CELEBRATION OF
RESEARCH, SCHOLARSHIP, AND
CREATIVE ACTIVITIES
Friday, April 13, 2012

SCHEDULE OF
EVENTS

Wright State
University
Changing Lives

Office of Undergraduate Research and STEMM Activities
3640 Colonel Glenn Highway, Dayton, Ohio 45435-0001
(937) 775-4744
www.wright.edu/urop

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Wright State Research Institute

Barnes & Noble
At Wright State University
in the Student Union Building

Universal Technology Corporation

Infoscitex Corporation

Peerless Technologies

PCU 60 years of Quality Solutions

Research, Scholarship, and Creative Activities
Schedule of Events

Conference Check-In and Registration: 7:30 am—11:30 am
Student Union Atrium

Oral Presentation, Morning Session: 9 am—11:20 am
Student Union, E156, E157, E163

COLA Dean’s Colloquium, E156A 9:20–11 am

Poster Presentations and Lunch: 11:40 am—1:30 pm
Apollo Room, Student Union

Oral Presentations, Afternoon Session: 1:45—3:45 pm
Student Union, E156A
# Session 1: E156A
## COLA Dean’s Colloquium
### Session Chair: Dr. Linda Caron

<table>
<thead>
<tr>
<th>Time</th>
<th>Student</th>
<th>Faculty Mentor</th>
<th>Department</th>
<th>Title</th>
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<tbody>
<tr>
<td>9</td>
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<tr>
<td>9:20</td>
<td>Carin Benning</td>
<td>Dr. Karen Lahm</td>
<td>Applied Behavioral Sciences</td>
<td><strong>Title:</strong> Parent-Child Relationships as a Motivation for Improved Behavior Among Prison Inmates</td>
</tr>
<tr>
<td>9:40</td>
<td>Kyleigh Clark</td>
<td>Dr. December Green</td>
<td>Political Science</td>
<td><strong>When Prohibition and Violence Collide: The Case of Mexico</strong></td>
</tr>
<tr>
<td>10</td>
<td>Leslie Matthews</td>
<td>Dr. Christopher Chaffee</td>
<td>Music</td>
<td><strong>Title:</strong> Music Instruction for Students who are Blind: A Collection of Methods and Materials for the Music Educator</td>
</tr>
<tr>
<td>10:20</td>
<td>Rebekkah Mulhol-land</td>
<td>Dr. Tracy Snipe</td>
<td>Political Science</td>
<td><strong>Title:</strong> African American Female Artists and the Sea Islands: Exploring Africanisms and Religious Expressions in Creative Works</td>
</tr>
<tr>
<td>10:40</td>
<td>Hayley Hughes</td>
<td>Dr. Barry Milligan</td>
<td>English</td>
<td><strong>Title:</strong> A manly, and almost womanly tenderness: Imagining a Unified Masculinity in Trollope’s Doctor Thorne</td>
</tr>
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</table>


# Session 2: E156B

Session Chair: Cathy Sayer, Dr. Tarun Goswami,

<table>
<thead>
<tr>
<th>Student</th>
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<tbody>
<tr>
<td>Raquel Dues</td>
<td>Dr. Gary Burns</td>
<td>Psychology</td>
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<tr>
<td><strong>Title:</strong></td>
<td><strong>Job Quality and Webpage Aesthetics</strong></td>
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<tr>
<td>9:20</td>
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<tr>
<td>Erica Kemp</td>
<td>Dr. Pamela Tsang</td>
<td>Psychology</td>
</tr>
<tr>
<td><strong>Title:</strong></td>
<td><strong>Timesharing Skill Among Athletes and Non-Athletes</strong></td>
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<tr>
<td>9:40</td>
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<tr>
<td>Orly Leiva</td>
<td>Dr. Mariana Morries</td>
<td>Pharmacology and Toxicology</td>
</tr>
<tr>
<td><strong>Title:</strong></td>
<td><strong>Localization of Renin Angiotensin Peptidases In Mouse Kidney Using Dual Immunofluorescence and Microscopy</strong></td>
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<td>10:20</td>
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<tr>
<td>Nadine Morgan</td>
<td>Dr. Courtney Sulentic</td>
<td>Pharmacology and Toxicology</td>
</tr>
<tr>
<td><strong>Title:</strong></td>
<td><strong>Determining the role of the AhR in TCDD-induced suppression of immunoglobulin heavy chain expression</strong></td>
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<td>10:40</td>
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<tr>
<td>Jing Liu</td>
<td>Dr. Courtney Sulentic</td>
<td>Pharmacology and Toxicology</td>
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<tr>
<td><strong>Title:</strong></td>
<td><strong>Transcriptional regulation by 2,3,7,8-tetrachlorodibenzo-p dioxin within the human polymorphic hs1,2 enhancer</strong></td>
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<tr>
<td>11:00</td>
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<tr>
<td>Kevin Hatcher</td>
<td>Dr. Tarun Goswami</td>
<td>Biomedical, Industrial and Human Factors Engineering (BIE)</td>
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<tr>
<td><strong>Title:</strong></td>
<td><strong>Neck and Head Injury Criteria and How It Relates to Pilot Ejection</strong></td>
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<td>11:00</td>
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<tr>
<td>Isiah Kendall</td>
<td>Dr. Tarun Goswami</td>
<td>Biomedical, Industrial and Human Factors Engineering (BIE)</td>
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<tr>
<td><strong>Title:</strong></td>
<td><strong>Analysis of NFL Concussions</strong></td>
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</table>
### Session 3: E156C
Session Chair: Dr. K.T. Arasu, Dr. Jason Deibel

<table>
<thead>
<tr>
<th>Student</th>
<th>Faculty Mentors</th>
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<tbody>
<tr>
<td>Jonathan Esala</td>
<td>Dr. K.T. Arasu</td>
<td>Mathematics and Statistics</td>
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<tr>
<td><strong>9:20</strong></td>
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<tr>
<td><strong>Title:</strong></td>
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<tr>
<td><strong>Non-Existence</strong></td>
<td>Non-Existence of Relative Difference Sets in Several Previously Unresolved Cases</td>
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<tr>
<td>Cody Watson</td>
<td>Dr. K.T. Arasu</td>
<td>Mathematics and Statistics</td>
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<td><strong>9:40</strong></td>
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<td><strong>Title:</strong></td>
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<tr>
<td><strong>Partially Balanced Incomplete Block Designs</strong></td>
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<tr>
<td>Akhilesh Pathak</td>
<td>Dr. K.T. Arasu</td>
<td>Mathematics and Statistics</td>
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<td><strong>9:40</strong></td>
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<td><strong>Title:</strong></td>
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<tr>
<td><strong>On the bounds of the entropy defined for an orthogonal matrix</strong></td>
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<tr>
<td>Satya Ganti</td>
<td>Dr. Jason Deibel</td>
<td>Physics</td>
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<td><strong>10:20</strong></td>
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<td><strong>Title:</strong></td>
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<tr>
<td><strong>Characterization and Modeling of Laser Micro-Machined Periodically Corrugated Metallic Terahertz Wire Waveguides</strong></td>
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<tr>
<td>Andrew Niklas</td>
<td>Dr. Jason Deibel</td>
<td>Physics</td>
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<td><strong>10:20</strong></td>
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<td><strong>Title:</strong></td>
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<td><strong>Characterization of Terahertz Frequency Scattering from Multi-Walled Carbon Nanotube Arrays</strong></td>
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<tr>
<td>Lindsay Owens</td>
<td>Dr. Jason Deibel</td>
<td>Physics</td>
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<td><strong>10:40</strong></td>
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<td><strong>Title:</strong></td>
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<tr>
<td><strong>Characterization of Ceramic Composite Materials using Terahertz Reflection Imaging Technique</strong></td>
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<tr>
<td>Alyssa Fosnight</td>
<td>Dr. Ivan Medvedev</td>
<td>Physics</td>
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<td><strong>11:00</strong></td>
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<td><strong>Title:</strong></td>
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<td><strong>Analytical Chemical Sensing using high resolution Terahertz/submillimeter wave spectroscopy</strong></td>
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<td>Faculty/Research Mentor</td>
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<tr>
<td>9:00</td>
<td>Pooja Mandke</td>
<td>Dr. Michael Markey</td>
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<td>9:20</td>
<td>Mary Leonoard</td>
<td>Dr. Madhavi Kadakia</td>
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<tr>
<td>9:40</td>
<td>Gabriel Gracia Maldonado</td>
<td>Dr. Madhavi Kadakia</td>
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<tr>
<td>10:00</td>
<td>Nathasha Hill</td>
<td>Dr. Madhavi Kadakia</td>
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<td>10:20</td>
<td>Dhawal Oswal</td>
<td>Dr. Heather Hostetler</td>
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<tr>
<td>10:40</td>
<td>Madhupriya Mahankali</td>
<td>Dr. Julian Gomez-Cambronero</td>
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<tr>
<td>11:00</td>
<td>Ahmed Obeidat</td>
<td>Dr. Timothy Cope</td>
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## Session 5: E163B

**Session Chair:** Dr. Susan Carrafiello, Dr. James Munch

<table>
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<tr>
<th>Time</th>
<th>Student</th>
<th>Faculty Mentor</th>
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<tr>
<td>9:00</td>
<td>Lindora Hubel</td>
<td>Dr. Yi-Hui Lee</td>
<td>College of Nursing</td>
<td><strong>Title:</strong> <em>Childhood Obesity and Participation in a Health and Fitness</em></td>
</tr>
<tr>
<td>9:20</td>
<td>Sarah Aisenbrey</td>
<td>Dr. Susan Carrafiello</td>
<td>History</td>
<td><strong>Title:</strong> <em>Carl Schurz, The Revolutions of 1848, and Abolition: The Forty-Eighters in America</em></td>
</tr>
<tr>
<td>9:40</td>
<td>Joshowa Yost</td>
<td>Dr. Meyer</td>
<td>History</td>
<td><strong>Title:</strong> *The Warrior Image in Modern Japanese Media and its Implica-</td>
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<tr>
<td>10:00</td>
<td>Spencer Brannon</td>
<td>Dr. Donna Schlagheck</td>
<td>Political Science</td>
<td><strong>Title:</strong> <em>Clash of the Titans: The Future of Competing Spheres of Influence in the South China Sea</em></td>
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<tr>
<td>10:20</td>
<td>Matthew Conaway</td>
<td>Dr. December Green</td>
<td>Political Science</td>
<td><strong>Title:</strong> <em>When ‘Boys Will Not Be Boys’: Variations of Wartime Sexual Violence by Armed Opposition Groups in Sri Lanka, Sierra Leone, and Nepal</em></td>
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<tr>
<td>10:40</td>
<td>Kathryn Chaney</td>
<td>Dr. December Green</td>
<td>Political Science</td>
<td><strong>Title:</strong> <em>Solutions to the Problem of Corruption in Brazil</em></td>
</tr>
<tr>
<td>11:00</td>
<td>Moneeka Gentry, Chad Lovins, Michael Tyler, Philip Logan, Rebekkah Mulholland, Allison Desimio, Sharita Jackson</td>
<td>Dr. Tracy Snipe</td>
<td>Political Science</td>
<td><strong>Title:</strong> <em>Keep the Faith: Student Reflections on the 12th Congressional Civil Rights Pilgrimage to Alabama</em></td>
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<td>Time</td>
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<td>Faculty Mentor</td>
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<td>9:20</td>
<td>Cory Knick</td>
<td>Dr. Amir Farajian</td>
<td>Mechanical and Materials Engineering</td>
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<tr>
<td></td>
<td><strong>Title:</strong> Modeling the Liquid Phase Exfoliation of Graphene</td>
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<td>9:40</td>
<td>Deah Lieurance</td>
<td>Dr. Don Cipollini</td>
<td>Biological Sciences</td>
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<td></td>
<td><strong>Title:</strong> Exotic Lonicera species both escape and resist specialist and generalist herbivores in the introduced range</td>
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<td>10</td>
<td>Ran Yan</td>
<td>Dr. Kate Excoffon</td>
<td>Biological Sciences</td>
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<td></td>
<td><strong>Title:</strong> The C-terminus of the Coxsackievirus and adenovirus receptor directly interacts with the PDZ1 and PDZ3 domains of MAGI-1 with high affinity</td>
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<td>10:20</td>
<td>Poornima Kotha Lakshmi Naranjan</td>
<td>Dr. Kate Excoffon</td>
<td>Biological Sciences</td>
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<tr>
<td></td>
<td><strong>Title:</strong> Regulation of Coxsackie and Adenovirus Receptor (CAR) by Cytokines</td>
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<td>10:40</td>
<td>Alexandra McCann</td>
<td>Dr. Kate Excoffon</td>
<td>Biological Sciences</td>
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<td></td>
<td><strong>Title:</strong> MAGI-1 Mediated Degradation of Coxsackievirus and Adenovirus Receptor Exon 8 (CAREx8)</td>
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<td>11:00</td>
<td>Daniel Davis</td>
<td>Dr. John Stireman</td>
<td>Biological Sciences</td>
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<td></td>
<td><strong>Title:</strong> The phylogenetics of Tachinidae (Insecta: Diptera) with an emphasis on subfamily structure</td>
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# Session 7: E156A

Session Chair: Dr. Courtney Sulentic

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<thead>
<tr>
<th>Student</th>
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<tbody>
<tr>
<td>Andrew Lyda</td>
<td>Dr. Christopher Barton</td>
<td>Earth and Environmental Sciences</td>
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<tr>
<td>1:45</td>
<td></td>
<td><strong>Title:</strong> Power Scaling to Forecast Water Height and Life Loss in Japan Tsunamis</td>
</tr>
<tr>
<td>Miyong Hughes</td>
<td>Dr. Suzanne Lunsford</td>
<td>Chemistry</td>
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<tr>
<td>2:05</td>
<td></td>
<td><strong>Title:</strong> Nanoscale Modification and Functionalization of Carbon Electrodes for the Detection of Harmful Organic Chemicals in Water</td>
</tr>
<tr>
<td>Nora Hunter</td>
<td>Dr. Paul Seybold</td>
<td>Chemistry</td>
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<tr>
<td>2:25</td>
<td></td>
<td><strong>Title:</strong> Modeling Second-Order Chemical Reactions using Cellular Automata</td>
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<tr>
<td>Adam Stahler</td>
<td>Dr. Ioana Pavel Sizemore</td>
<td>Chemistry</td>
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<tr>
<td>2:45</td>
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<td><strong>Title:</strong> Effects of Substrate Temperature on the SERS-based Sensing Performance of Silver Nanorod Thin Films Fabricated Through Oblique Angle Deposition</td>
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<tr>
<td>Joshua Baker</td>
<td>Dr. Ioana Pavel Sizemore</td>
<td>Chemistry</td>
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<tr>
<td>3:05</td>
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<td><strong>Title:</strong> “Green” size-selection and concentration of unfunctionalized silver nanoparticles for SERS-based sensing applications</td>
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<tr>
<td>Jessica Dagher</td>
<td>Dr. Ioana Pavel Sizemore</td>
<td>Chemistry</td>
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<tr>
<td>3:25</td>
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<td><strong>Title:</strong> Transport of Engineered Silver Nano Particles through Saturated Porous Media</td>
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</table>
# Session 8: E156B
Session Chair: Dr. Frank Ciarallo, Dr. Nasser Kashou

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<tbody>
<tr>
<td>1:45</td>
<td>Gregory Noble</td>
<td>Dr. Frank Ciarallo</td>
<td>BIE</td>
<td>Supplier Decisions in a Two-Retailer, One Supplier Transshipment System with Quantity Discounts</td>
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<td>2:05</td>
<td>Victor Middleton</td>
<td>Dr. Frank Ciarallo</td>
<td>BIE</td>
<td>Imperfect Situation Awareness: Representing the Role of Error and Uncertainty in Modeling, Simulation &amp; Analysis</td>
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<tr>
<td>2:25</td>
<td>Dewei Guan</td>
<td>Dr. Hong Huang</td>
<td>Mechanical and Materials Engineering</td>
<td>Electric wheelchair Design</td>
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<td>2:45</td>
<td>Kirti Kant Paulla</td>
<td>Dr. Amir Farjian</td>
<td>Mechanical and Materials Engineering</td>
<td>Molecular Vibrational Effects in Electron Transport of Ultra Thin and Narrow Gas Sensors: An ab-initio Study</td>
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<tr>
<td>3:05</td>
<td>Tim Osborn</td>
<td>Dr. Amir Farjian</td>
<td>Mechanical and Materials Engineering</td>
<td>Computational modeling of silicene hydrogenation</td>
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<tr>
<th>Student</th>
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<tbody>
<tr>
<td>Michael Tyler</td>
<td>Dr. Tracy Snipe</td>
<td>Political Science</td>
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<td><strong>1:45</strong></td>
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<tr>
<td><strong>Title:</strong> <em>The Rearview Mirror: A Forward Journey Back</em></td>
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<tr>
<td>Thomas Knickerbocker</td>
<td>Dr. Damaris Serrano</td>
<td>Modern Languages</td>
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<tr>
<td><strong>Title:</strong> <em>Los Ninjas, insight into modern Cuba</em></td>
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<tr>
<td>Michael Garison</td>
<td>Dr. Damaris Serrano</td>
<td>Modern Languages</td>
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<td><strong>Title:</strong> <em>Innocence Kidnapped</em></td>
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<tr>
<td>Angela Borgerding,</td>
<td>Dr. Damaris Serrano</td>
<td>Modern Languages</td>
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<td>Briana Weisner,</td>
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<td>Kourtney Yarger, Ty-</td>
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<td><strong>Title:</strong> <em>The Lost Children of Franco</em></td>
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3:05

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Posters

**ATHLETIC TRAINING**

Allison Church  
Title: *The Etiology and Management of Achilles Tendon Ruptures*  
Undergraduate Student in Athletic Training  
Mentor: Tony Ortiz, Athletic Training

**BIOLOGICAL SCIENCES**

Renalda Munubi  
Title: *The Influence of Depth, Rugosity, Food Quality and Primary Productivity on Abundances of Algivorous Fishes in Lake Tanganyika*  
Graduate Student in Biological Sciences  
Mentor: Yvonne Vedeboncoeur, Bio. Science

Samantha Davis  
Title: *How environmental conditions and changing landscapes influence the survival of a rare woodland butterfly, Pieris virginiensis.*  
Graduate Student in Biological Sciences  
Mentor: Don Cipollini, Biological Sciences

Daniel Hyman  
Title: *Moderate Exercise in Mice*  
Undergraduate Student in Biological Sciences  
Mentor: Paula Bubulya, Biological Sciences

Arlene Maliekal  
Title: *Provides Protection against Diet-Induced Diabetes*  
Undergraduate Student in Biological Sciences  
Mentor: Roberta Pohlman, Biological Sciences

James Readler  
Title: *Effects of Chronic Exercise on Diet-Induced Obesity in Developing Mice*  
Undergraduate Student in Biological Sciences  
Mentor: Roberta Pohlman, Biological Sciences

Sapna Varia  
Title: *Btf colocalizes with pre-mRNA splicing and mRNA export factors at transcription sites and affects the cellular distribution of mRNAs*  
Graduate Student in Biological Sciences  
Mentor: Katherine Excoffon, Biological Sciences
Alexandra Zelles
Title: **Positive feedback does not occur between garlic mustard (Allaria petiolata) and Eurasian earthworms**
Graduate Student in Biological Sciences
Mentor: Tom Rooney, Biological Sciences

Alexandria Woodward
Title: **Effects of salicylic acid and jasmonic acid on defensive chemistry of garlic mustard**
Undergraduate Student in Biological Sciences
Mentor: Don Cipollini, Biological Sciences

Jeremy Heath
Title: **Testing optimal defense theory in Solidago altissima**
Graduate Student
Mentor: John Stireman III, Biology

Nickellatt Edwards
Title: **Characterization of HIV Rev and Tubulin Interactions**
Undergraduate Student in Clinical Laboratory Science
Mentor: Mill Miller, Biological Sciences

**BIOCHEMISTRY AND MOLECULAR BIOLOGY**

Khadijeh Alnajjar
Title: **Isolation and Characterization of a Triple Histidine Mutation in the Proton-Collecting Antenna of Cytochrome c Oxidase in Rhodobacter Sphaeroides**
Graduate Student in Biological Sciences
Mentor: Lawrence Prochaska, Biochemistry and Molecular Biology

**CHEMISTRY**

Daniel Brown
Title: **Halogenations of Aryl Substituted Sydnones**
Graduate Student in Chemistry
Mentor: Kenneth Turnbull, Chemistry

Mark Duffy
Title: **Cyclopentadienone Dimers**
Graduate Student in Chemistry
Mentor: William Feld, Chemistry

Kelsi Eberst
Title: **Synthesis of Molybdenum Trinuclear Clusters**
Undergraduate Student in Pre-Med/Pre-professional health
Mentor: Vladimir Katovic, Chemistry

Andria Fortney
Title: **Tailoring the Solubility and Thermal Characteristics of Poly (ether ether ketone)**
Undergraduate Student in Chemistry
Mentor: Eric Fossum, Chemistry

Daniel Greene
Title: *Synthesis of Crown Ether-Lithium Phthalocyanine Complexes*
Undergraduate Student in Chemistry
Mentor: William Feld, Chemistry

Michael Krol
Title: *Alkoxyammonium Lithium Phthalocyanines*
GR Student in Chemistry
Mentor: William Feld, Chemistry

Jeremy Lear
Title: *Main Chain Alkoxy Substituted PPV*
Undergraduate Student in Chemistry
Mentor: William Feld, Chemistry

Allie Meyerhoefer
Title: *A Study of the Transport of Different Size Silver Nanoparticles in Saturated Porous Media*
Undergraduate Student in Chemistry
Mentor: Ioana Pavel-Sizemore, Chemistry

Ryan Oostendorp
Title: *Bis(alkoxyphenyl)cyclopentadienones*
GR Student in Chemistry
Mentor: William Feld, Chemistry

Courtney Sutherland
Title: *Poly(arylene ether)s prepared from functionalized 3,5-difluorotriphenylphosphine oxide*
Undergraduate Student in Chemistry
Mentor: William Feld, Chemistry

Graduate Student in Chemistry
Mentor: Eric Fossum, Chemistry

Mehmet Tatli
Title: *Facile Synthesis of Functionalized Poly (Arylene Ether Sulfone)*
Graduate Student in Chemistry
Mentor: Eric Fossum, Chemistry

Triet Truong
Title: *Monitoring the health of Glen Helen Nature Preserve: Can I drink the water?*
Graduate Student in Chemistry
Mentor: Audrey McGowin, Chemistry

Triet Truong
Title: *Identifying new haplotypes and potential cryptic species for marine leeches (Ozobranchus spp.) from Hawaiian and Florida sea turtles based on molecular data*
Graduate Student in Chemistry
Mentor: Audrey McGowin, Chemistry

Kristy Wickman
Title: *Exchange Reaction using 1,3-bis(1-adamantyl)imidazolium tetrafluoroborate and dilithium phthalocyanine*
Graduate Student in Chemistry
Mentor: William Feld, Chemistry
Austin Williams  
Title: *Synthesis, characterization and “green” manipulation of un-functionalized silver nanoparticles for SERS-based sensing applications*  
Undergraduate Student in Biological Sciences  
Mentor: Ioana Pavel-Sizemore, Chemistry

**COLLEGE OF NURSING AND HEALTH**

Laura Churchman, Stacey Sherman¹, Brittany Fouts²  
Title: *Project SMARTCare: Interdisciplinary Collaboration for Development of a Virtual Environment for Bleeding Disorder Education*  
Undergraduate Student in Nursing,¹ Undergraduate student in Biomedical Engineering at OSU and AFRL,² Undergraduate student in Biomedical Engineering at WSU and AFRL  
Mentor: Detrice Barry, College of Nursing and Health

Jennifer Schueler  
Title: *End-Of-Life Care Education for the Intensive Care Nurse*  
Graduate Student in Nursing  
Mentor: Yi-Hui Lee, College of Nursing and Health

**COMMUNITY HEALTH**

Elizabeth Alvarez Paradise  
Title: *Physical and demographic influences on health related quality of life*  
Graduate Student  
Mentor: Miryoung Lee, Community Health

**COMPUTER SCIENCE**

Pramod Anantharam  
Title: *Trust Issues in Social and Sensor Networks*  
Graduate Student in Computer Science  
Mentor: Amit Sheth, Computer Science

**EARTH AND ENVIRONMENTAL SCIENCES**

Mohamad Reza Soltanian Pereshkafti  
Title: *Which Scale of Stratal Architecture are Relevant to Hyporheic-Zone Processes?*  
Graduate Student in Earth and Environmental Science  
Mentor: Robert Ritzi, Earth and Environmental Sciences

Daniel Blake  
Title: *MASW Determination of Surface Layer Thickness and VS Reconciled with Microtremor*
Resonance Analysis—Grenne County, Ohio
Graduate Student in Earth and Environmental Science
Mentor: Ernest Hauser, Earth and Environmental Sciences

Ke Qin
Title: Sustained Aerobic Degradation of Trichloroethylene by Ammonia-Oxidizing Bacteria Naturally Associated with Wetland Plant Roots
Graduate Student in Earth and Environmental Science
Mentor: Abinash Agrawal, Environmental Science

Marcia White
Title: Comparison of Earth Weather and other
Undergraduate Student in Middle Childhood Education
Mentor: Rebecca Teed, Earth and Environmental Sciences

EES Lake Campus
Leigh Deuter
Title: A review of the Chondrichthyans from the Mississippi System of Northern Alabama, USA
Undergraduate Student in Earth and Environmental Science
Mentor: Chuck Ciampaglio, EES Lake Campus

Emergency Medicine
Melissa Bradshaw
Title: Purinergic receptors are critical for cell volume recovery after exposure to hypotonic environments.
Graduate Student
Mentor: James Olson, Emergency Medicine

Marketing
Heather Boyd
Title: An empirical investigation of the students' attitudes and opinions toward texting while driving
Undergraduate Student in Marketing
Mentor: Pola Gupta, Marketing

Mechanical Engineering
Matthew Finke
Title: Alkaline Fuel Cells
Undergraduate Student in Mechanical Engineering
Mentor: Andrew Hsu, Mechanical Engineering

Modern Languages
Francisco Cronin
Title: Fin del Mundo
Undergraduate Student in Spanish
Mentor: Damaris Serrano, Modern Languages
**NEUROSCIENCE, CELL BIOLOGY AND PATHOLOGY (NCBP)**

Renee Albers  
Title: **Lentiviral Gene Targeting**  
Graduate Student in Biological Sciences  
Mentor: *Thomas L. Brown, NCBP*

Renee Albers  
Title: **Placental, Lineage-Specific Lentiviral Gene Transfer**  
Graduate Student in Biological Sciences  
Mentor: *Thomas L. Brown, NCBP*

Rebecca Bricker  
Title: **Generation of a Labyrinthine-Committed, Placental Progenitor Cell Line**  
Graduate Student in Biological Sciences  
Mentor: *Thomas Brown, NCBP*

Erica Carey  
Title: **Cell-Specific Knockdown of AMPK Alpha Subunits**  
Graduate Student in Biological Sciences  
Mentor: *Thomas L. Brown, NCBP*

Siham Hourani  
Title: **Induced expression of human store-operated calcium channel components: Orai1, Orai3 and STIM1 in stable Drosophila S2 Cell Lines?**  
Undergraduate Student in Biological Sciences  
Mentor: *Ashot Kozak, NCBP*

J. Chika Morah  
Title: **Normoxia Influences Cell Growth and Total Mitochondrial Volume in Cell Culture**  
Undergraduate Student in Biological Sciences  
Mentor: *Christopher Wyatt, NCBP*

Saif Ahmed  
Title: **HCN1 Immunoreactivity of α-motoneurons Following Peripheral Nerve Injury**  
Graduate Student in Biological Sciences  
Mentor: *Robert Fyffe, NCBP*

Savannah Dolibo  
Title: **Lentiviral, Invasive Trophoblast-Specific Gene Targeting**  
Undergraduate Student in Biological Sciences  
Mentor: *Thomas Brown, NCBP*

Jon Harvey  
Title: **Development of Ia Sensory Afferents**  
Graduate Student  
Mentor: *David Ladle, NCBP*

Angela Krupka  
Title: **Lentiviral, Placental Giant Cell-Specific Gene Targeting**  
Undergraduate Student in Biological Sciences  
Mentor: *Thomas Brown, NCBP*
PHARMACOLOGY AND TOXICOLOGY

Theresa Fennell
Title: ETI-385 as a Novel Antiemetic Against Dr Undergraduate Induced Emesis
Undergraduate Student in Biological Sciences
Mentor: James Lucot, Pharmacology & Toxicology

Emily Smith
Title: Measurement of Urinary Catecholamines
Undergraduate Student in Psychology
Mentor: James Lucot, Pharmacology & Toxicology

Brooke Johnson
Title: Hs3A/hs1,2 or Hs3B/hs4 is Sufficient to Mediate TCDD-Induced Inhibition Of the 3'IgH In A Transgenic B-Cell Line
Undergraduate Student in Biological Sciences
Mentor: Courtney Sulentic, Pharmacology and Toxicology

Samantha Spitak
Title: ETI-415 as a novel antiemetic against motion and chemical stimuli
Undergraduate Student in Biological Sciences
Mentor: James Lucot, Pharmacology & Toxicology

PHYSICS

Devin Todd
Title: The Mechanisms of Luminescence from ZnO under Electron Irradiation
Graduate Student in Physics
Mentor: Gary Farlow, Physics

James Trame
Title: Remote Vital Signs Instrument
Undergraduate Student in Engineering Physics
Mentor: Douglas Petkie, Physics

Matthew Bischoff
Title: Characterization of Composite Materials using Millimeter-wave Techniques
Graduate Student in Physics
Mentor: Doug Petkie, Physics / Electrical Engineering

POLITICAL SCIENCE

Rana Odeh
Title: The Impact of U.S. Media Bias on the Palestinian Israeli Conflict
Graduate Student in Political Science
Mentor: Vaughn Shannon, Political Science
Seanceray Bellinger
Title: Bio-Behavioral Analysis of a Dual-Exposure Pesticide Model and its Implications in a Silent Vulnerability to Parkinson’s Disease
Graduate Student in Psychology
Mentor: Gale Kleven, Psychology

Christina Estrada
Title: Maternal behavior impacts during development of the PITX3 Parkinson’s mouse
Graduate Student in Psychology
Mentor: Gale Kleven, Psychology

Ashley Ford
Title: Improving vigilance: Binaural beat technology and vigilance task performance
Undergraduate Student in Psychology
Mentor: Gary Burns, Psychology

Michael Hoepf
Title: A job is what you craft of it: A critical review of popular self-help
Graduate Student in Psychology
Mentor: Nathan Bowling, Psychology

Sarah Jackson
Title: Assessment of Implicit Attitudes toward Women Faculty in STEM
Graduate Student in Psychology
Mentor: Tamera Schneider, Psychology

Lindsey Keene
Title: Transient Prenatal and Postnatal Behavioral Deficits after Low-Dose Prenatal Toxin Exposure
Graduate Student
Mentor: Gale Kleven, Psychology

Steven Khazon
Title: Emotional Intelligence as a moderator for self-reported questionnaires
Graduate Student in Psychology
Mentor: Nathan Bowling, Psychology

Leah Miller
Title: Perceptions of Masculinity and Femininity from Resumes
Undergraduate Student in Psychology
Mentor: Gary Burns, Psychology

Emily Polander
Title: “We’re Bringing Bio Back”: Putting Biomedical Back into Lay Mental Models of Alcoholism
Graduate Student in Psychology
Mentor: Valerie Shalin, Psychology
Zachary Vallandingham
Title: **Effects of elevated glucocorticoids on dentate gyrus development**
Graduate Student
Mentor: Dragana Claflin, Psychology

Sarah Wood
Title: **One Week Retention of Classical Eyeblink Conditioning in Pre-Weanling and Weanling Rats**
Graduate Student in Psychology
Mentor: Dragana Claflin, Psychology

**SOCIAL WORK**

Caitlin McGee
Title: **Horticultural Therapy with Juvenile Offenders and Their Families**
Undergraduate Student in Social Work
Mentor: Sarah Twill, Social Work

Rebecca Holtkamp
Title: **Integrating Schools With Mental Health Systems**
Undergraduate Student in Social Work
Mentor: Carl Brun, Social Work
SAVE THE DATE

Fourth Annual Research Celebration
Friday, April 12, 2013

Fifth Annual Research Celebration
Friday, April 11, 2014