



Festival of Honors

Schedule of Division III Honors Thesis Presentations

April 20th-29th 2016



SMITH COLLEGE



**Wednesday April 20, Ford 241
Computer Science**

12:10 PM	Karen Chau <i>McKinley Fellow</i>	Modeling Cytoplasmic Dynein Motor Ensemble Motility with Cargo Designed Using DNA Origami	Ileana Streinu Nathan Derr
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**Wednesday April 20, Ford 240
Engineering**

4:15 PM	Anna Partridge <i>McKinley Fellow</i>	Product Characterization in a Pilot Scale Biomass Torrefier with Heater Screw Conveyance	Denise McKahn
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4:45 PM	Julicanna Niu	Design and Testing of a Miniature PEM Fuel Cell Stack	Denise McKahn
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5:15 PM	Yijin Wei	Electric Power System Design for Miniature PEM Fuel Cells	Denise McKahn
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**Thursday April 21, Ford 022
Engineering**

4:15 PM	Yezhezi (Michelle) Zhang	Wideband Acoustic Immittance Measurements: Effects of Age, Gender, Race, and Equipment	Susan Voss
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4:45 PM	Xi Jiang	Measurement of the Maximum Sound Pressure Level Generated by the iPhone 6s	Susan Voss
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5:15 PM	Dakota Murray	A Life Cycle Assessment of Packaging for Medtronic's Veress Needle	Param Pati Susannah Howe
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5:30 PM	Sara Loric	The Prospects of ZnO in Metal Oxide Sensors for Chemical Sensing	Kristen Dorsey Susannah Howe
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**Monday April 25, Bass 210
Psychology**

4:40 PM	Karina Gruetz	Stereotype Activation in Gun Identification: Patterns of Ducking Be- havior Indistinguishable from Shooting Behavior in Shooter Bias Paradigm	Fletcher Blanchard
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5:20 PM	Ray Silveria	Shooter Bias and Eye Gaze	Fletcher Blanchard
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**Monday April 25, Burton 307
Mathematics**

4:15 PM	Jamie Cyr	An Investigative Study of Cardiovascular Abnormalities Using Math- ematical Models of the Cardiovascular System and its Regulatory Mechanisms	Christopher Gole Nessy Tania
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**Monday April 25 McConnell B05
Biological Sciences**

4:00 PM	Cynthia Masai <i>McKinley Fellow</i>	Developing a Molecular Method for Estimating the Effective Population Size of Ciliate Morphospecies <i>Chilodonella Unicinata</i>	Laura Katz
4:30 PM	Elizabeth Tan	The Phylogeography and Cytology of <i>Rhipsalis baccifera</i> : the Cactus that made it to the Old World	Robert Merritt Laura Katz
5:00 PM	Natalie Phillips	Assessing the Biodiversity and Discovering Evidence of RNA Editing in Testate (Shelled) Amoebae	Laura Katz
5:30 PM	Jiaqi Mei	Phylogenomic Investigation of Interdomain Lateral Gene Transfers: Transfers from Fungi and Viruses into Eukaryotic Genomes	Laura Katz

**Monday April 25, McConnell B15
Biological Sciences**

4:00 PM	Erin Walch	Characterization of Cyclohexanol Modulation of GABAA Receptor Currents	Adam Hall
4:30 PM	Meghna Purkayastha	Exploring Modifications and Identification of Neuroleinin as a Potential Anti-filarial Drug Candidate for Lymphatic Filariasis	Steven Williams

**Monday April 25, McConnell B15
Biochemistry**

5:00 PM	Emily Boerger	Nuclear Magnetic Resonance Studies of a Cisplatin-Modified DNA 9-mer	Elizabeth Jamieson
5:30 PM	Arcadia Kratkiewicz	Analysis of Creatine Kinase Expression and Regulation throughout C2C12 Myogenesis	Stylios Scordilis

**Tuesday April 26, Ford 241
Computer Science**

2:00 PM	Angela Upreti	Security and Privacy Issues in the Smart Grid: a Decentralized Approach	Judith Cardell
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**Tuesday April 26, McConnell B05
Biological Sciences**

4:00 PM	Kathryn Berg	Characterizing PAH-Induced Teratogenesis of the Pharyngeal System During Zebrafish Craniofacial Development	Michael Barresi
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Tuesday April 26, McConnell B05 Neurosciences

4:30 PM	Olivia Mallari	The Role of the Orexin System in the Incubation of Alcohol Craving in Rats	David Moorman Mary Harrington
5:00 PM	Elizabeth Halpin	Effects of <i>Withania somnifera</i> on the Human Glycine Receptor	Adam Hall

Tuesday April 26, McConnell B15 Chemistry

4:00 PM	Emilia Arguello <i>McKinley Fellow</i>	DNA-catalyst Conjugates (DCats) for Site-selective Chemical Transformations in Complex Milieus	David Gorin
4:40 PM	KC Chen	Ethylene Carbonate for Ethoxylation of Aromatic Nitrogen Nucleophiles	David Gorin
5:20 PM	Clare Jacobson	Copper Mediated C-H Methylation with Boronic Acid	David Gorin

Tuesday April 26, UMass Campus Center Astronomy

4:00 PM	Heather Kurtz	Peas in a Pod: Environment and Ionization in Green Pea Galaxies	Anne Jaskot Suzan Edwards
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Wednesday April 27, McConnell B05 Biological Sciences

4:00 PM	Gina Mantica <i>McKinley Fellow</i>	The Evolution of Androgen Receptor Distribution in the Spinal Cord to Support Specialized Sexual Displays: A Comparative Analysis using <i>Stauroids parvus</i>	Lisa Mangiamele
4:30 PM	Elizabeth Besozzi	Bottom-Up and Top-Down Controls on Red-Backed Salamander (<i>Plethodon cinereus</i>) Distribution: A Possible "Landscape of Fear" on the Forest Floor	Jesse Bellemare Lisa Mangiamele
5:00 PM	Elena Karlsen-Ayala	Migration Versus Mutualism: Can the Small-Ranged Endemic Plant <i>Rhododendron Catwabiense</i> form Specialized Ericoid Mycorrhizae with Soil Fungi North of its Native Range?	Jesse Bellemare
5:30 PM	Eirini Tsekitsidou	Investigating the Evolution of Wolbachia spp.-derived Genes in the Genome of Wolbachia-independent Filarial Nematodes	Steven Williams

**Wednesday April 27, Bass 210
Psychology**

4:00 PM	Cara Tomaso	Drinking Motives and Alcohol Expectancies as Predictors of High-Risk Drinking Behaviors Prior to and During the College Transition	Byron Zamboanga
4:40 PM	Yiwen Zhu <i>McKinley Fellow</i>	Client Emotional Response and Psychotherapy Progress: A Case-Based Approach	Nnamdi Pole
5:20 PM	Huafeng (Louise) Yu	Escalation of Commitment in Retrospect: An Integration of Responsibility, Hindsight bias and Counterfactual Thinking	Fletcher Blanchard

**Wednesday April 27, McConnell B15
Chemistry**

4:00 PM	Noelia Martinez-Munoz <i>McKinley Fellow</i>	Methylation of Oxygen Nucleophiles using Dimethyl Carbonate: Mechanistic Studies	David Gorin
4:40 PM	Isabella McNamara	The Synthesis and Use of Stimuli Responsive Cross-linkers to Prepare PVDMA Hydrogels	Maren Buck

**Thursday April 28, Bass 203
Psychology**

4:00 PM	Maggie Dorin	Hoarding Behavior and Sleep Patterns in a College Sample	Randy Frost
4:40 PM	Emily Derosier	Cultural Cues and their Effects on Shooter Bias	Fletcher Blanchard
5:20 PM	Martha Miller	Shooter Bias and Sunk Costs in a Policing Context: Using an Escalation of Commitment Framework to Investigate Shooting Decisions	Fletcher Blanchard

**Thursday April 28, McConnell B05
Biological Sciences**

4:00 PM	Ria Deshpande	Investigating Cytoplasmic Dynein Function using Chimeric Proteins to Isolate Subdomain Mechanisms	Nathan Derr
4:30 PM	Esther Nwaka	Analysis of the Phylogenetic Relationships of Genes along Chromosomes in the Genome of the Malarial Parasite <i>Plasmodium falciparum</i>	Laura Katz
5:00 PM	Zuliat Owoade	Analysis of Two Approaches for Inferring Lateral Gene Transfer in the Malarial Parasite <i>Plasmodium falciparum</i>	Laura Katz
5:30 PM	Mary Badger	Spatial and Temporal Distributions of Ciliates in New England Tide Pools	Laura Katz

**Thursday April 28, McConnell B15
Chemistry**

4:00 PM	Catherine McGeough <i>McKinley Fellow</i>	Extraction and Functionalization of Neuroleins from <i>Neurolaena lobata</i>	Kevin Shea
4:40 PM	Claire Keller	Investigating Varied Reactivity in Aerosol-Mimicking Solutions	Andrew Berke

**Friday April 29, Ford 241
Computer Science**

2:00 PM	Hee Jin	Multiple Object Tracking Using Convolutional Neural Network in Wireless Sensor Networks	Judith Cardell
2:30 PM	Victoria Wolf	Towards <i>In Silico</i> Protein Surgery: Handling Errors and Working with the Protein Data Bank	Ileana Streinu

**Friday April 29, McConnell B15
Biochemistry**

4:00 PM	Natalie Smith	Protein Engineering for Receptor-Mediated Drug Delivery across the Blood-Brain Barrier	Sarah Moore
4:30 PM	Madeleine Sutherland	Size Matters Not: The Importance of sRNAs in Adaptive Thermoregulation in Uropathogenic <i>Escherichia coli</i>	Christine White-Ziegler
5:00 PM	Anna Carroll	Synthesis and Analysis of Multi-Functional Polymer Hydrogel Biomedical Materials	Maren Buck

**Monday May 2, Sabin Reed 103
Geosciences**

9:00 AM	Hannah Francis	Experiments Investigating Retention of Sodium in Peatlands Affected by Road-Salt Pollution	Amy Rhodes
9:45 AM	Heather Upin	A Study of the Geomorphologic and Geochemical Evidence for Prehistoric Floods from Paulina Lake in Newberry Crater, Central Oregon	Robert Newton
10:30 AM	Teresa McGann <i>McKinley Fellow</i>	Archaeocyathan reefs and chemostratigraphy of the lower Cambrian Wood Canyon Formation in Titanother Canyon, Death Valley, California	Sara Pruss
11:15 AM	Emily DiPadova	Origin and Metamorphism of Xenoliths in the Cuillin Center Gabbros, Isle of Skye, Scotland	Mark Brandriss