity > 97%). BellusTerra had no unique genes; all of its genes belong to gene families (“phams”) found in other A4 phages. Among the A subclusters, A4 phages share more similarities with members of subclusters A10, A7, and A3. The diversity and mosaic nature of phage genomes is due to horizontal gene transfer. This is exemplified by the genes that code for integrase in cluster A phages. Once inside of a host, phages can incorporate their DNA into the host’s genome using their own integrase, remain in the cytosol as a separate entity, or lyse the cell. DNA incorporated into the bacterial genome can also extract itself and lyse the cell when it is beneficial for the phage to do so. Most A phages have one of two integrase genes in their genome: either serine integrase (N = 99) or tyrosine integrase (N = 30, including BellusTerra). A small subset (N = 11; all A6 phages, 2 A2 and 1 A9 phage) have no integrase gene but instead have a Par-A gene, that is involved in plasmid partitioning in bacteria, at the same location in their genome. Further studies are needed to understand the role Par-A genes play in phage biology.
Control of DNA damage signaling by SSPP/SSPT motifs in Aspergillus nidulans snoARif1

In the filamentous fungus Aspergillus nidulans, snoARif1 (suppressor-of-nimO) and nimODbf4 (never-in-mitosis) are involved in DNA replication, DNA damage responses (DDR), and the induction and repair of programmed double-strand breaks (DSBs) during meiosis. nimODbf4 encodes the regulatory subunit of nimO-cdc7 kinase, whose ortholog, Dbf4-dependent kinase (DDK), is a highly conserved serine-threonine kinase. Rif1 in budding yeast localizes to telomeres, where it maintains telomere homeostasis by inhibiting both elongation and resection. In mammals, however, Rif1 has evolved new functions, acting in the intra-S phase checkpoint, facilitating recovery from replication stress, and regulating origin firing during DNA replication. In Aspergillus, loss of snoARif1 suppresses the temperature and DNA damage sensitivity of nimODbf4 mutants, suggesting that snoARif1 may act normally to inhibit the role of nimODbf4 in DDR. snoARif1 and nimODbf4 physically interact at a serine-proline rich region of snoARif1, in which are found three conserved SSPP/SSPT tetrapeptide motifs. Substitution of non-phosphorylatable alanine at all six serines (AA6x) confers strong sensitivity to double strand breaks, indicating that these three tetrapeptides in snoARif1 may function as an on/off switch controlling a DNA damage response during mitotic growth. In this study, we have used site-directed mutagenesis to dissect the function of each of these three motifs, by e.g., mutating SSPT to AAPT. Our results demonstrate that the second motif and, to a lesser degree, the first motif may act as regulatory switches for DNA damage responses. Whereas mutations in the third motif confer only very weak, if any, sensitivity to genotoxic agents, alanine replacements in the first and second motifs confer strong sensitivity similar to the original AA6x mutant. Experiments are now underway to analyze the role of each individual serine (e.g., SAPP-SAPT-SAPP or ASPP-ASPT-ASPP) in controlling the response.
Determining the function of fshr-1 in oxidative stress in Caenorhabditis elegans

Most organisms are exposed to an incalculable amount of bacteria in the course of their natural lifecycle. These bacteria can often be pathogenic and it is essential that organisms are able to detect and quickly respond defensively to infection. The primary response to infection is directed by the innate immune system, which identifies and kills invading microbial pathogens. The invertebrate Caenorhabditis elegans is particularly suited as a model for research on immune responses because it lacks a complex adaptive immune response, has relatively short generation times, and it is susceptible to intestinal infection through the use of pathogenic bacteria such as Pseudomonas aeruginosa, a bacterium which has been shown to kill C.elegans through an infection-like process. In C.elegans, fshr-1 is required for the induction of a range of antimicrobial compounds induced by P.aeruginosa. Previous data suggest reactive oxygen species (ROS) may also be critical in the response to infection by microbial pathogens, and could be involved in the fshr-1 response to P.aeruginosa. The same underlying mechanisms that make ROS an effective defense response against bacterial pathogens, however, also make ROS dangerous for normal cellular functions. Thus, when ROS are generated as part of an immune response, detoxification enzymes must also be produced as part of an oxidative stress response, so that the organism itself is not damaged. We are looking at FSHR-1’s role in the production and detoxification of ROS, thus providing a molecular connection between oxidative stress and the innate immune response conserved among multicellular organisms.
Effect of fluoxetine (Prozac) on locomotion of one species of freshwater snail and two species of marine snail.

Human pharmaceuticals or active pharmaceutical ingredients (APIs) are released into sewage treatment plants and eventually into receiving streams where they have been detected in concentrations high enough to have effects on aquatic organisms. Of these APIs, antidepressants such as fluoxetine (Prozac) have been commonly detected and have been shown to produce effects ranging from stimulation of spawning in clams to alteration of feeding behavior in striped bass. Freshwater and marine snails exposed to environmentally relevant concentrations of antidepressants detach their foot from the substrate and flip over (orifice side up). Previous experiments have shown that prior to foot detachment, some species increase crawling velocity. We hypothesize that antidepressants initially cause their toxicity by stimulating crawling which leads to foot detachment.

This study tested the effect of fluoxetine on crawling velocity in three species of snail, the oyster drill Urosalpinx cinerea, the turbo snail Lithopoma americanum, and the freshwater Physa spp. at 10-6, 10-7, and 10-8M for short periods of time. Snails were exposed to each concentration for 20 minutes, and then their velocity was measured. Results indicate a trend toward increased velocity after exposure to fluoxetine at environmentally relevant concentrations in oyster drills and in Physa.
Effect of fluoxetine (Prozac) on locomotion of two species of marine snail and one species of freshwater snail. (Poster)

Student(s): Christina Jasion  
Mentor(s): Peter Fong  
Time/Location: 8:30am - 9:45am  
Science Center 2 and 3 Lobby

Effect of fluoxetine (Prozac) on locomotion of two species of marine snail and one species of freshwater snail.

Human pharmaceuticals or active pharmaceutical ingredients (APIs) are released into sewage treatment plants and eventually into receiving streams where they have been detected in concentrations high enough to have effects on aquatic organisms. Of these APIs, antidepressants such as fluoxetine (Prozac) have been commonly detected and have been shown to produce effects ranging from stimulation of spawning in clams to alteration of feeding behavior in striped bass. Freshwater and marine snails exposed to environmentally relevant concentrations of antidepressants detach their foot from the substrate and flip over (orifice side up). Previous experiments have shown that prior to foot detachment, some species increase crawling velocity. We hypothesize that antidepressants initially cause their toxicity by stimulating crawling which leads to foot detachment. This study tested the effect of fluoxetine on crawling velocity in three species of snail, the oyster drill Urosalpinx cinerea, the turbo snail, Lithopoma americanum, and the freshwater Physa spp. at 10-6, 10-7, and 10-8M for short periods of time. Snails were exposed to each concentration for 20 minutes, and then their velocity was measured. Results indicate a trend toward increased velocity after exposure to fluoxetine at environmentally relevant concentrations in oyster drills and in Physa.
Effects of deforestation on microhabitat suitability for salamander communities (Panel)

Student(s): Kaitlin Watrud
Mentor(s): Gerardo Carfagno
Time/Location: 10:00am - 11:15am
Science Center 300

The objective of this study was to determine the impact of recent selective logging on the community of salamanders at Strawberry Hill Nature Preserve, a privately owned, non-profit education and conservation organization in south-central, Pennsylvania. I hypothesized that salamander communities would be negatively impacted by the effects of selective logging. I predicted a lower abundance of salamanders in logged areas compared to undisturbed areas, and that logged areas would exhibit significantly different microclimates compared to undisturbed areas. Study sites were established along one of the preserve’s streams to compare the abundance and distribution of salamanders in riparian buffer zones with undisturbed forest patches. Soil temperature, leaf litter, canopy cover, soil moisture and salamander cover types were also compared between the two habitat types to test for microclimate preferences by terrestrial and aquatic salamander guilds. No significant difference was found between salamander abundances in logged and unlogged areas. However, significant differences were found in salamander distribution patterns with a higher proportion of salamanders restricted to areas closer to the stream in logged areas compared to unlogged areas. Logged and unlogged habitat differed only in that unlogged areas had a higher soil temperature and canopy cover. Analysis of salamander cover types revealed a preference for rock and log cover, with aquatic salamanders selecting rock cover and terrestrial salamanders selecting log cover. While the use of riparian buffer zones may have limited the effects of logging, some of my results suggest that logging may have had subtle negative effects on the salamander communities of the preserve.
Elucidating the FSHR-1 Signaling Cascade in Caenorhabditis elegans

All classes of life must be able to protect themselves against infection. The innate immune system, which is capable of recognizing a wide variety of microorganisms and acting immediately to eliminate them, provides a primary line of defense for all plants and animals. One animal that has become increasingly popular for studies of the innate immune system is the nematode Caenorhabditis elegans. In many organisms, the innate immune system functions through cell receptors called pattern-recognition receptors (PRRs). PRRs alert the host to the presence of infection by recognizing pathogen associated molecular patterns (PAMPs). A screen of putative PRRs in C. elegans identified a G protein-coupled receptor called FSHR-1, which is required to illicit an immune response to diverse pathogens. FSHR-1 is known to act in the intestine, but its signaling pathway remains unknown. Previous work has shown that the G-alpha-s subunit GSA-1 is required for intestinal immunity, and we suspect it may be critical for the activation of FSHR-1. C. elegans has four known genes encoding adenylyl cyclase, a downstream signaling element in GPCR-mediated signaling that catalyzes the formation of the critical second messenger, cyclic AMP. Three of these four genes have been tested for a role in innate immunity, all showing no immune phenotype. We propose to investigate whether the remaining adenylyl cyclase gene, acy-4, has a role in defense against intestinal infection, acting downstream of FSHR-1, through a series of RNA interference assays.
**Generation of new snxAHrbl alleles by a non-complementation Assay (Poster)**

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Kohlbrenner</td>
<td>Steven James</td>
<td>8:30am - 9:45am</td>
</tr>
</tbody>
</table>

**Time/Location:**  Science Center 2 and 3 Lobby

**Generation of new snxAHrbl alleles by a non-complementation Assay**

nimXCdc2 in Aspergillus nidulans encodes the catalytic subunit of CDK1, the canonical cdc2-cyclinB kinase whose activation in late G2 phase triggers entry into mitosis. Within the snxA gene (suppressor-of-nimXCdc2), snxA1 was isolated as an extragenic suppressor of nimX2F223L and suppresses the heat-sensitive G2 arrest of nimX2 and permits mitosis to occur at the restrictive temperature of 42°C. snxA1 alone also confers a cold-sensitive arrest in G1 at 22°C or below. snxA encodes the A. nidulans ortholog of Saccharomyces cerevisiae Hrb1/Gbp2, nonessential shuttling mRNA binding proteins belonging to the SR (Serine-Arginine Rich) and RRM (RNA Recognition Motif) protein family. These proteins were not previously known as regulators of cell division. Deletion of snxA phenocopies snxA1, conferring cold-sensitivity and suppressing nimX2, albeit with a more severe, growth- impaired phenotype than snxA1. It was determined that the snxA1 mutation lies outside the coding region and most likely is in a proximal element such as enhancer that makes it difficult to identify. These findings suggest that (1) snxA1 is likely to be a hypomorphic mutation resulting from diminished levels of the wild-type protein, and (2) at normal levels, snxA acts to restrain the rate and timing of cell division. A non-complementation strategy was used to isolate 10 new candidate snxA mutations as well as linkage analysis, complementation testing, and DNA sequencing to verify bona fide snxA alleles and to identify the mutations in each. It is of interest to continue investigating the snxA novel mechanism in cell proliferation because it is possible that snxA may play an essential role cancerous unrestrained cell division.
Generation of new snxAHrbl alleles in Aspergillus nidulans by a non-complementation Assay

Panel

**Student(s):** Emily Kohlbrenner  
**Mentor(s):** Steven James  
**Time/Location:** 10:00am - 11:15am, Science Center 300

nimXcdc2 in Aspergillus nidulans encodes the catalytic subunit of CDK1, the canonical cdc2-cyclinB kinase whose activation in late G2 phase triggers entry into mitosis. Within the snxA gene (suppressor-of-nimXcdc2), snxA1 was isolated as an extragenic suppressor of nimX2F223L and suppresses the heat-sensitive G2 arrest of nimX2 and permits mitosis to occur at the restrictive temperature of 42°C. snxA1 alone also confers a cold-sensitive arrest in G1 at 22°C or below. snxA encodes the A. nidulans ortholog of Saccharomyces cerevisiae Hrb1/Gbp2, nonessential shuttling mRNA binding proteins belonging to the SR (Serine-Arginine Rich) and RRM (RNA Recognition Motif) protein family. These proteins were not previously known as regulators of cell division. Deletion of snxA phenocopies snxA1, conferring cold-sensitivity and suppressing nimX2, albeit with a more severe, growth-impaired phenotype than snxA1. It was determined that the snxA1 mutation lies outside the coding region and most likely is in a proximal element such as enhancer that makes it difficult to identify. These findings suggest that (1) snxA1 is likely to be a hypomorphic mutation resulting from diminished levels of the wild-type protein, and (2) at normal levels, snxA acts to restrain the rate and timing of cell division. A non-complementation strategy was used to isolate 10 new candidate snxA mutations as well as linkage analysis, complementation testing, and DNA sequencing to verify bona fide snxA alleles and to identify the mutations in each. It is of interest to continue investigating the snxA novel mechanism in cell proliferation because it is possible that snxA may play an essential role in cancerous unrestrained cell division.
Growth characteristics of six novel mycobacteriophages on Mycobacteria smegmatis and aurum (Poster)

Student(s): Albert Vill, Alecia Achimovich, Ashley Boone, Brianne Tomko

Mentor(s): Gregory Krukonis, Veronique Delesalle

Time/Location: 8:30am - 9:45am, Science Center 2 and 3 Lobby

Growth characteristics of six novel mycobacteriophages on Mycobacteria smegmatis and aurum

Mycobacteriophages are viruses that target mycobacteria as their host. Six novel phages have been isolated from the Gettysburg College campus and are known to lyse a strain of Mycobacterium smegmatis. As a first step, Mycobacterium aurum was introduced as a second host in order to further define the host range of these phages. This also allowed for the comparison of phage growth characteristics such as plating efficiency, average plaque size, and plaque turbidity on different hosts. The ability, or lack thereof, of the phages to lyse both species of bacteria will provide insight into the mechanisms of phage replication as well as possible host defenses against phage DNA integration. It is hypothesized that all six phages will lyse M. aurum. However, M. aurum grows much more slowly than M. smegmatis. It is, therefore, possible that some phages may activate the lysogenic cycle rather than the lytic cycle when infecting a slow growing host. If this is the case, we may see more turbid plaques formed when the host is M. aurum.
Identification of Immunity Groups within Mycobacteriophage (Poster)

Student(s): Adam Poff, David Van Doren, Katherine Boas, Matthew Dunworth

Mentor(s): Gregory Krukonis, Veronique Delesalle

Time/Location: 8:30am - 9:45am
Science Center 2 and 3 Lobby

Identification of Immunity Groups within Mycobacteriophage

Mycobacteriophages are a specific type of bacteriophage that infect the genus Mycobacterium. In this study, phages that infect the bacterial strain Mycobacterium smegmatis mc2 155 were examined. When a virus infects a bacterium, it has one of two options. The virus can either enter the lysogenic cycle, by incorporating its DNA into the host genome and creating a prophage, or can enter the lytic cycle and lyse the host cell. Once a phage enters the lysogenic cycle, it incorporates its DNA into the host genome, making the bacteria a lysogen. Lysogens can further be cultured and grown, creating an entire colony of bacteria that contain the viral DNA.

Spot test analysis confirmed the ability of four phage to create lysogens, including BellusTerra, our sequenced and annotated A4 phage. Subsequent streaking and inoculation created lysogenic cultures for immunity testing. Lysogens were superinfected with phage from other clusters to determine immunity groups within the mycobacteriophage population. Those that were able to lyse a particular lysogen were determined to be heteroimmune, while those that were not were considered homoimmune. Lysogens were also tested for phage release, during which the phage extracts its genome and lyses the host cell. The immunity groups were compared to the characteristics of the phages to determine if any patterns exist. Such patterns may include the ability of one cluster or subcluster to lyse lysogens produced by phage of a different cluster or subcluster.
Measuring Bacterial Growth Curves Under Different Resource Conditions (Panel)

Student(s): Alice Kraiza
Mentor(s): Gregory Krukonis
Time/Location: 10:00am - 11:15am
Science Center 300

Measuring Bacterial Growth Curves Under Different Resource Conditions

Bacillus subtilis is a Gram-positive rod-shaped soil bacterium, commonly used in microbiological studies. As the Gram-positive model organism equivalent of E. coli (which is Gram-negative), many different strains of B. subtilis have been isolated. These vary in function, morphology, growth rate, and susceptibility to viruses. In our lab, we are interested in the competitive interactions among B. subtilis strains as well as the interactions between Bacillus phages and different B. subtilis hosts. To facilitate these studies, I am developing a protocol to measure colony growth rate using a spectrophotometer. Optical density can be used as a measure of the concentration of bacteria in a suspension. Thus measuring changes in optical density through time can be used to measure colony growth rate. I am comparing five Bacillus strains, available in Dr. Krukonis' lab, which have been already sequenced. Thus, I may be able to relate variation in bacterial phenotypes (e.g., growth rate) to variation in their genotypes. Further studies will explore whether variation in nutrient requirements or susceptibility to particular phages can be correlated to particular genotypes (e.g., presence or absence of specific genes, differences in specific genes).
The Expression of an Antimicrobial Protein is Regulated by fshr-1 (Poster)

Student(s): Joseph Robinson  
Mentor(s): Jennifer Powell  
Time/Location: 8:30am - 9:45am  
Science Center 2 and 3 Lobby  

The Expression of an Antimicrobial Protein is Regulated by fshr-1

Innate immunity is the body's first line of defense against infection. One crucial aspect of the innate immune system is the release of antimicrobial proteins as a response to infection. The G-protein coupled receptor FSHR-1 defines an innate immune signaling pathway in Caenorhabditis elegans which is required for the response to a wide variety of pathogens; however, it has been difficult to make a reliable reporter to measure its activity. To this end, we have been testing whether fshr-1 impacts the activity of the gfp-promoter fusion reporter of lys-7. lys-7 is a lysozyme that is known to have antimicrobial activity and is released upon infection by a number of pathogens. Upon infection with Pseudomonas aeruginosa, however, lys-7 expression has been previously been shown to be reduced. Preliminary experiments using RNA interference to knock down the expression of fshr-1 in the lys-7 reporter strain of C. elegans SAL105 suggest that there is lower expression of lys-7 in the fshr-1 RNAi worms, especially upon infection with P. aeruginosa. Other experiments, possibly involving other pathogens would be required to determine whether this reduction in expression is due to the generally poorer health of fshr-1 RNAi knock down C. elegans or due to fshr-1’s being a part of the signaling pathway for lys-7. If fshr-1 is shown to be part of the signaling pathway that induces expression of lys-7, the lys-7 reporter strain could be used in assays to determine other members of the fshr-1 signaling pathway.
The Search for Aquatic Mycobacteriophage in Gettysburg, Pennsylvania (Poster)

Student(s): Bethany Holtz, Emily Jankowski, Emily Love, Rose Fogliano
Mentor(s): Gregory Krukonis, Veronique Delesalle
Time/Location: 8:30am - 9:45am, Science Center 2 and 3 Lobby

Bacteriophages are viruses that infect bacteria. Mycobacteriophages are a well-studied and diverse group of bacteriophages that are known to inhabit many environments. Fewer mycobacteriophages have been isolated from water than soil. In the last two years, over 30 mycobacteriophages have been isolated from soil samples on the Gettysburg College campus, but no aquatic mycobacteriophages have yet been found here. Discovery and analysis of an aquatic mycobacteriophage could provide valuable insights into the similarities and differences between terrestrial and aquatic mycobacteriophages. The intent of our study is to search for and isolate an aquatic mycobacteriophage from samples of water from Quarry Pond and Stevens Run. Any mycobacteriophage found will be analyzed in terms of plaque formation and morphological characteristics. The mycobacteriophage will then be compared to previous mycobacteriophages found in soil samples from Gettysburg College and phages isolated from water samples at other schools and universities to determine potential differences between them.

Time-lapse Visualization of Bacteria Growth (Poster)

Student(s): Christina Cochran
Mentor(s): Gregory Krukonis
Time/Location: 8:30am - 9:45am, Science Center 2 and 3 Lobby

I developed a computer automated system using a flatbed scanner to generate time lapse images of bacterial colony growth under different conditions. The short program makes a scanner run for a designated period of time taking pictures every 2 minutes (or other specified time interval). Comparison of bacterial strains growing separably or in the presence of competitors allows us to visualize the effects of antagonistic interactions between strains mediated by secreted compounds.
DNA Binding of Cobalt Clathrochelates

Metal complexes have been found to possess diagnostic and therapeutic applications to recognize DNA mismatches and serve as a DNA damaging cancer treatment. There are advantages to using transition metal complexes as DNA binding agents because the metal can hold ligands in a desired 3D confirmation and if the metal is electrochemically active, it can be used as an electrochemical probe. In this study clathrochelates, transition metal complexes in which the metal ion is completely encapsulated by a ligand cage, are examined for their ability to interact with DNA. The substituents on the periphery of the clathrochelates can be adjusted to explore the mode of noncovalent DNA interaction. A binding constant can be measured electrochemically to help understand the mode of the DNA and clathrochelate interaction. In this experiment, a constant clathrochelate concentration was studied in the presence of an increasing DNA concentration by differential pulse voltammetry to determine if clathrochelates can bind DNA and gain some understanding of the mode of binding.
Evaluating the impact of industrialization on lead levels in soils on the Gettysburg College Campus: A Chemical and Spatial Analysis (Poster)

Student(s): Nikita La Cruz
Mentor(s): Joseph Grzybowski
Sarah Principato

Time/Location:
11:30am - 12:45pm
Science Center 2 and 3 Lobby

Evaluating the impact of industrialization on lead levels in soils on the Gettysburg College Campus: A Chemical and Spatial Analysis

The purpose of this study is to determine the impact of past industrialization on lead levels in soil on the Gettysburg College campus located in South Central, PA. The soil samples used in this analysis were therefore collected from areas that were impacted by industrialization, including a railroad, a paint shop and quarry, and from areas that were not impacted by industrial activities. The soil samples were collected using a hand auger, dried in an oven at 50°C for 24 hours, and sieved. The less than 2 mm fraction of each sample was digested using the Environmental Protection Agency's Method (3050B). The digested samples were analyzed using flame atomic absorption spectrometry to determine the lead concentrations. The measured lead concentrations were mapped using ArcGIS and a kriging surface was made and subsequently used to determine the lead concentrations between measured samples. Preliminary results indicate that lead concentration varies with depth and that the majority of sites tested have lead concentrations below 400 ppm (the no concern or urban background level identified by the EPA). There is at least one site that has a concentration of 688 ± 37 ppm, and this lead concentration is in the level of concern concentration identified by the EPA.
Iron-Catalyzed Oxidative Cyclizations of Diols (Poster)

Student(s): Casina Malinchak

Mentor(s): Timothy Funk

Time/Location: 11:30am - 12:45pm
Science Center 2 and 3 Lobby

Iron-Catalyzed Oxidative Cyclizations of Diols

Cyclic esters, or lactones, are a functional group found in many biologically important molecules. While a variety of compounds can catalyze the synthesis of a lactone from a diol, expensive and toxic precious metal containing molecules are most commonly used. Shvo’s catalyst, a ruthenium containing dimer, is an example of one such molecule. Due to the obvious downfalls of precious metals, iron would be favorable because of its low toxicity and relatively inexpensive cost, if developed properly. Previously, an iron-hydride created by Knölker and discovered by Casey and Guan to hydrogenate ketones was found to be an active catalyst for diol oxidative cyclization but their compound was not air stable, which made it unrealistic for widespread use. It did prove, however, that iron could be used for these reactions. Past research in this group has aimed to create air stable iron-catalysts that will work similarly to the air-sensitive iron hydride. This project has focused on oxidizing alcohols to lactones using two previously developed (cyclopentadienone)iron carbonyl compounds. Both primary and secondary alcohols with differing steric hindrances and structures were used to create 5, 6, and 7 membered rings and examine the reactivity of the catalysts. These results were favorable.
Partitioning 6-methoxy-2-naphthol to the Bilayer of Gold Nanorods (Poster)

Student(s): Katherine Wilson
Mentor(s): Lucas Thompson
Time/Location: 11:30am - 12:45pm
Science Center 2 and 3 Lobby

The partitioning of 6-methoxy-2-naphthol into the surfactant bilayer on gold nanorods

Since prehistoric times gold has been recognized as a precious external metal, but in the past few decades, gold has surfaced as a precious metal in the chemical and medicinal world. Because of the newly discovered applications of this metal, many new areas of research have begun. One of those areas is the use of gold nanorods in photothermal therapy via cell ablation and photothermal activated drug and gene delivery. For drug delivery applications, it is of utmost importance to understand the energetics of the drug/nanoparticles interactions. Gold nanorods are used because of their unique optical properties, which arise from the localized surface plasmon resonance. This LSPR is manifested in two absorption bands in the visible region of the electromagnetic spectrum that can be tuned via the synthetic methodology. The synthetic method also leaves the surface of the nanorods with a bilayer of cetyltrimethylammonium bromide, which provides an overall positive surface charge and a thin hydrophobic region of about 3nm. This hydrophobic region is capable of sequestering nonpolar molecules. The focus of this research is determining the concentration of 6-methoxy-2-naphthol that will partition into the bilayer on the gold nanorods.

Photodissociation of Dimethyl Disulfide in Solution (Poster)

Student(s): Jennifer Middlebrooks, R. Joseph Fortenbaugh
Mentor(s): Michael Wedlock
Time/Location: 11:30am - 12:45pm
Science Center 2 and 3 Lobby

Photodissociation of Dimethyl Disulfide in Solution

We present the ultraviolet resonance Raman spectrum of dimethyl disulfide excited at 266 nm in solution for several solvents. Resonance Raman spectra provide insight into the photodissociation dynamics of a molecule as it leaves the Franck-Condon region following electronic excitation. In the case of dimethyl disulfide, the spectra taken in solution are significantly different than our previously published gas phase spectra suggesting the possibility of differing dissociation dynamics in the liquid and gas phases.
The Partitioning of Resveratrol into the Nanorod-bound Surfactant Bilayer of Gold Nanorods

Student(s): Jeremiah Johnston  
Mentor(s): Lucas Thompson  
Time/Location: 11:30am - 12:45pm  
Science Center 2 and 3 Lobby

Gold nanorods remain stable in aqueous solutions due to electrostatic repulsions from the positively-charged cetyltrimethylammonium bromide (CTAB) surfactant bilayer that encapsulates each nanorod during synthesis. This bilayer has attracted attention in the field of targeted drug delivery due to the ease with which small, hydrophobic molecules partition into the hydrophobic core of the CTAB bilayer. Although the knowledge of the types of molecules that can partition into the CTAB bilayer is vast, few groups have made quantitative measurements indicating the energetic favorability of these small molecules entering and remaining in the hydrophobic core. Using a simple assay and UV-Vis spectroscopy, this work has found the maximum loading capacity and partitioning coefficient for resveratrol, a small hydrophobic molecule of biological significance, into the CTAB bilayer of gold nanorods. After discovering that the partitioning of the molecule can be described by the Langmuir model, we found values for the maximum number of bound resveratrol and the partitioning coefficient at 25 °C that agree with values derived from the literature for a similar molecule, 1-naphthol.
### Classics

**Ancient Comedy (Theatrical)**

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aaron Donnachie, Alexandra Dunn, Amanda&lt;br&gt;Smith, Audra Foster, Benjamin Zepnick, Charles Reinhardt, Darcy Merrill, Emily Wilson, Joanna Hess, Lauren Roedner, Lawrence DelVisco, Logan Tapscott, Mark Wojcik, Matthew Trepel, Thomas Piccirillo, Tiana Wu</td>
<td>H. Brown</td>
<td>12:45pm - 2:15pm&lt;br&gt;College Union Junction</td>
</tr>
</tbody>
</table>
Department of Classics- Senior Capstones (Panel)

<table>
<thead>
<tr>
<th>Student(s)</th>
<th>Mentor(s)</th>
<th>Time/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexander Skufca, Audra Foster, Joshua Carmel, Kelsey Gerber</td>
<td>GailAnn Rickert, H. Brown, Jonathan David</td>
<td>10:00am - 11:15am, Breidenbaugh Hall 311</td>
</tr>
</tbody>
</table>

**Department of Classics- Senior Capstones**

**Alexander Skufca Individual Abstract**

Critical Intervention in Book V of Xenophon's _Hellenica_

Xenophon’s Hellenica has proven to be a crucible for debate. While the histories of Herodotus and Thucydides have clear proems with stated goals, Xenophon’s Hellenica begins with the final years of the Peloponnesian War and ends with the battle of Mantinea (in 362 B.C.) leaving the fate of Sparta hanging in the balance. His bracketing of themes by direct authorial intervention into the narrative allows readers to understand his own conceptualization of its individuals and events in addition to giving clues about his view of poleis and their policies. In Hellenica, Xenophon makes clear didactic statements about the fall of Spartan arche and develops a unique understanding of hegemony in the fourth century. This study examines such interventions in the years after the King’s Peace in 387 and the Spartan seizure of the Cadmea in 382 and, by comparing them to his other works, seeks to show that Xenophon’s anticipates Sparta’s fall in her actions leading the illegal occupation of Thebes. Hubris waxes with power (Hell. 5.2.18), and Xenophon describes four specific applications of harsh policy by Sparta towards other Greek cities that do not weave into his view of proper and just foreign policy. The dioikismos of Mantinea, the interference on behalf of Philiasian exiles, the war against Olynthus, and the seizure of the Cadmea, all are examples of a Spartan policy that, for Xenophon, only weakened her position in the international politics of Greece.

**Allyson Hitte, Andrew Monthey, Michael Walmer, William Coates**

**Individual Abstract**

Metrology of an Early Bronze Age Settlement in the Jezreel Valley

The Early Bronze Age inhabitants of Tel-Megiddo East were in many ways socially and politically connected to the larger city of Megiddo. Tel Megiddo East is directly adjacent to the Tel that is located in northern Israel in the Jezreel Valley. One way to determine a social and political connection is the architectural specialization that was used to design the elite structures found at Tel-Megiddo East. This research has concluded that the builders of Tel-Megiddo East used the cubit, a standard unit of measurement, when designing the settlement during the Early Bronze Age.
Group C (Theatrical)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benjamin Zepnick, Lawrence DelViscio, Mark Wojcik, Matthew Trepel, Thomas Piccirillo</td>
<td>H. Brown</td>
<td>9:00am - 9:40am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Brua Hall 215 Stevens Theatre</td>
</tr>
</tbody>
</table>

Group C
Computer Science

An Evaluation Function for UCT Search in the Game of Amazons (Panel)

Student(s): Marcin Malec
Mentor(s): Todd Neller
Time/Location: 1:00pm - 2:15pm, Science Center 152

An Evaluation Function for UCT Search in the Game of Amazons

Using the Game of Amazons as a challenge domain, we experimentally determine the role of complex evaluation function in the performance of the MCTS algorithm and introduce a precise way to meaningfully combine two or more evaluation functions. Further, we show experimentally that the MCTS can benefit from complex evaluation functions and discuss possible improvements.

Computer Science Capstone - Android Tour Authoring Tool (Poster)

Student(s): Craig Witushynsky, Daniel McNamara, Katherine Murphy, Theodore Kerr
Mentor(s): Ivaylo Ilinkin, Rodney Tosten
Time/Location: 10:00am - 11:15am, Science Center 2 and 3 Lobby

Computer Science Capstone - Android Tour Authoring Tool

The authoring tool group developed an online application for creating interactive tours on an android device. The application allows users to upload media and plan a tour path using google maps. The tour is stored online for download through an android device.
Computer Science Capstone: Android Application (Poster)

Student(s): David Laws, Samir Lalvani, Sterling Hallfors, Taylor Gaw  
Mentor(s): Ivaylo Ilinkin, Rodney Tosten  
Time/Location: 10:00am - 11:15am, Science Center 2 and 3 Lobby

The Gettysburg Choose-A-Tour App was built to provide tourists, who want to explore the historical areas of Gettysburg on foot, with an interactive and personal experience. Its main purpose is to provide users with real-time directions, alerts, information, and an array of media relevant to their specific tour. The app is designed to download and build a tour from an online feed, where experts, and professionals have created their custom tours. In this way, the Android-based app renders an intuitive tour that optimizes the experience for the user.

The app was created by the seniors majoring in Computer Science in conjunction with the Civil War Institute.

Poker Squares Challenge (Panel)

Student(s): Marcin Malec, Ryan Becker  
Mentor(s): Todd Neller  
Time/Location: 1:00pm - 2:15pm, Science Center 152

Poker Squares Challenge

In this interactive talk, we will introduce the game of Poker Squares (a.k.a. Poker Solitaire, Poker Square), where a player sequentially places random playing cards into a 5-by-5 grid in order to maximize the score of poker hands in each of the grid’s 5 rows and 5 columns. We will then play a game together using a common card deck draw. From this experience of the game, we will discuss strategies for human and computer play resulting semester-long programming contest.
Economics

Inflation at the Zero Lower Bound (Poster)

Student(s): Anna Cammisa
Mentor(s): Charles Weise
Time/Location: 10:00am - 11:15am
Science Center 2 and 3 Lobby

Inflation at the Zero Lower Bound

In December 2008, following the global financial crash and recession, the United States hit the zero lower bound on interest rates. This new monetary environment has forced the Federal Reserve to resort to unconventional monetary policy options in order to further economic recovery. This paper first provides a thorough discussion and analysis on these three unconventional tools - large-scale asset purchases (quantitative easing), forward guidance and inflation. Following this analysis, it is shown that a program of quantitative easing along with forward guidance, as well as higher inflation can be beneficial to economic recovery at the zero lower bound. Quantitative easing, along with forward guidance, has shown to be very controversial, partly due to concerns that asset purchases will raise inflation. In order to answer this question, this paper seeks to analyze the relationship between Federal Open Market Committee (FOMC) announcements of asset purchases and inflation expectations. To do so, a simple event study analysis was employed around dates of purchase announcements. Also, this paper builds a crude inflation expectations forecast model in order to try and determine the influence of purchase announcements on expected inflation. Ultimately, this paper concludes that there is no significant relationship between FOMC asset purchase announcements and inflation expectations. These empirical and earlier theoretical findings support a continued program of quantitative easing and forward guidance, along with higher inflation targets in order to foster greater recovery at the zero lower bound.
Modeling Time Trends in Asset Return Directionality (Poster)

Student(s): Nicholas Jesteadt
Mentor(s): Drew Murphy
John Cadigan
Tsu-ting Lin
Time/Location: 10:00am - 11:15am
Science Center 2 and 3 Lobby

Modeling Time Trends in Asset Return Directionality

My honors research for the Economics Department focuses on directional predictability and momentum of individual asset returns in the Stock Market in an arbitrage pricing model building upon the framework of the Capital Asset Pricing Model. It is grounded in Behavioral Finance Theory and the herding movement of investors. Using MatLab software, I was able to develop and test an oscillatory time trend model in a regression on asset returns to determine if it assists in day-to-day directional forecasting.

On the Orthodox Nature of Heterodox Income Distribution Theory (Poster)

Student(s): Ross Nichols
Mentor(s): Ryan Dodd
Tsu-ting Lin
Time/Location: 10:00am - 11:15am
Science Center 2 and 3 Lobby

On the Orthodox Nature of Heterodox Income Distribution Theory

The goal of this paper is to show that orthodox and heterodox theories of personal income distribution developed in the mid-twentieth century are effectively identical, despite their claims to the contrary. While segmented labor market theory contends that neoclassical theories of personal income distribution, such as human capital theory, ignore the impact of social institutions on the labor market, human capital theory actually implicitly incorporates them. Social institutions are, therefore, just as important in the orthodox approach to personal income distribution. Yet, while this is the case, the heterodox perspective is valuable because of the stress it places on social institutions, the importance of which is not always explicitly recognized in human capital theory.

**Student(s):**
Kevin Lugo

**Mentor(s):**
John Cadigan
Rutherford Platt

**Time/Location:**
10:00am - 11:15am
Science Center 2 and 3 Lobby

This paper uses a spatially explicit and dynamic common pool resource experiment to compare renewable resource extraction behavior between four treatments varying (1) open-access and sole ownership institutions and (2) mobility of the renewable resource. The primary purpose is to test the hypothesis that introducing resource mobility into a sole ownership regime will cause subjects to follow a myopic strategy rather than the maximizing strategy of a sole owner. I also test the hypothesis that open-access firms are indifferent to resource dispersal. The results show that efficiency is unaffected by dispersal but the behavior of sole owners differs between dispersal conditions. Extraction requests increase at a faster rate under dispersal, fewer tokens remain un-extracted, and some subjects show strategic behavior resulting in greater than 100% efficiency. This is a pilot study that presents preliminary evidence of a behavioral change. The results are subject to experimental factors such as subject misperceptions of linearity and statistical significance suffers from a small subject pool.

The impact of China's local government debt on economic growth (Poster)

**Student(s):**
Jia Qi Zhou

**Mentor(s):**
Zhining Hu

**Time/Location:**
10:00am - 11:15am
Science Center 2 and 3 Lobby

After China rolled out a 4 trillion economic stimulus plan in 2008 to alleviate the impact of global recession, many countries around the world praised the efficiency of this government. However, as the marginal effect of the rescue package diminished, many other problems resurfaced to the ground especially the local government debt. The local government debt to GDP ratio increases as much faster pace than the central government does due to the sluggish growth in real estate market. Therefore, in this research, I will develop a model to evaluate China's local government debt level and future growth.
Education

Declining Membership in the Parent Teacher Association: Not Merely Coincidental (Poster)

Student(s): Lindsay Menton  
Mentor(s): Divonna Stebick  
Time/Location: 1:00pm - 2:15pm  
Science Center 2 and 3 Lobby

Declining Membership in the Parent Teacher Association: Not Merely Coincidental

The Parent Teacher Association is a well-known national organization that aims to improve the quality of education for students enrolled in public schools nationwide. It aims to achieve this by creating positive relationships between parents, teachers, and administrators who can work together as activists to advocate for and promote educational reform. The National Parent Teacher Association has state branches that help connect it with even more localized regional and individual school membership groups. However, “PTA membership has continued to decline after reaching its peak of 12,131,318 (members) in 1962-63” (Harr 2002). This paper aims to discover what could account for this decline. Through thorough examination of relevant literature and surveying local members of Parent Teacher Associations revealed that the decline can specifically be attributed to a conflict of interest and differing priorities between the national and local branches of the Parent Teacher Association.
### English Honors Theses, Student Presentations (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia Grabowski, Christina Cochran, Sarah Parker</td>
<td>Robert Garnett</td>
<td>10:00am - 11:15am Breidenbaugh Hall 209</td>
</tr>
</tbody>
</table>

### English Honors Theses, Student Presentations

This panel will present the work of those students who completed on honors thesis in English

#### Individual Abstract

**Amelia Grabowski**

**She's A Brick House: August Wilson and the Maternal Stereotype of Black Womanhood**

In his Century Cycle of plays, August Wilson tells ten distinct stories of families in or linked to the Hill District, an African American community in Pittsburgh; one play taking place in each decade of the twentieth century. Through these plays, Wilson's audience sees the Hill District and America evolve, while prejudice, oppression, and poverty remain constant. Many scholars argue that sexism provides a fourth common factor, asserting that Wilson portrays the female characters in the male-fantasized, stereotypical roles of the Mammy or the Jezebel figure, rather as realistic, empowered, and complex women. However, close examination of the women with in each of Wilson's plays reveals that Wilson does not embrace these stereotypes, but subverts them, allowing sexuality and maternity to serve a source of empowerment, not subordination and subservience. This paper will examine Wilson's subversion of the Mammy stereotype, which is particularly evident in the centrality of the maternal characters to the plays' action and character development, and is underscored by metonymic relations to the sets. The Piano Lesson, Gem of the Ocean, and Fences best illustrate Wilson's empowering mechanisms and will be principally discussed, although the effects can be seen in each of Wilson's ten plays.

#### Individual Abstract

**Sarah Parker**

**If It Were A Snake, It Would Have Bit You**

Heritage is inescapable. Whether it's in a nasal “a” or the turn of a phrase, we each exhibit our ancestral sources, and with this collection of poetry, I attempt to examine my own. Born of a family that has resisted movement for over a century, I work within the cultural traditions of Appalachian knowledge and folklore to explore my own connection with the landscape of the Blue Ridge Mountains, presenting it within the context of personal experience. Through a variety of poetic forms, from ekphrastic free verse to contemplative tankas, this collection examines personal heritage through varied lenses. Exploring the dichotomy of connection and disillusion, of volition and guilt, of desire and fear, this collection works to reconcile the discomfort and tension of maturation.

### English Honors Theses, Student Presentations

This panel will present the work of those students who completed on honors thesis in English

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Williams, Joshua Carmel, Veronica Rosenberger</td>
<td>Robert Garnett</td>
<td>8:30am - 9:45am Breidenbaugh Hall 209</td>
</tr>
</tbody>
</table>
A comparison of Adams County residents to farmers’ market attendees: A question of representation (Poster)

**Student(s):** Emily Ruhl, Robin Arnold

**Mentor(s):** Rutherford Platt

**Time/Location:**
1:00pm - 2:15pm
Science Center 2 and 3
Lobby

Farmers’ markets provide a place where consumers can buy fresh, usually locally grown produce straight from the growers, and generally have a positive impact on many aspects of a community (Brown and Miller, 2008). The purpose of this study was to analyze certain demographics of the Gettysburg area farmers’ market attendees in Adams County, Pennsylvania and compare these to the demographics all of the area’s residents. Specifically, this study will compare race, age, gender, education status, and average annual income between the two datasets in order to better understand the type of customer that typically attends the farmers’ markets versus the general population of the surrounding area. By analyzing this, our study aims to evaluate how the farmers’ markets in Adams County can better service its residents as a whole. The results of this study indicated that the majority of farmer's market attendees were white and between the ages of 30-64, which is consistent with the majority of the Adams County population. However, the results also indicated that females, high-income residents, and residents with advanced education degrees may be over-represented at the farmers' markets. A lack of public transportation and market hours may be factors that are limiting the accessibility of the markets to low-income and low-education status individuals. Successfully attracting a wider customer base to these markets would be an opportunity for economic growth and increased stability in Adams County.

Student(s): Kevin Lugo
Mentor(s): John Cadigan, Rutherford Platt
Time/Location: 9:00am - 9:45am, Science Center 153


This paper uses a spatially explicit and dynamic common pool resource experiment to compare renewable resource extraction behavior between four treatments varying (1) open-access and sole ownership institutions and (2) mobility of the renewable resource. The primary purpose is to test the hypothesis that introducing resource mobility into a sole ownership regime will cause subjects to follow a myopic strategy rather than the maximizing strategy of a sole owner. I also test the hypothesis that open-access firms are indifferent to resource dispersal. The results show that efficiency is unaffected by dispersal but the behavior of sole owners differs between dispersal conditions. Extraction requests increase at a faster rate under dispersal, fewer tokens remain un-extracted, and some subjects show strategic behavior resulting in greater than 100% efficiency. This is a pilot study that presents preliminary evidence of a behavioral change. The results are subject to experimental factors such as subject misperceptions of linearity and statistical significance suffers from a small subject pool.
German Studies

Propaganda in 20th Century Germany (Panel)

Student(s): Connor Lees, Jonathan Hofe
Mentor(s): Kerry Wallach
Time/Location: 11:30am - 12:45pm
Breidenbaugh Hall 205

Propaganda in 20th Century Germany

These presentations grow out of the German Studies Senior Seminar, the capstone course in German Studies. In interdisciplinary ways, these projects explore state mandated propagandistic written and visual texts that were used systematically to influence societies and populations in 20th-century Germany, specifically Nazi Germany and East Germany. They further examine topics such as the metaphorical and political power of language, linguistic and visual rhetorical strategies, and theories of mass media.

Jonathan Hofe

Creating Socialist Youth: Propaganda in Children's Literature in East Germany

The purpose of my project is to demonstrate the indoctrinating effects of propaganda on children in the socialist state of East Germany, particularly in the 1960s and 1970s. In my research I examine several publications for children in the GDR written before Erich Honecker became head of the Socialist Unity Party of Germany. One publication is a children’s picture book; another is a yearly calendar distributed to members of the Young Pioneers (an organization similar to the Boy Scouts of America). The texts examined in my study express the importance of community and reliance on others, as well as adherence, loyalty to, and dependence on the state and the head of the Socialist Unity Party, Walter Ulbricht. They also possess propagandistic characteristics used to incite one particular way of thinking, which was in line with and benefited those in power. My work demonstrates that, in a culture of ubiquitous indoctrination, children’s literature served as a subtle yet compelling foundation for lifelong socialist ideals.
A Modern Take on an Ancient Place: My Study Abroad Experience in Greece

I chose to study abroad in Athens, Greece for the spring of my Junior year. I did not however, go there to look at ancient ruins and artifacts (though I saw plenty of them and they were interesting), I went to study the modern Greek State and gain a better understanding of why the country is in such turmoil. I had an amazing time and learned a great deal about what makes Greek society tick.

A Semester in Switzerland: A Globalized Experience

This past spring I studied abroad in Geneva, Switzerland. While abroad I was able to conduct more research on the area of the EU, which is a particular area of focus for me in my Globalization Studies major. Some of the classes I took included: beginners French, an anthropology class, International Studies seminar and an Independent Study Project. I wrote my ISP paper on European Neighborhood Policy in a Changing Geopolitical Context. Though I will be focusing on a broader, global theme for my Globalization Studies thesis, the process of writing the paper and conducting research gave me some vital experience.
# Bringing Denmark Back to Gettysburg (Poster)

**Student(s):**

Caroline Clark

**Mentor(s):**

Adrienne Clarke  
Andrew Hughes

**Time/Location:**

1:00pm - 2:15pm  
Science Center 2 and 3 Lobby

---

**Bringing Denmark Back to Gettysburg**

Bringing my abroad experience to our campus felt very natural after I became a GLGC member. My experiences on campus have reflected the programs' three pillars: mentorship, activism, and scholarship. I have most appreciated the mentorship role, as my enthusiasm to encourage other students to study abroad seems to be endless. Meeting with students who are interested in the abroad opportunity has allowed me to relive, as well as, deeply reflect upon my personal abroad experience. Making the decision to go abroad is a very difficult and stressful choice. Also, preparing for the experience can be quite overwhelming. Helping prepare students for their semester abroad has been the most fulfilling part of my involvement within GLGC. Attending Send-Offs, planning group dinners, and emailing information to students are some of the ways in which I helped those getting ready to go abroad. Overall, I have greatly enjoyed the opportunity to be a member of GLGC. It has been a wonderful way for me to continue my semester abroad; an experience which was life-changing and will be cherished forever.
Bringing the homeland home: Converting travel experiences into creative nonfiction

In Spring 2012, I studied abroad in Bath, England with the Advanced Studies in England program. During my time in Bath, I took classes on writing, history, and literature; became immersed in the culture of the city; and traveled extensively throughout the United Kingdom. On many of my free weekends, I traveled to different parts of Wales in order to visit distant relatives and explore the land where my ancestors came from. On each visit, I had conversations with locals and participated in regional customs in order to get a better sense of the culture. As a senior honors student in the English department, I chose to write my honors thesis on these travel experiences in Wales and the role of family ancestry in the present day. In writing this creative nonfiction piece, I have been able to more thoroughly integrate my abroad experience into my daily life as a student at Gettysburg College while also deepening my understanding of the cultural connections I made between Wales and America. The final paper centers on five separate experiences: two of which take place in America and three of which take place in different parts of Wales. It discusses the ways in which cultural identity is changing in an increasingly globalized world and looks ahead to the future of the Welsh community in America. My presentation at Celebration will present this paper as well as provide an overall look at my abroad experience in Bath, England.
Experiences in Panama Studying Tropical Ecology, Marine Ecosystems, and Biodiversity Conservation from the Perspective of a Global Leader of Gettysburg College (Poster)

Student(s): Valerie Leone
Mentor(s): Adrienne Clarke
Time/Location: 1:00pm - 2:15pm
Science Center 2 and 3 Lobby

In the fall of 2011 I traveled to Panama with the School for International Training to study tropical ecology, marine ecosystems, and biodiversity conservation. My independent study project there involved a series of topical interviews and observation of class proceedings in rural towns to evaluate the implementation of environmental education and the integration of environmental education materials in primary schools in Panama. In addition, the impact of location (rural versus city) on the implementation of environmental education that students receive was considered. This project led to a declaration of a major in Public Policy in addition to Environmental Studies. I later became involved with the School for International Training as an Alumni Mentor and Alumni Contact and a Student Ambassador. Upon returning to campus, I tutored adults in English and volunteered at Campus Kitchens. I also took certain classes with an active component including Introduction to Peace and Justice Studies and Issues of Immigration and even Conservation Biology, where I wrote and researched a paper on the national bird of Panama, the Harpy Eagle. The experiences I had in Panama and my application of them since have helped me develop the pillars of scholarship, mentorship, and activism at Gettysburg College.

Incredible Italy!: A Gettysburgian's story on the experiences, exposures, and excitements in one of the most beautiful places in the world. (Poster)

Student(s): Samir Lalvani, Samuel Holmes
Mentor(s): Adrienne Clarke, Andrew Hughes
Time/Location: 1:00pm - 2:15pm
Science Center 2 and 3 Lobby

Two Gettysburg College seniors, Sam Holmes and Samir Lalvani, present to you the stories of our journey while studying abroad in Florence, Italy.
My Experience Abroad and Bringing Those Experiences Home: Japan and the Global Leaders of Gettysburg College (Poster)

Student(s): Katherine Rice
Mentor(s): Adrienne Clarke
Time/Location: 1:00pm - 2:15pm
Science Center 2 and 3 Lobby

A visual representation of my year-long study abroad at Kansai Gaidai University in Osaka, Japan, reflecting on the experiences I had there and how I applied them to my life back home in the United States.

Study Abroad Experience in Copenhagen, Denmark (Poster)

Student(s): Kelly Madden
Mentor(s): Adrienne Clarke, Andrew Hughes
Time/Location: 1:00pm - 2:15pm
Science Center 2 and 3 Lobby

I spent a semester studying abroad in Copenhagen, Denmark. I lived with a host family which allowed me to be immediately immersed in the culture. During my semester abroad, I traveled to 9 different countries and 15 different cities which further added to the depth of my experience. My time in Copenhagen emphasized the importance of experiential learning as part of a liberal arts education.

Studying Abroad in Seville, Spain Spring of 2012 (Poster)

Student(s): Eric Herndon
Mentor(s): Andrew Hughes
Time/Location: 1:00pm - 2:15pm
Science Center 2 and 3 Lobby

For my poster I will be presenting my experience of studying abroad in Seville, Spain in the Spring of 2012. I am also in the GLGC and will be presenting the entire experience of my classes, living in the city of Seville, lessons learned, and places traveled to throughout Europe.
The role of Chinese aid in Samoa (Poster)

Student(s): Cassi Franz
Mentor(s): Adrienne Clarke
Time/Location: 1:00pm - 2:15pm, Science Center 2 and 3 Lobby

The role of Chinese aid in Samoa

For my independent study project during my semester abroad in Samoa, I looked at the significance of Chinese aid. Though both China and Samoa are both considered "Least Developed Countries" by the United Nations, China pours a great deal of money into Samoa and other small Pacific Island nations. This research sought to understand why China would be interested in such a small country with very little global influence.

The research connects with my time in Gettysburg, particularly being a member of Global Leaders of Gettysburg College. It allowed me to see the effects of globalization from the perspective of a small nation who is in the position of being the aid recipient. Wealthy nations such as the United States (and China to a degree) assume that our aid is both welcome and necessary. By studying the type of aid delivered by the Chinese as well as the reactions of the Samoan people, I was able to gain a greater understanding of the effects of globalization.

Understanding and Embracing Cultural Differences between America and France (Poster)

Student(s): Anna Schneider, Dana Sahli, Jordan Swenson, Julie Schaub, Suzanne Englot
Mentor(s): Adrienne Clarke, Andrew Hughes
Time/Location: 1:00pm - 2:15pm, Science Center 2 and 3 Lobby

Understanding and Embracing Cultural Differences between America and France

Upon arrival in France and upon return to the United States, the differences in cultural values and norms become both immediately and gradually apparent. Using insights and experiences developed over each of our semesters abroad, we would like to present our findings, and offer conclusions about how to reconcile the discovered differences, as well as advice to future travelers concerning how to prepare oneself to become immersed in another culture so very different from one's own.
Globalization Studies

Foreign Direct Investment as a Measure of Disembedding in North Africa (Panel)

Student(s): Ross Nichols
Mentor(s): Megan Sijapati, Monica Ogra
Time/Location: 11:30am - 12:45am, Science Center 200

Foreign Direct Investment as a Measure of Disembedding in North Africa

The relationship between FDI and GDP has received much attention in development economics. Some economists argue that FDI has a strong, positive impact on GDP while others believe that there is not a significant relationship between the two. One possible reason for such disparity in these viewpoints is that the influence of FDI on economic growth varies by region. This creates an avenue for the study of FDI through a globalization perspective. FDI can be viewed as a form of disembedding and focusing on specific geographic regions rather than the developing world as a whole allows us to better understand the impact of disembedding on these regions.
Globalization Studies Honors Senior Thesis Presentations (Panel)

Globalization Studies Honors Senior Thesis Presentations

The five globalization studies honors students will present their individualized senior research.

Elizabeth Rupert

Fronteras: Borders in a Borderless World

The question of immigration is truly a global one, as it requires movement across boundaries, recognition of differences between states, and attention to cultural and traditional differences. Globalization, the “flattening” of the Earth, has allowed for faster connections, increased movement, spectacular technology, and a better understanding of what is taking place in other countries. The movement for which globalization creates a space can sometimes be voluntary, but often - as in the case of Latin America - is a forced movement that takes place because of the displacement caused by neoliberal economic policies that effect different nations, politics, peoples, individuals, and interactions. As immigration is becoming necessary for many groups and individuals in this globalized world, a nationalist backlash is creating borders for these immigrants that would not, or could not, exist within a truly globalized world. I examine this rise in nationalism within the context of a globalized society specifically in regard to immigration from Latin America to the United States, and ask how borders impact the lives of immigrants in today’s society.

Rose Kane

Islamic Traditions and Suicide Bombing in the Middle East: Understanding the Connection

Over the past fifty years, the profound impact of globalization has benefitted many people around the world, yet it has also left many disadvantaged and powerless. While there is no one reason why the frequency and severity of terrorist attacks around the world have increased over the past half-century, it is an undeniable fact that they have. This paper seeks to uncover acts of suicide terrorism in particular have become much more intense and prevalent, with a particular focus on terrorist organizations rooted in the Middle East. To further this understanding, this paper will also explore how terrorists and their surrounding communities use the traditions and symbols of Islam to execute and justify these killings.
Sarah Fodero

Individual Abstract

The Nexus Between the Peacemaking and the Peacebuilding processes: The Inclusion of Women in the Mediation Process Influencing a Sustainable Peacebuilding Process

Conflict occurs around the world, for different reasons, between different people, and is resolved very differently in all cases. This thesis is investigating two civil conflicts, one in Cote d'Ivoire and one in Burundi. More specifically, this paper is exploring the role women play in the mediation process and peace agreement, and how their participation impacts the peacebuilding process. Both conflict were interstate and absurdly destructive to human life and infrastructure. Ethnic differences, exacerbated by colonialism and then the removal of this governance, created a vacuum in which violence was created.

International Non-Governmental Organizations in Vietnam: A Case Study with Project Gaia, Inc. (Panel)

Student(s): Alyssa Bosold
Mentor(s): Monica Ogra
Time/Location: 11:30am - 12:45am
Science Center 200

International Non-Governmental Organizations in Vietnam: A Case Study with Project Gaia, Inc.

In 1986, the Vietnamese government undertook a series of reforms known as doi moi. These reforms were mainly economic adjustments that encouraged globalization through capitalism, international trade, and foreign investment. They restructured Vietnam's economy from a centrally-planned system to a market economy with a socialist orientation. This presentation focuses on the political and cultural aspects of globalization after doi moi, and analyzes the development of international non-governmental organizations (INGOs) in Vietnam. Specifically, it seeks to address the following research question: How has the INGO sector changed with increasing globalization in Vietnam after the 1986 doi moi reforms, and what are the national and local challenges to INGOs currently operating in Vietnam? As a case study, this presentation looks specifically at an environmental INGO called Project Gaia, Inc. (PGI) that works in the developing world to replace polluting biomass fuels, with clean-burning, sustainable, alcohol fuels and stoves. It illuminates the institutional and societal challenges that PGI might face in Vietnam, and the ways that that their international approach might be received by local people.
Health Sciences

A Double Blind Investigation of Isokinetic Leg Strength both With and Without 200mg of Caffeine (Poster)

Student(s): Charles Maass, Robert Weiss  
Mentor(s): Daniel Drury  
Time/Location: 11:30am - 12:45pm  
Science Center 2 and 3 Lobby

Caffeine is commonly used by people to wake up or to “stay alert.” Caffeine also can be used as an ergogenic performance aid by athletes. Purpose: To investigate the effect of Stay Alert Caffeine gum on muscular performance of the quadriceps and hamstrings on the Biodex machine. Methods: A double-blind analysis of seventeen healthy college-aged (20.61+/-.79) males and females performed three sets of leg extension and leg flexion at various resistance: 60 degrees, 180 degrees, and 300 degrees. The participants completed five repetitions at 60 degrees, five repetitions at 300 degrees and 30 repetitions at 180 degrees. Using a double-blind investigation, three trials were conducted. The first trial was a preliminary trial to establish a baseline. In the second and third trial, the participant received the placebo or the caffeinated gum. The participant warmed up 30 minutes on ergometer. The participant then stretched both their hamstrings and quads for 30 seconds. The participant was strapped in on the Biodex machine and completed each of the three trials with 90 seconds break between each trial. Peak torque, time to peak torque, and fatigue index scores were analyzed using a dependent T-test with a significance set at p<0.05. Results: Time to peak torque scores are reported below for 60 degrees, 180 degrees, and 300 degrees.
Abstracts by Academic Department

Hispanic Patient-Provider Interactions (Poster)

Student(s): Olivia Ruth  
Mentor(s): Amy Dailey

Time/Location: 11:30am - 12:45pm
Science Center 2 and 3 Lobby

Hispanic Patient-Provider Interactions

Many studies have shown that quality of patient care and patient-provider interactions vary by race/ethnicity, but few focus on the specific preferences of the rapidly growing Hispanic community. The authors conducted a systematic review of studies examining patient-provider decision-making preferences of Hispanic patients. The authors conducted two independent literature searches of MEDLINE, PsycINFO, and SCOPUS for keywords such as Hispanic, patient preference, race, ethnicity, decision-making, and patient autonomy. Studies that excluded the Hispanic population or provided insufficient evidence regarding Hispanic decision making preferences were excluded. This systematic review of evidence supports the notion that many Hispanic patients prefer physicians to take the lead in decision-making, rather than engaging in a joint participatory process. The results of this review will be used to help a local clinic, serving a high-percentage of Hispanic patients, develop ways to enhance patient-provider interactions.
History

No Treason: How Lysander Spooner's Political Works Have Shaped the Modern Libertarian Movement (Panel)

Student(s): William Segraves
Mentor(s): Scott Hancock
Time/Location: 11:30am - 12:45am
Science Center 151

No Treason: How Lysander Spooner's Political Works Have Shaped the Modern Libertarian Movement

Whether they are aware of it or not, many modern libertarians, those with libertarian sentiments, and those interested in liberty in general draw on the works of Lysander Spooner when framing debates, answering criticisms, and explaining their own personal political philosophies. By examining both Spooner's works as well as current libertarian political figures (such as Ron Paul, Rand Paul, Justin Amash, and Gary Johnson) and organizations (such as the Cato Institute and the Ludwig von Mises Institute), it is possible to draw clear lines between Spooner's individual anarchism and modern libertarian thought.
Notions of Frontier: Literature, Geography and Identity in America's Borderlands (Panel)

**Student(s):** Amelia Grabowski, John Nelson, Tricia Runzel

**Mentor(s):** Barbara Sommer

**Time/Location:** 8:30am - 9:15am
Science Center 151

**Notions of Frontier: Literature, Geography and Identity in America's Borderlands**

The American “Frontier” is a term that scholars have struggled with since the days of Frederick Jackson Turner. The notion of this land on the fringes of civilization has fascinated and inspired many, but in thinking of this space beyond the pale as some kind of no-man’s land, or wilderness, it blurs the true narrative of North America’s borderlands. These regions, from the Ohio country and Great Lakes of the eighteenth century to the western coast of California and the arid Southwest of the nineteenth century, were rich in history. As places between, these borderlands were meeting zones for different groups of Europeans and indigenous peoples—regions of interaction and exchange. Those living in and along these “frontiers” did not think of themselves on the edge of the world. Rather, they found themselves in the midst of an ever-changing and vital space at the crossroads of history. These three projects examine various aspects of these borderlands, from how literature shaped perceptions of Native Americans, to the role geography played in interaction, and how women identified themselves and femininity within this fluid society. These projects challenge traditional concepts of frontiers, and attempt to rethink these complex regions in history.

**Amelia Grabowski**

**Individual Abstract**

**How to Be An American: Captivity Narratives and the Constructed American Identity**

In the conclusion of his 1857 captivity narrative, Captivity of the Oatman Girls, R.B. Stratton moralized that, “The march of American civilization, if unhampered by the weakness and corruption of its own happy subjects, will yet, and soon, break upon the barbarity of these numerous tribes, and either elevate them to the unappreciated blessings of a superior state, or wipe them into oblivion, and give their long-underdeveloped territory to another.” Stratton’s statement epitomized the attitude that most captivity narratives, and indeed mid-nineteenth century popular culture, assumed toward Native Americans. By the 1850s, popular culture in the United States included a clear sense of American civilization—a definition of proper United States society constructed by European settlers, which valorized hierarchical social structures and European behavioral mores. Settlers alleged that their civilization, now dubbed American civilization, was superior to and generally disclaimed that of Native Americans. Captivity narratives contributed to the construction of an American identity, defining American-ness by emphasizing key traits of captives that their Native American captors lacked. Most prominent among these traits is the sense of societal responsibility, denoted by familial duty, and industriousness in order to provide for others.
John Nelson

Epicenters of Interaction: Geographic Sites Along the Eighteenth Century Great Lakes Borderland

This project seeks to explore the importance of several key geographic locations to the Great Lakes Borderland of Eighteenth Century North America, looking specifically at the Niagara Portage, the Detroit River area, and the Straits of Mackinac as centers of cultural exchange and interaction. These specific geographic sites offer a focused setting with which to study the Great Lakes borderland as a whole. In these locations, the entire spectrum of cross-cultural contact took place between the various groups of the region, both European and indigenous. These places were essentially microcosms of the intercultural borderland experienced across the entire region—epicenters of interaction. These sites naturally became such focal points because of the physical geography of the Great Lakes, holding strategic and commercial significance for the European and indigenous powers of the region as well as being theatres for concentrated trade, cultural exchange, and cohabitation. Studying the history of these geographic epicenters provides a lens in which one can examine the overall cross-cultural narrative of the Great Lakes region during the dynamic history of the eighteenth century as French voyageurs, British colonists, and Native Americans lived, traded, and warred with one another across these inland waterways.

Tricia Runzel

The Changing Ideal of Womanhood during the California Gold Rush

For women in the Victorian era, being a true woman meant strictly adhering to ideals of piety, purity, submission, and domesticity. The California Gold Rush of 1849, however, forced thousands of women to reconcile those ideals with the lawlessness of Gold Rush society. Often following husbands or fathers to the gold fields, circumstances and personalities worked in tandem to determine how each woman would live her life. By focusing on a number of women who left primary sources detailing their immersion into Gold Rush culture, it is clear that each woman's ideology of womanhood was highly individualized. Sarah Royce and Mary Jane Megquier are women who represent the extremes, but the majority of Gold Rush women produced a hybrid of ladylike appearance and independent thought. These opposing mindsets ultimately came together to create a fluid, intricate society that included elements of both.
Socio-Ethnic Conflict and Compromise in Modern Europe (Panel)

**Student(s):** David Wemer, John Nelson, Kavya Kumar, Mia Harpel

**Mentor(s):** Monica Ogra, William Bowman

**Time/Location:** 10:00am - 11:15am, Science Center 200

---

**Socio-Ethnic Conflict and Compromise in Modern Europe**

From the World Wars through the Cold War, into the modern era, the socio-political atmosphere has changed dramatically for Europe. While Europe today finds itself in a period of relative stability and peace, the continent has been through much over the past century. Looking at ethnic, political, religious and social conflicts and compromises throughout the European theatre, this panel examines different elements of European strife and stability. Exploring such diverse topics as Turkey's place in modern Europe, elements of gender in the peace process, the history of war and peace between Poland and Ukraine and the role memory plays in the Troubles of Northern Ireland, this panel examines the overarching themes of ethnicity, gender, inclusion, and identity in Modern Europe. The various projects explore how these larger trends influenced both strife and peace building in Europe from the mid-twentieth century through to the present. Through this discussion of various civil, ethnic, and political struggles, one can draw parallels and come to understand the larger trends that have occurred across Europe in the modern era.

David Wemer

**Individual Abstract**

Forgiving History Together: How the Euro 2012 Co-Hosts Overcame Ethnic Hate and What We Can Learn From It

In the summer of 2012, the nations of Poland and Ukraine co-hosted the UEFA European Football Championship, symbolizing the close relationship these countries now share. Less than seventy years ago, however, Poles and Ukrainians launched brutal ethnic cleansings against one another resulting in hundreds of thousands of deaths and millions of people displaced. This project traces the history of Polish-Ukrainian relations from the ethnic cleansings of 1943-1947 to the present day in an attempt to determine the causes of this dramatic reconciliation. Despite the complete separation of Poles and Ukrainians by 1947, true reconciliation did not occur until both nations emerged from Communist rule in 1991. Reconciliation in the 1990s was largely due to the shared political objectives of both Polish and Ukrainian elites: Poland’s push for NATO and EU accession and fear of a resurgent Russia, and Ukraine’s security needs and desire to leave Russia’s orbit. Elite level cooperation was followed by popular level connections surrounding the Ukrainian Orange Revolution of 2004, which saw the Polish people overwhelmingly support the protest movement. Reconciliation did not occur once the populations were simply separated and even subordinated under Soviet control, but was achieved only when political elites shared common objectives and both populaces were exposed to positive images of the other side. The Polish-Ukrainian reconciliation provides a counter-example to the “one nation, one state” model of ethnic conflict resolution and instead illustrates the importance of elite-level cooperation and cross-cultural contact in ethnic conflict resolution.
The Influence of Memory in Ulster Protestant Identity and the Troubles of Northern Ireland

Perceptions of the past and the collective memory of a group serve to shape and define that group’s unique cultural identity and influence its interpretations in the present. This study analyzes how one group, the Ulster Protestants, has perceived, remembered and utilized its own history in the context of modern day Northern Ireland. Much of the group’s collective memory, which defines its cultural identity, originates from the period of history surrounding the Williamite struggle in Ireland, between the years 1688-1691. The legacy of that contested history today is one of the most controversial and volatile historical legacies in Western Europe, as it continues to play out in Northern Ireland in the clash between the Ulster Protestants and their Irish Catholic neighbors. Drawing from firsthand accounts and oral histories conducted amongst the Ulster Protestant community, this research examines how the collective memory of the Ulster Scots’ past continues to influence their present. The perceived history of the Williamite period reflects the more recent memories of the Troubles in Ulster Scots’ perspectives, as they remember the events of the Williamite War in the context of their own experiences with sectarian violence. The historical events of the Williamite period are key components in many Ulster Protestants’ cultural identity and a celebrated part of their past, and therefore, this concentrated study is an ideal microcosm for exploring the more universal questions about legacy and perceptions of history in modern society—especially in a socio-politically conflicted area like Northern Ireland.
Adapting Short Stories to Screenplays (Film)

Student(s): Hannah Bollinger  
Mentor(s): James Udden, William Lane  
Time/Location: 10:00am - 12:00pm  
Breidenbaugh Hall 201, Joseph Theater

Adapting Short Stories to Screenplays

This presentation will discuss the complications that arise while adapting a short story to a screenplay. In this creative process, it becomes clear that creating a perfect copy of the source is impossible. Consequently, a balance between creative license and being “true” to the source must be made in creating a successful adaptation.

Alumni Then and Now; A closer look into what makes Gettysburg so great (Film)

Student(s): Kristi Lowery, Lauren FitzGerald, Shannon Callahan, Shelby Creamer  
Mentor(s): Erin Stringer  
Time/Location: 1:00pm - 2:15pm  
Breidenbaugh Hall 201, Joseph Theater

Alumni Then and Now; A closer look into what makes Gettysburg so great

Gettysburg College takes pride in its alumni. Each year, the institution holds numerous events, including Homecoming and Reunion Weekends, which showcase just how much we appreciate those who have come before us. What is it, exactly, that keeps these alumni coming back? This presentation seeks to answer this question. Through interviews with alumni from the past seven decades, we will compile information about their experiences from then and now. With these responses we look to compare both past and current students’ experiences to see the growth and consistencies of our campus’ culture over the years. We want our alumni to continue taking interest in their alma mater for years to come, and we hope that this video will help to give us insight as to what has caused them to keep coming back so far.
### Good Morning Today Gettysburg (Film)

**Student(s):** Lee Silver, Rachel Myers, Samantha Bader, Thomas Neufeld  
**Mentor(s):** James Udden  
**Time/Location:** 10:00am - 12:00pm  
**Location:** Breidenbaugh Hall 201, Joseph Theater

**Good Morning Today Gettysburg**

Our project is a television show. It is the season finale where we have several guests and special segments. We show some of our favorite clips, as well as commercials. The genre is dark comedy.

### Masculinity in the Hollywood Musical of the Studio Era (Panel)

**Student(s):** Christina Gallo  
**Mentor(s):** James Udden  
**Time/Location:** 10:00am - 12:00pm  
**Location:** Breidenbaugh Hall 201, Joseph Theater

**Masculinity in the Hollywood Musical of the Studio Era**

Since its invention, cinema had primarily presented the male figure as rough, rugged, and emotionally stoic in such genres as the western and gangster film. With Hollywood’s adoption of the Production Code in 1930, the standards and guidelines for depicting men and women in film were strictly defined and anything that remotely resembled homosexuality was forbidden. This paper explores why studio-era musicals were able to bypass these obstacles and play with conventional modes of representing masculinity on the screen from physical, emotional, and sexual standpoints. The musical did not require its male leads to play against their image. Instead, the genre allowed these men to be polished and sophisticated in their appearance, while at the same time they portrayed masculine and heroic roles. Additionally, male figures in the musical were often defined by their emotional vulnerability – a quality previously reserved strictly for female roles. Finally, the male leads frequently wore tight-fitting clothing that showed off their physicality. Whereas other genres eroticized only female actresses, the musical transferred such attention over to the male.
The Gentlemen of Hazlett: An Original Short Film (Film)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>David DeBor</td>
<td>Jeffery Williams</td>
<td>10:00am - 12:00pm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breidenbaugh Hall 201</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Joseph Theater</td>
</tr>
</tbody>
</table>

The Gentlemen of Hazlett: An Original Short Film

“The Gentlemen of Hazlett,” written, produced, and directed by Dave DeBor, is a comedic drama about four college-aged men and their quest to throw memorable, yet distinctly classy, college parties, and the hilarious dilemmas they encounter along the way.
Mathematics

A Clustering Approach to Image Compression (Poster)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nathan Blyler</td>
<td>Benjamin Kennedy</td>
<td>11:30am - 12:45pm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science Center 2 and 3 Lobby</td>
</tr>
</tbody>
</table>

A Clustering Approach to Image Compression

We combine the K-means clustering algorithm with distance metrics weighted in accordance to the human visual system to improve on the lossy data compression technique used in JPEG images. In particular, we try to improve the chroma subsampling method used in JPEG images. Instead of combining chroma values of pixels based on proximity, we cluster based on likeness in color. We successfully lessen the color bleeding that regular downsampling causes, and improve JPEG compression of images with sharp contrast with comparable amounts of compression.

Playing Games on Graphs (Poster)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ryan Becker</td>
<td>Darren Glass</td>
<td>10:00am - 11:15am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Science Center 2 and 3 Lobby</td>
</tr>
</tbody>
</table>

Playing Games on Graphs

We begin by introducing a game in which chips are placed on the vertices of a graph and can be moved in a prescribed way to reach a winning configuration. After exploring this game, we use our knowledge of how it is won to define what is called the Riemann-Roch space of the graph. We conclude by examining several "nice" graphs for which we can explicitly construct the Riemann-Roch space.
Searching for Underlying Subpopulations of Silene Spaldingii

Everyone likes flowers, especially when they bloom. However, just because one type of flower looks the same when it blooms, does not mean each plant has the same probability of blooming. In nature, plants transition between periods of dormancy and flowering for reasons that are not completely understood. Previous literature has suggested a link between the dormancy and flowering states of Silene spaldingii. After evaluating the Expectation Maximization Algorithm, we use it to test the hypothesis that multiple subpopulations within the wild flower Silene Spaldingii cause a link between staying dormant or flowering.
# Mellon Summer Scholars

## Mellon Summer Scholars 2013 Panel #1 (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alyssa Foxx, John Hill, Joshua Griffiths, Taylor Smart</td>
<td>Amy Dailey, Jennifer Bloomquist, Lisa Portmess, Rimvydas Baltaduonis</td>
<td>1:00pm - 2:15pm Breidenbaugh Hall 209</td>
</tr>
</tbody>
</table>

### Mellon Summer Scholars 2013 Panel #1

Research topics included are energy economics, philosophy, public health, and sociolinguistics.

#### Alyssa Foxx

Health Literacy in Adams County

My research seeks to understand the relationship between structural violence and hegemony as barriers to achieving health literacy in Adams County, Pennsylvania, primarily in the most vulnerable populations to health illiteracy: the elderly and low income women. This research was conducted using ethnographic field methods, a literature review, as well as a critical discourse analysis.

#### Joshua Griffiths

Que(e)yng the Language of the Keystone State

Using sociolinguistic and sociological data, this project seeks to investigate if language can be an indicator of community cohesion in marginalized populations. Gay men of the urban Delaware Valley Dialect Region of Pennsylvania and of the rural Upper Ohio and Central Pennsylvania Dialect regions were surveyed and interviewed regarding their personal lexicons. These responses are still being analyzed to see if the sociological data and sociolinguistic data correspond to each other.

#### Taylor Smart

An Experimental Examination of Dynamic Pricing Schemes

We have conducted a laboratory economics experiment to investigate retail electricity consumer’s decision making habits in the presence of different dynamic pricing schemes. The experiment incorporates Real Time Pricing (RTP), Time of Use (TOU) pricing, and the more traditional Flat Rate Pricing (FRP) schemes with optional direct and indirect wholesale price feedback. We simulate the cyclical nature of the market demand as well as shocks to the market demand by manipulating the unit resale values presented to the buyers. Our focus is on testing participants’ preferences for various pricing schemes as well as the rate of convergence to market equilibrium levels under different pricing regimes. This experiment builds on our previous research which suggests that RTP with direct feedback will be the most efficient pricing scheme, and hypothesizes that this pricing scheme will be the most adaptable to market shocks and that it will for that reason be the preferred choice among market participants. The results of this experiment provide insights as to how demand response programs should be structured in order to both avoid market inefficiencies and to minimize negative consumer reactions. The preliminary findings suggest that TOU with direct feedback is the most preferred contract and that RTP with direct feedback has the quickest convergence to equilibrium.
Music

Appassionata (Musical)

Student(s): Lorela Ciraku
Mentor(s): Jocelyn Swigger
Time/Location: 11:30am - 12:45pm
Schmucker Hall 222
Recital Hall

Appassionata
Piano Sonata in F minor Op. 57, No. 23

Bachelor of Science in Music Education Portfolio Presentation (Musical)

Student(s): Michelle Stukane
Mentor(s): Brent Talbot
Time/Location: 8:30am - 9:45am
Schmucker Hall 222
Recital Hall

Bachelor of Science in Music Education Portfolio Presentation

This work is a culmination of my education and certification process in Music Education K-12 at Gettysburg College. It will include professional materials representing my understanding of the multitude of areas within music education such as philosophies, instructional models and examples, assessment, curriculum, diverse student learning, classroom management, professional growth and development in addition to content knowledge of music.
### Bachelor of Science in Music Education Portfolio Presentation (Poster)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emma Sheffer</td>
<td>Brent Talbot</td>
<td>8:30am - 9:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recital Hall</td>
</tr>
</tbody>
</table>

**Bachelor of Science in Music Education Portfolio Presentation**

This work is a culmination of my education and certification process in Music Education K-12 at Gettysburg College. It will include professional materials representing my understanding of the multitude of areas within music education such as philosophies, instructional models and examples, assessment, curriculum, diverse student learning, classroom management, professional growth and development in addition to content knowledge of music.

### Celebration Piano Concert (Musical)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jane Best</td>
<td>Jocelyn Swigger</td>
<td>11:30am - 12:45pm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recital Hall</td>
</tr>
</tbody>
</table>

**Celebration Piano Concert**

Part of the Celebration piano recital

Playing Venetian Boat Song No. 2 (Op. 30 No. 6)- Mendelssohn

### Debussy's first Arabesque "Arabesque No. 1. Andantino con moto" (Musical)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sarabeth Hamberlin</td>
<td>Jocelyn Swigger</td>
<td>11:30am - 12:45pm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recital Hall</td>
</tr>
</tbody>
</table>

**Debussy's first Arabesque "Arabesque No. 1. Andantino con moto"**

Approx. timing: 4.5 minutes
Music Education Portfolio Presentation (Musical)

Student(s): Kristin Staub
Mentor(s): Brent Talbot
Time/Location: 8:30am - 9:45am
Schmucker Hall 222
Recital Hall

Music Education Portfolio Presentation

This work is a culmination of my education and certification process in Music Education K-12 at Gettysburg College. It will include professional materials representing my understanding of the multitude of areas within music education such as philosophies, instructional models and examples, assessment, curriculum, diverse student learning, classroom management, professional growth and development in addition to content knowledge of music.

Music Education Student Teaching Portfolio Presentation (Poster)

Student(s): Keith Gromis
Mentor(s): Brent Talbot
Time/Location: 8:30am - 9:45am
Schmucker Hall 222
Recital Hall

Music Education Student Teaching Portfolio Presentation

This work is a culmination of my education and certification process in Music Education K-12 at Gettysburg College. It will include professional materials representing my understanding of the multitude of areas within music education such as philosophies, instructional models and examples, assessment, curriculum, diverse student learning, classroom management, professional growth and development in addition to content knowledge of music.
Music Teaching Portfolio (Musical)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matthew Carlson</td>
<td>Brent Talbot</td>
<td>8:30am - 9:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recital Hall</td>
</tr>
</tbody>
</table>

**Music Teaching Portfolio**

A music teaching portfolio will be presented. This portfolio is a compilation of my educational and musical career to date, and will be used to inform school administrators about my qualifications and experience.

Music teaching portfolio presentation (Musical)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kevin Psolka-Green</td>
<td>Brent Talbot</td>
<td>8:30am - 9:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recital Hall</td>
</tr>
</tbody>
</table>

**Music teaching portfolio presentation**

This will be a presentation of our student teaching portfolio. The portfolio is a culmination of all relevant music and pedagogical artifacts that I have accumulated throughout my four years and student teaching semester. It will be used during upcoming job interviews.

Piano Concert (Musical)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veronika Stare</td>
<td>Jocelyn Swigger</td>
<td>11:30am - 12:45pm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Schmucker Hall 222</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recital Hall</td>
</tr>
</tbody>
</table>

**Piano Concert**

Chopin Ballade in G minor
Piano Performance (Musical)

Student(s): Emily Watkins
Mentor(s): Jocelyn Swigger
Time/Location: 11:30am - 12:45pm, Schmucker Hall 222

Piano Performance
Performance of Chopin Scherzo No. 4 in E Major

The Use of Music Technology in South Central Pennsylvania (Panel)

Student(s): Alice Broadway, Eva Lorentz, Hudson Gillot, Ian Steege, Jennifer Yealy, Katherine Trautz
Mentor(s): Brent Talbot
Time/Location: 10:00am - 11:15am, Schmucker Hall 214

The Use of Music Technology in South Central Pennsylvania
This research examined how music teachers in South-central Pennsylvania use music technology in their classrooms. An anonymous-online survey was distributed to teachers in three South-central Pennsylvania counties that examined what types of software, hardware, and media are used and what types of influences impact teaching and learning in their classrooms. Data, findings, and implications for the field of music education will be shared.
Off Campus Studies Office

Experiences from Wollongong, Australia, and beyond (Poster)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emily Constantian</td>
<td>Adrienne Clarke</td>
<td>1:00pm - 2:15pm</td>
</tr>
</tbody>
</table>

Science Center 2 and 3 Lobby

Experiences from Wollongong, Australia, and beyond

This poster will be a representation of my experiences abroad and back at Gettysburg. GLGC has allowed me to be part of a group that puts a special emphasis on the importance of thinking and acting globally. The poster will portray some of the experiences I had at the University of Wollongong, Australia, and what those experiences mean to me back at school.

GLGC
CET Chinese Studies Beijing (Poster)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Boyland</td>
<td>Adrienne Clarke</td>
<td>1:00pm - 2:15pm</td>
</tr>
</tbody>
</table>

Science Center 2 and 3 Lobby

GLGC
CET Chinese Studies Beijing

I will create a poster as part of my requirement as a member of GLGC. The poster will highlight how I have been able to encompass my study abroad experience here at Gettysburg College.
Returning Home: Sharing the Experiences from Life in Japan (Global Leaders of Gettysburg College) (Poster)

Student(s): Courtney Benn
Mentor(s): Adrienne Clarke, Andrew Hughes
Time/Location: 1:00pm - 2:15pm, Science Center 2 and 3 Lobby

The three focuses of the Global Leaders of Gettysburg College are Scholarship, Mentorship, and Activism. These three pillars have directed where I should place my knowledge and experiences from studying abroad. After studying abroad for one year and completing a summer internship in Japan, I accumulated varying experiences, which I believe has allowed myself to grow more as an individual. With my new developments, I was unsure what to do with them or who to share them with. However, after returning back to campus, GLGC has provided the opportunities for me to encourage other students to study abroad and help them pursue in their goals as well as how to incorporate my new perspectives into my future endeavors. This poster is a reflection of my experiences, in which I hope to share how my journey to Japan continues with GLGC.

Xenophobia without Borders: A Journey to Social Justice through Global Leadership (Poster)

Student(s): Amelia Grabowski
Mentor(s): Adrienne Clarke
Time/Location: 1:00pm - 2:15pm, Science Center 2 and 3 Lobby

One poster in the larger Global Leaders of Gettysburg College presentation, this poster will highlight how I studied and experienced xenophobia in both international and intimate communities during my time abroad in Bath, England; Nantes, France; and as a Global Leader of Gettysburg College. Through the poster, I intend to share how these learning experiences have motivated me to fight for social justice through a career in the public humanities.
Attachment Theory in the Workplace: Comparison of Women’s Father-Figure & Supervisor Relationships in relation to Workplace Performance (Poster)

Student(s): Cheryl Olechnowicz
Mentor(s): Amy Hooper
Time/Location: 10:00am - 11:15am
Science Center 2 and 3 Lobby

Attachment Theory in the Workplace: Comparison of Women’s Father-Figure & Supervisor Relationships in relation to Workplace Performance

Literature has shown similarities between a woman’s romantic partners a woman chooses and her father-figure. The relationships individuals form, such as romantic, are determined by the attachment style developed as an infant. This attachment style is present in the workplace as well and determines the relationships employees form with their supervisors and co-workers. The present study measures the correlation between a woman’s attachment style with her father-figure and with her past supervisor in relation to her work performance (as measured by work vigor, dedication, and absorption). I am currently collecting this data. I hypothesize that work performance will be higher for participants whose father-figure and supervisor have similar qualities and lower for participants whose father-figure and supervisor have dissimilar qualities. I will then be able to answer whether women perform better in the workplace when their leader possesses qualities similar to those of their father figures. This research can help organizations better assess and understand how workplace relationships affect workplace performance.

Bipolar Disorder and Occupational Functioning (Poster)

Student(s): Charrisha Watkins
Mentor(s): Amy Hooper
Time/Location: 10:00am - 11:15am
Science Center 2 and 3 Lobby

Bipolar Disorder and Occupational Functioning

There has been research conducted on people with bipolar disorders and the effects it has on occupational functioning and the overall ability to get a job. Research has found different viewpoints on the likelihood of a bipolar person getting a job and if they were beneficial to an organization or not. In this present study, I will gather information on the achievement of bipolar people through an interview across a time span to find a common theme on work history, bipolar rehabilitation programs, and feelings while at work. I am currently collecting this data. I expect to find that a person with bipolar disorder will face negative and positive outcomes while at work. My study will further current research on the outcomes and advantages/disadvantages of a bipolar person in the workplace. Keywords: bipolar disorder, mental illness, occupational functioning, work, programs, organization
Do birth-order and extraversion influence compatibility in romantic relationships? (Poster)

Student(s): Dana Sahli  
Mentor(s): Amy Hooper  
Time/Location: 10:00am - 11:15am  
Science Center 2 and 3 Lobby

Do birth-order and extraversion influence compatibility in romantic relationships?

In the study I am conducting, relationship compatibility, measured by relationship satisfaction, will be measured as a function of both birth-order and the personality trait of extraversion/introversion. I have hypothesized that a combination of one partner who is a first-born and more introverted, and the other partner a later-born and more extraverted, will result in a higher level of relationship satisfaction. There will be a variety of combinations from the couples who participate in the study, but I expect to find that, in relation to my hypothesis, opposite traits in a couple will lead to higher satisfaction. This will help contribute to the ongoing debate about whether similarities or differences make for better compatibility in romantic relationships.

Do Introverts and Extroverts Have Different Preferences on Class structure and Study habits? (Poster)

Student(s): Jonathan Morris  
Mentor(s): Amy Hooper  
Time/Location: 10:00am - 11:15am  
Science Center 2 and 3 Lobby

Do Introverts and Extroverts Have Different Preferences on Class structure and Study habits?

Every student has his or her own learning style preference in regards to class structure and study habits for both inside and outside of the classroom. Since personality type can be used as a predictor of behavior, I suspect that these learning style preferences differ amongst the various dimensions of personality, specifically, introversion and extroversion. In the present study, I am interviewing both introverted and extroverted college students about their preferences of specific class structures and study habits to determine if any differences exist and identify any behavioral themes between the two personality types. I am currently collecting this data. I expect to find that introverted and extroverted students will report clear differences between their preferences of class structure and study habits. I will also be able to identify how different introverted-extroverted behaviors play a role in determining class structure and study habit preferences, which will help academic institutions better accommodate to their students’ learning styles.
Extraversion, Introversion and Conflict-Handling Styles (Poster)

Student(s): Kristin North, Stephanie Gulden
Mentor(s): Amy Hooper, Betsy Gulden
Time/Location: 10:00am - 11:15am, Science Center 2 and 3 Lobby

Extraversion, Introversion and Conflict-Handling Styles

The purpose of this current study was to examine if a relationship occurs between extraversion, introversion and conflict-handling styles. Employees from a range of different departments at a liberal arts college in a small Northeast town were surveyed at one point in time measuring their personality and how they handle conflict. Participants were assessed using the Big Five Personality Test, the Jung Typology and the Thomas-Killman Conflict-Handling Style Measure. We hypothesized that a more extraverted individual would collaborate with others to handle conflict while a more introverted individual would avoid conflict with others. Results would support further researching investigating how the effect of having more time to process the conflict would impact how introverts handle conflict.

Keywords: extraversion, introversion, conflict-handling style, time, collaborating, avoiding

Life Events as a Predictor of Personality Traits (Poster)

Student(s): Kelly Johns
Mentor(s): Amy Hooper
Time/Location: 10:00am - 11:15am, Science Center 2 and 3 Lobby

Life Events as a Predictor of Personality Traits

Research supports both environmental and biological influences on individual personality development. The effect of environment and life experiences is becoming a prominent area of study to explain personality change and development. In the present study, I am testing whether experiencing certain life events is correlated with specific personality traits. Participants state whether or not the event occurred, and then rate its significance on a five point scale ranging from high negative impact to high positive impact. Participants also complete a modified version of the IPIP-NEO inventory measuring the Big Five personality traits. I am currently collecting this data. I expect to find the life events that were rated positively will be correlated with higher levels of extraversion, and the negative rated life events to be correlated with higher levels of neuroticism. By measuring the correlations I will be able to assess the impact of positive and negative life events on specific personality traits.
New Facet of Introversion: Modesty (Poster)

Abstract
This study explores the relationships between introversion, extroversion, and modesty. Modesty has an attached notion that persons whom are modest sell themselves short and are typically shy. Studies have proven this incorrect though. Studies have shown that whether a person is introverted or extroverted, to be modest is a favorable behavior. A compilation of multiple studies shows that modest behaviors are independent of gender, age, and ethnicity. It is thought that people who are higher in extroversion are less modest then those who are higher in introversion. According to the IPIP NEO personality test, modesty is facet of agreeableness. However modesty can be a facet of introversion. Using the questions from this test focusing on extroversion, introversion and modesty I will test the hypothesis that modesty is higher in those who are considered higher in introversion than extroversion. I will survey people, collecting modesty and extroversion scores, and reverse scoring extroversion scores to obtain introversion scores, based on the idea that a person’s levels of extroversion and introversion are on a complementary continuum.

Keywords: modesty, introversion, extroversion, relationship

Personality Traits of ROTC Cadets (Poster)

ROTC cadets at Gettysburg College will receive a questionnaire that presents them with questions and situations to measure personality traits. In an attempt to determine these traits, the Five Factor Model of personality will be used for both the questionnaire and situational questions. Based on prior research it was determined that extroversion, a trait of the Five Factor Model, was the main personality trait of officers and soldiers in the US military and militaries around the world. The study will attempt to determine whether young ROTC candidates possess the same traits as commissioned military officers.
The Power of Silence: Introversion and Leadership (Poster)

**Student(s):** Erin Becker

**Mentor(s):** Amy Hooper

**Time/Location:** 10:00am - 11:15am
Science Center 2 and 3 Lobby

An effective leader is a desire of all organizations, yet what elements comprise the most effective leader is quite ambiguous. Recent research into personality and leadership has found support for the effectiveness of introverted leaders especially in instances of followers exhibiting proactive behavior. In the present study, I examine whether introversion may or may not play a role in the relationships an introverted leader makes with his or her subordinates by interviewing an introverted leader and professors within an academic department at a Northeastern college. I am currently in the process of conducting and collecting this research. I expect to find that introversion will play a significant and positive role in the relationships that an introverted leader creates with each of his or her subordinates as introverts tend to prefer forming one on one relationships and socialization in smaller group settings. I hope this research will support recent research on the effectiveness of introverted leaders in our society and be able to communicate these results to organizations to alter the way introverted leaders are perceived in the workplace.

What Can We Learn From Asking People Their Thoughts During Personality Testing? (Poster)

**Student(s):** Sarah Alesio

**Mentor(s):** Amy Hooper

**Time/Location:** 10:00am - 11:15am
Science Center 2 and 3 Lobby

Personality testing is believed to be a true judgment of a person's personality by having them answer a set of questions honestly, but a person's honesty or tendency to fake may not be the issue in this personality measurement; situational behavior may be a bigger issue in this method of testing. This study focuses on the thoughts that people have while answering each question on a personality test. Many organizations today utilize personality tests, such as Jung's Typology Test and Myers Briggs, to contribute to their interviewing process while looking for the perfect fit in an employee. By using a qualitative approach, I seek to analyze whether these tests are filled out based on the person's true personality, or whether they exemplify situational behavior, the person's current state of mind, a relationship with someone, or a specific situation. By hypothesizing that most people are not considering their true personality, a relatively consistent pattern of their behaviors, I hope to be able to show what people are truly thinking about during their answer to each personality question.
Workaholism and Personality

The meaning of Workaholic has attracted a great deal of attention in these times of economic uncertainty. With the increase in weekly work hours over the past two decades, along with recent theoretical developments on this topic, it seems appropriate and timely to explore. Workaholism is defined by the idea that an individual could value work over any other activity, even when it negatively affects your health and family, as well as the quality of your work (Bonebright, Clay & Ankenmann, R. 2000). The changing nature of work in recent years, including the blurring of boundaries between work and personal life, has increased the need to understand workaholism. Several things are thought to be correlated with workaholism in individuals. Some of these things include different traits of the Big Five Personality scale, Type A personalities and positive and negative affects. In the present paper, the role that personality traits contribute to workaholism is investigated. It is hypothesized that personality attributes influence workaholism. Also it is hypothesized that the workaholism manipulates worker job satisfaction. The following literature reviews attempt to demonstrate and support the hypothesis.
Public Policy

The Impacts on Environmental Worldviews on Environmental Risk, Policy Options, and Behavior. (Panel)

Student(s): Valerie Leone
Mentor(s): Bruce Larson
Time/Location: 9:00am - 9:45am Science Center 153

The Impacts on Environmental Worldviews on Environmental Risk, Policy Options, and Behavior.

Through the use of a survey administered to students at Gettysburg College and the United States Naval Academy the influence of environmental worldviews on attitudes regarding environmental risk, environmental policy options, and environmental behavior was investigated.

This is a working abstract.
Religious Studies

Spiritual Immersion and Cultural Dialogues in Taize, France (Panel)

<table>
<thead>
<tr>
<th>Student(s):</th>
<th>Mentor(s):</th>
<th>Time/Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Pence, George Erlandson, Kristine Harner, Kurt Mathisen, Linnea Goebel</td>
<td>Joseph Donnella</td>
<td>8:30am - 9:45am</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Breidenbaugh Hall 112</td>
</tr>
</tbody>
</table>

Spiritual Immersion and Cultural Dialogues in Taize, France

Taize is an ecumenical monastery in the French countryside. It is a global community made up of monks and visitors from across the globe. The monks invite people from all walks of life to spend time immersed in their traditions and explore spirituality.

Visiting Taize allowed us to explore our Christian faith in a new context. Taize’s diverse community enabled us to broaden our understanding of what spirituality looks like in other cultures and how it brings people together. We were able to engage in dialogue with people from around the world to understand how our faith can contribute to a diverse community and have a positive impact on our society. We hoped to understand how Christianity could fit into the global discourse on social justice and further open our minds to understand the complexities of peace in our globalizing world.
Sociology

Stigma and Intellectual Disability: Sometimes the Best Intentions have the Worst Results
(Poster)

Student(s): Kelsey Boyce
Mentor(s): VoonChin Phua
Time/Location: 1:00pm - 2:15pm
Science Center 2 and 3 Lobby

Stigma and Intellectual Disability: Sometimes the Best Intentions have the Worst Results

Stigma is placed on individuals and groups in response to violations of norms. One such group that has historically faced stigma is the intellectually disabled and those who take part in Special Education programs in schools. Because the intellectually disabled do not live up to social norms and norms of scholastic achievement, many aspects of their lives can be affected negatively. They can also face stigma because of possible physical manifestations of their disabilities. Language that is used today reflects stigmatization. The use of words like “retard” as a synonym for stupid and dumb is an obvious indication of this in our culture today. However, there are many more subtle ways that language can be stigmatizing. We are interested in how college students talk about the intellectually disabled and their role in society and how the language used reflects the presence or lack of stigma in the culture. This study used data from in-depth ethnographic interviews of Gettysburg College students to examine how students on this campus perpetuate the stigmatization of the intellectually disabled through their use of language. The results reflect that although students are careful not to use language that is overtly stigmatizing, the content of their conversations shows that stigmatization is prevalent.
The Perception of Time In American Life: Can We Really Have It All?

Time is a subjective experience and most of us at some point have wished we had more time. The question is, what is it we wish we had more time for? Why, despite having it easy compared to other nations and our predecessors, are Americans burdened by the feeling of trying to "have it all"? This Sociology senior capstone paper focused on a discourse that is particularly relevant to the perception of time: the work-life balance. An in-depth literature review outlined definitional problems with the work-life balance discourse, a historical analysis of the changes in American society that have led to our feeling of "busyness," and how role de-differentiation has permeated society, as well as how the work-life balance intersects with gender and the life course. Content analysis was conducted of five popular culture blogs intended for Generation Y women in order to assess the impact of the work-life balance discourse on a particular sub-population negotiating role conflicts. A cultural comparison to Denmark was also used as a contrast to the time imbalance experienced in American society. The research revealed that time in the United States is an individualized experience that must be personally navigated in the face of rapid changes in twenty-first century.
Spanish

Cómo los inmigrantes se centralizan en las memorias del pasado como una técnica terapéutica (Poster)

Student(s): Chase Leonard  
Mentor(s): Alvaro Kaempfer  
Time/Location: 1:00pm - 2:15pm  
Science Center 2 and 3 Lobby

La historia y la memoria: Un análisis de La Sombra del Viento de Carlos Ruiz Zafón (Poster)

Student(s): Emma Thomas  
Mentor(s): Alvaro Kaempfer  
Time/Location: 1:00pm - 2:15pm  
Science Center 2 and 3 Lobby

La historia y la memoria: Un análisis de La Sombra del Viento de Carlos Ruiz Zafón
Theatre Arts

<EL TIGRE> (Theatrical)

Student(s): Avery Lentz, Felicia Pagan, Kierstan DeVo, Mauricio Novoa, Paul Di Salvo, Yulaikis Garcia
Mentor(s): Adrienne Clarke, Andrew Hughes, Christopher Kauffman, Susan Russell
Time/Location: 12:00pm - 12:45pm
Pennsylvania Hall
Outside North

EL TIGRE by Ecuadorian author Demetrio Aguilera Malta is a one-act play about four workers in the Amazon Rain Forest. Aguayo, the youngest of the four workers, sees a tiger that is pursuing her, but the others don't believe her. This piece is a journey of the characters' psychological experience of coping with constant fear of death. The play is about 40 minutes long, performed outdoors, and presented in Spanish language by native or fluent actors. The use of directorial choices and acting techniques will transcend the language barrier between the audience and the actors in order to emphasize the transformative power of theater to make non-native cultures accessible and exciting! EL TIGRE will also comment on the interaction of man versus nature and the cultural understandings of wilderness.

Chrysothemis (Theatrical)

Student(s): Gregory Scheiber
Mentor(s): Susan Russell
Time/Location: 10:00am - 10:30am
Brua Hall 215 Stevens Theatre

Chrysothemis is a play that attempts to discover the hidden story behind Agamemnon's forgotten daughter, present at her father's sacrifice of her sister, Iphigenia. The play looks at the themes of familial bonds, war, revenge, and divinity set on a ancient Grecian stage. The writing style of the dialogue explores the use of stylized, heightened diction and syntax within the context of a play for modern audiences.
The Balloon Catcher (Theatrical)

Student(s): Riley Park  
Mentor(s): Christopher Kauffman  
Time/Location: 10:45am - 11:45am, Brua Hall 215 Stevens Theatre

The Balloon Catcher

A spiritual successor to a previously written and self-produced play entitled Once Upon a Midnight Sandwich, the Balloon Catcher builds on many of the themes of magical realism established in that world while adding even greater focus to character development and visual artistry. The Balloon Catcher is the story of a young girl who doesn't let go of her balloon. Swept up into the sky amidst the clouds, she meets a colorful cast of characters who, for their own various reasons, cannot let go as well. A philosophical examination of laughter, loss, and love, the 8 person cast are all featured prominently as an ensemble with limited technical needs concerning lighting, staging and props. The focus is on the people and dialogue. Drawing from personal experience as well as the study of philosophy, it attempts to examine the differences of love we each have, the will and feeling of moving on from a place, homelessness, and how we recover from all of them. Whimsical and light-hearted with a (hopefully) rich subtext, the Balloon Catcher should be a fun ride for all to see. Also, there will be balloons of many, many a different color.
<table>
<thead>
<tr>
<th>Name</th>
<th>Index</th>
<th>Name</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achimovich,Alecia</td>
<td>44,53</td>
<td>Grabowski,Amelia</td>
<td>73,90,106</td>
</tr>
<tr>
<td>Alesio,Sarah</td>
<td>111</td>
<td>Grandi,Leah</td>
<td>43</td>
</tr>
<tr>
<td>Amin,Avani</td>
<td>58</td>
<td>Griffiths,Joshua</td>
<td>99</td>
</tr>
<tr>
<td>Arnold,Robin</td>
<td>75</td>
<td>Gromis,Keith</td>
<td>102</td>
</tr>
<tr>
<td>Bader,Samantha</td>
<td>95</td>
<td>Gulden,Stephanie</td>
<td>109</td>
</tr>
<tr>
<td>Becker,Erin</td>
<td>111</td>
<td>Halfors,Sterling</td>
<td>67</td>
</tr>
<tr>
<td>Becker,Ryan</td>
<td>67,97</td>
<td>Hamberlin,Sarabeth</td>
<td>101</td>
</tr>
<tr>
<td>Benn,Courtney</td>
<td>106</td>
<td>Harner,Kristine</td>
<td>114</td>
</tr>
<tr>
<td>Best,Jane</td>
<td>101</td>
<td>Harpel,Mia</td>
<td>92</td>
</tr>
<tr>
<td>Blyler,Nathan</td>
<td>97,98</td>
<td>Harris,Dean</td>
<td>40</td>
</tr>
<tr>
<td>Boas,Katherine</td>
<td>44,54</td>
<td>Heeren,Emily</td>
<td>33</td>
</tr>
<tr>
<td>Bollinger,Hannah</td>
<td>94</td>
<td>Hemdon,Eric</td>
<td>82</td>
</tr>
<tr>
<td>Bond,Kevin</td>
<td>40</td>
<td>Hess,Joanna</td>
<td>63</td>
</tr>
<tr>
<td>Boone,Ashley</td>
<td>44,53</td>
<td>Hill,John</td>
<td>99</td>
</tr>
<tr>
<td>Bosold,Alyssa</td>
<td>86</td>
<td>Hitte,Allyson</td>
<td>64</td>
</tr>
<tr>
<td>Boyce,Kelsey</td>
<td>115</td>
<td>Hofe,Jonathan</td>
<td>77</td>
</tr>
<tr>
<td>Boyland,Michael</td>
<td>105</td>
<td>Holmes,Samuel</td>
<td>81</td>
</tr>
<tr>
<td>Broadway,Alice</td>
<td>104</td>
<td>Holtz,Bethany</td>
<td>44,57</td>
</tr>
<tr>
<td>Callahan,Shannon</td>
<td>94</td>
<td>Jankowski,Emily</td>
<td>44,57</td>
</tr>
<tr>
<td>Cammisa,Anna</td>
<td>68</td>
<td>Jasion,Christina</td>
<td>47,48</td>
</tr>
<tr>
<td>Carlson,Matthew</td>
<td>103</td>
<td>Jesteadt,Nicholas</td>
<td>69</td>
</tr>
<tr>
<td>Carmel,Joshua</td>
<td>64,73</td>
<td>Johns,Kelly</td>
<td>109</td>
</tr>
<tr>
<td>Chiarelli,Kaitlin</td>
<td>33</td>
<td>Johnston,Jeremiah</td>
<td>62</td>
</tr>
<tr>
<td>Ciraku,Lorela</td>
<td>100</td>
<td>Joseph Fortenbaugh,R.</td>
<td>61</td>
</tr>
<tr>
<td>Clark,Caroline</td>
<td>79</td>
<td>Kane,Rose</td>
<td>85</td>
</tr>
<tr>
<td>Coates,William</td>
<td>64</td>
<td>Kauffman,Lauren</td>
<td>36</td>
</tr>
<tr>
<td>Cochran,Christina</td>
<td>57,73</td>
<td>Keith,Tyler</td>
<td>110</td>
</tr>
<tr>
<td>Constantian,Emily</td>
<td>105</td>
<td>Ken,Theodore</td>
<td>66</td>
</tr>
<tr>
<td>Cooper,Melanie</td>
<td>30</td>
<td>Ketelsen,Sara</td>
<td>36</td>
</tr>
<tr>
<td>Creamer,Shelby</td>
<td>94</td>
<td>Kohlbrener,Emily</td>
<td>51,52</td>
</tr>
<tr>
<td>Daniels,Catherine</td>
<td>32</td>
<td>Kraiza,Alice</td>
<td>55</td>
</tr>
<tr>
<td>DeBor,David</td>
<td>96</td>
<td>Kumar,Kavya</td>
<td>78,92</td>
</tr>
<tr>
<td>Deffler,Rebecca</td>
<td>36</td>
<td>La Cruz,Nikita</td>
<td>59</td>
</tr>
<tr>
<td>Deimler,Falon</td>
<td>32</td>
<td>Lalvani,Samir</td>
<td>67,81</td>
</tr>
<tr>
<td>DelVisco,Lawrence</td>
<td>63,65</td>
<td>Laws,David</td>
<td>67</td>
</tr>
<tr>
<td>Desmond,Madison</td>
<td>38</td>
<td>Lee,Eric</td>
<td>39</td>
</tr>
<tr>
<td>DeVoe,Kierstan</td>
<td>118</td>
<td>Lees,Connor</td>
<td>77</td>
</tr>
<tr>
<td>Di Salvo,Paul</td>
<td>118</td>
<td>Lentz,Avery</td>
<td>118</td>
</tr>
<tr>
<td>Donnachie,Aaron</td>
<td>63</td>
<td>Leonard,Chase</td>
<td>117</td>
</tr>
<tr>
<td>Dunn,Alexandra</td>
<td>63</td>
<td>Leone,Valerie</td>
<td>81,113</td>
</tr>
<tr>
<td>Dunne,Lauren</td>
<td>32</td>
<td>Lorentz,Eva</td>
<td>104</td>
</tr>
<tr>
<td>Dunworth,Matthew</td>
<td>44,54</td>
<td>Love,Emily</td>
<td>44,57</td>
</tr>
<tr>
<td>Englott,Suzanne</td>
<td>83</td>
<td>Lowery,Kristi</td>
<td>94</td>
</tr>
<tr>
<td>Erlandson,George</td>
<td>114</td>
<td>Lugo,Kevin</td>
<td>70,76</td>
</tr>
<tr>
<td>Everts,Harrison</td>
<td>112</td>
<td>Maass,Charles</td>
<td>87</td>
</tr>
<tr>
<td>FitzGerald,Lauren</td>
<td>94</td>
<td>Madden,Kelly</td>
<td>82</td>
</tr>
<tr>
<td>Fodero,Sarah</td>
<td>85</td>
<td>Malec,Marcin</td>
<td>66,67</td>
</tr>
<tr>
<td>Fogliano,Rose</td>
<td>44,57</td>
<td>Malinchak,Casina</td>
<td>60</td>
</tr>
<tr>
<td>Foster,Audra</td>
<td>63,64</td>
<td>Mathisen,Kurt</td>
<td>114</td>
</tr>
<tr>
<td>Foxx,Alyssa</td>
<td>33,99</td>
<td>McCormick,Brendan</td>
<td>110</td>
</tr>
<tr>
<td>Francisco,Emily</td>
<td>34</td>
<td>McNamara,Daniel</td>
<td>66</td>
</tr>
<tr>
<td>Franz,Cassi</td>
<td>83</td>
<td>Menton,Lindsay</td>
<td>71</td>
</tr>
<tr>
<td>Gallo,Christina</td>
<td>95</td>
<td>Merril,Darcy</td>
<td>63</td>
</tr>
<tr>
<td>Garcia,Yulaikis</td>
<td>118</td>
<td>Middlebrooks,Jennifer</td>
<td>61</td>
</tr>
<tr>
<td>Gaw,Taylor</td>
<td>67</td>
<td>Miller,Elizabeth</td>
<td>46</td>
</tr>
<tr>
<td>Gerber,Kelsey</td>
<td>33,64</td>
<td>Mohamed-Aly,Dina</td>
<td>36</td>
</tr>
<tr>
<td>Gillot,Hudson</td>
<td>104</td>
<td>Monthey,Andrew</td>
<td>64</td>
</tr>
<tr>
<td>Goebel,Linnea</td>
<td>78,114</td>
<td>Morris,Jonathan</td>
<td>108</td>
</tr>
<tr>
<td>Murphy,Katherine</td>
<td>66</td>
<td>Watrud,Kaitlin</td>
<td>49</td>
</tr>
<tr>
<td>Myers,Joanna</td>
<td>35</td>
<td>Weisman,Margaret</td>
<td>116</td>
</tr>
</tbody>
</table>
Myers, Rachel  
Nelson, John  90, 92  
Neufeld, Thomas  95  
Nguyen, Cam  41, 42  
Nichols, Ross  69, 84  
North, Kristin  109  
Novoa, Mauricio  118  
Olechnowicz, Cheryl  107  
Orzechowski, Amanda  45  
Osborne, Taylor  32  
Pagan, Felicia  118  
Park, Riley  119  
Parker, Sarah  73  
Pence, Elizabeth  114  
Piccirillo, Thomas  63, 65  
Poff, Adam  44, 54  
Poorman, Joshua  36, 39  
Psolka-Green, Kevin  103  
Qi Zhou, Jia  70  
Reinhardt, Charles  63  
Rice, Katherine  82  
Robinson, Joseph  56  
Roedner, Lauren  31, 63  
Rosenberger, Veronica  73  
Rouscher, Morgan  33  
Ruhl, Emily  75  
Runzel, Tricia  90  
Rupert, Elizabeth  85  
Ruth, Olivia  50, 88  
Sahli, Dana  83, 108  
Schaub, Julie  83  
Scheiber, Gregory  118  
Schneider, Anna  83  
Segraves, William  89  
Sheffer, Emma  101  
Silver, Lee  95  
Skufca, Alexander  64  
Smart, Taylor  99  
Smith, Amanda  63  
Stare, Veronika  103  
Staub, Kristin  102  
Steege, Ian  104  
Stukane, Michelle  100  
Swenson, Jordan  83  
Swink, Shane  36  
Taormina, Rebecca  33  
Tapscott, Logan  63  
Thomas, Emma  117  
Tomko, Brianne  44, 53  
Trautz, Katherine  104  
Trepel, Matthew  63, 65  
Van Doren, David  44, 54  
Vill, Albert  44, 53  
Walmer, Michael  64  
Watkins, Charrisha  107  
Watkins, Emily  104