

SIGMA XI

The Scientific Research Society

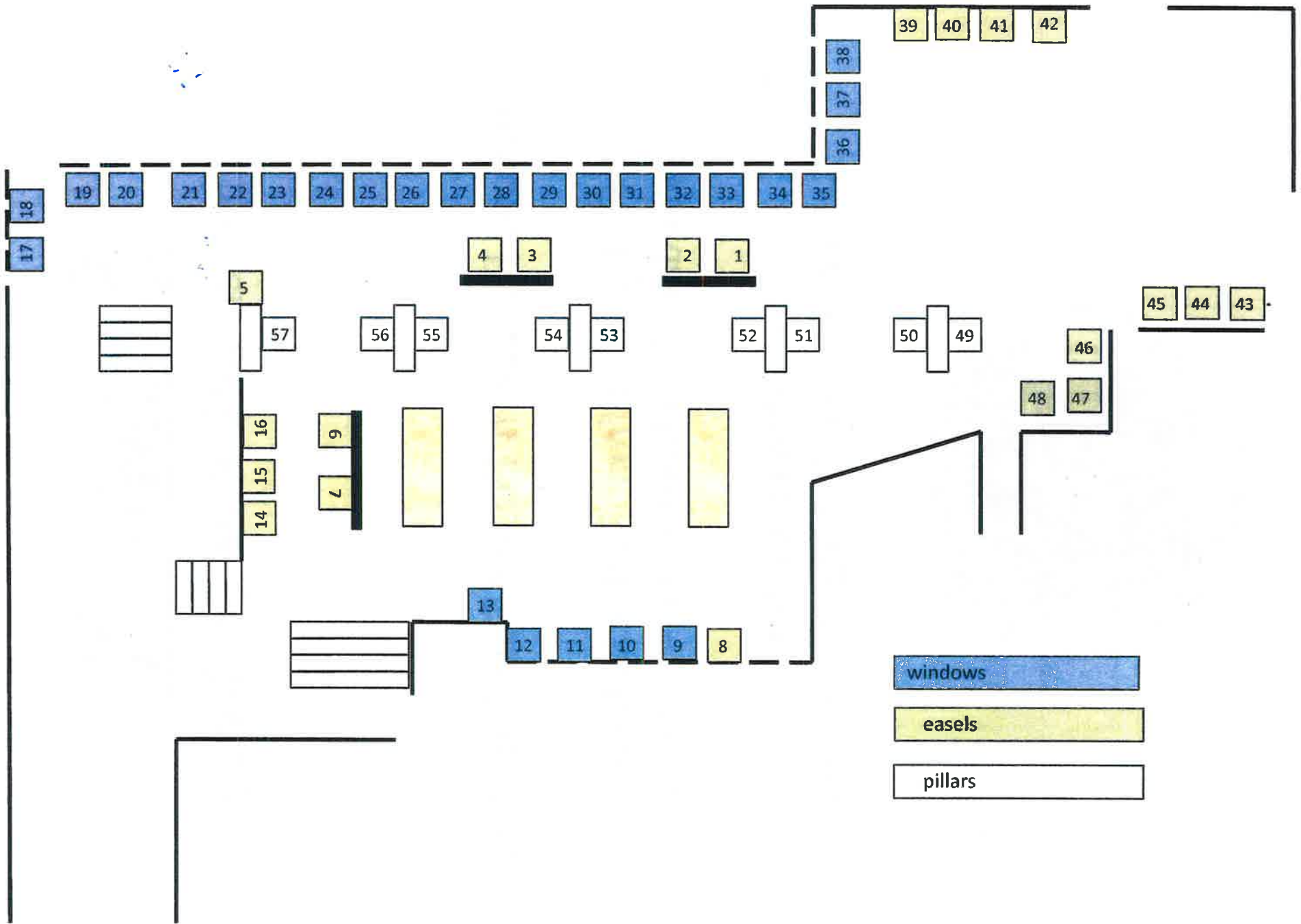


Student Research Poster Session 2013

Friday, 10/4 from 2:00 – 3:30 pm
Saturday, 10/5 from 12:00 – 1:00 pm

Swarthmore College
Science Center, Eldridge Commons





- windows
- easels
- pillars

1. Alex Ahn and James Watson	Early Detection of Ecological Regime Shifts by Change Point Analysis	Biology
2. Peter Amadeo and Robert Paley	Diastereoselective Approach to Bis-Spiroketal Synthesis	Chemistry
3. Amy Amuquandoh and Elizabeth Vallen	Manipulating the Phenotype of Secretory Proteins in the Mutant Sec-61 <i>Saccharomyces cerevisiae</i> on a Western Blot	Biology
4. Jessie Bacha, Patrick A. Gibney, and David Botstein	The Molecular Mechanism of Fructose 1-phosphate Toxicity	Biology
5. Kathryn Barron, Michael Isaacman, and Luke Theogarajan	Clickable Amphiphilic Triblock Copolymers	Biochemistry
6. Alejandro Bellon, Joseph Spaulding, Leah Lee and Sarah Cohen	Two Species of Botryllid Colonial Ascidians Show Different Responses to Flow at Early Juvenile Stages	Biology
7. Stephanie Carrera and Vince Formica	Social Habitat Choice in the Forked Fungus Beetle	Biology
8. Jonathan Cohen and Sara Cherry	The Role of the Intestinal Microbiome in Anti-Viral Immunity	Biology
9. Phoebe Cook and Vince Formica	Network-level Selection in Different Networks	Biology
10. Hayden Dahmm and Michael Harris	Considering the Feasibility of Industrial Carbon Sequestration By Calcium Carbonate Sequestration	Engineering

11. Katherine Derosier, Natalia Denisenko, and Michale Fee	Linking the Auditory System and the Song System	Neuroscience
12. Dawei Ding and Josh Newby	Physical Properties of Cis-Anethole, Hydroxyacetone, and Photolysed Hydroxyacetone: A Computational Study	Chemistry
13. Matt Elkins and Kathleen P. Howard	Development of Magnetically Oriented Lipid Bilayers for Membrane Protein Studies	Biochemistry
14. Amber Famiglietti, Fernando Segade, and Brad Davidson	Investigating the Emergence of the Matrix Protein Fibronectin in the Urochordate <i>Ciona intestinalis</i>	Biology
15. Michael Fishman, Yongsoo Kim, and Pavel Osten	The Role of the Medial Amygdala and Ventromedial Hypothalamus Circuit in Mouse Social Behavior	Neuroscience
16. Emily Gale and Theodore Dumas	Reduced Brain Inflammatory Response Supports the Biocompatibility of Silicon Carbide: A Viable Material for Implanted Medical Devices	Neuroscience
17. Ariel Gewirtz and Timothy Lezon	Computational Modeling of Spatial Heterogeneity in Growing Tumors	Computational Biology
18. Joshua Gluck and Andrew Danner	A Fast General Purpose Graphics Processing Solution to Quadtree Creation	Computer Science
19. Andrew Hogyu Han and Nakwon Choi	Conjugated Ru-based Phosphorescent Nanoparticles Show Greater Sensitivity to Varying Oxygen Concentration Level	Computational Biochemistry
20. Harris Hoke and Robert Pasternack	A New, Aqueous Model of Hemozoin Formation	Biochemistry

21. Jason Hua and Stephen Miller	Structural Studies of <i>Haemophilus influenzae</i> and <i>Aggregatibacter actinomycetemcomitans</i> Ribose Binding Protein (RbsB)	Biochemistry
22. Ariel Hwang and Brad Davidson	Functional Conservation of Heart-Related Enhancers in <i>Ciona intestinalis</i> and <i>Corella inflata</i>	Biology
23. Jessica Jowdy, Saurav Pathak, Frank Moscatelli, and Arjun Yodh	Boundary Conditions for the Diffusion Equation in Breast Tissue	Physics
24. Laura Katz and Vince Formica	Sampling Society: The Effect of Observation Rate on Social Network Analysis	Biology
25. Henry Kietzman and Robert J. Lipinski, Kathleen K. Sulik	The effect of SHH and GLI2 heterozygosity in a mouse model of Fetal Alcohol Syndrome	Biology
26. Tae Kim, Catherine Crouch, and Kathleen Howard	The effect of SHH and GLI2 Heterozygosity in a Mouse Model of Fetal Alcohol Syndrome	Chemistry
27. Sangwoo Shawn Kim and Kathleen Howard	Probing and Characterizing Distinct Conformational States Populated by Influenza A M2 Protein	Biochemistry
28. Kelley Langhans and David Cohen	X-raying Massive Star Winds	Astronomy
29. Hyeon Ryun Lee and Rachel Merz	Extraordinary Elongation and Mechanical Properties of the Body Wall of the Burrowing Sea Cucumber <i>Leptosynapta clarki</i>	Biology
30. Mark Levine-Weinberg and Rachel Merz	The Intertidal Front Lines: A Comparison of the Aggressive Response in High and Low Intertidal Clones of the Anemone <i>Anthopleura elegantissima</i>	Biology

31. Caela Long, Katelyn Sadler, and Benedict Kolber	Inflammatory Pain and the Central Amygdala: Immunohistochemical Analysis of Pain Markers	Biology
32. Sarina Lowe and John Pringle	The Herbicide Atrazine Disrupts <i>Aiptasia-Symbiodinium</i> Symbiosis	Biology
33. Shaina Lu, Donal Day, and Young-Hwan Moon	Methods on the Isolation of Isomaltooligosaccharides for use as a Prebiotic	Biochemistry
34. Azucena Lucatero and Theresa Ong	Negative Effects of Pathogen-Predator Intraguild Predation on <i>Hippodamia convergens</i> Fecundity	Biology
35. Claudia Lujan and Jeremy Pomeroy	What is the Association of Perceived and Objectively Measured Stress Levels to Gestational Glucose Tolerance? A Proposal for a Sub-study of Current Lifestyle Intervention for Expectant Moms (LIFE-MOMs)	Epidemiology
36. Jillian Ma, Christopher Dengler, and Douglas Coulter	Imaging of Mouse Hippocampal Circuits in Acquired Temporal Lobe Epilepsy	Biology
37. Martin Mathay, Natalie Campen, Amy Vollmer, and Alison Holliday	Development of an Extraction Method for Determination of Epoxiconazole in Solid Agar Media by HPLC	Chemistry
38. Chrstine McGinn and Peter Collings	Measuring Twist in a Chiral Nematic Chromonic Liquid Crystal	Physics
39. Tinashe Mubvuma, Lynne Molter, and Erik Cheever	Assistive Technology Design: Alternative Actuators for Braille Display Devices	Engineering
40. Julia Murphy and Robert Paley	Azaspirocycle Formation Directed by Planar Chiral Iron(0) Tricarbonyl Diene Complexes	Chemistry

41. Kathleen Naccarato and Alison Holliday	Development of a Method for a Comparative Study of the Microbial Dehalogenation of PCBs and PBBs	Chemistry
42. Kee Myoung Nam and Jeremy Gunawardena	Parameter geography of a two-site phosphorylation system	Systems Biology
43. Samer Nashed, Amy Graves, Carl Goodrich and Andrea Liu	Pinning Susceptibility Near the Jamming Transition	Physics
44. Callen Rain, Peng Zhao and Tali Moreshet	Energy Efficient Synchronization and Parallelism on the VirtualSoC Simulator	Engineering
45. Galen Rask, Jessica Diaz, and Patricia Springer	Characterization of Transgenic Rice Plants Expressing a Brassinosteroid Inactivating Enzyme in the Lamina Joint	Biology
46. Navin Sabharwal, Victoria Savikhin, Joshua Turek-Herman, Veronika Szalai, and Liliya Yatsunyk	N-methylmesoporphyrin IX Fluorescence as a Reporter of Strand Orientation in Guanine Quadruplexes	Biochemistry
47. Katie Samuelson, Diane Foster, Meagan Wengrove, and Emily Carlson	Full Scale Observational Estimates of Pressure Gradients and Plug Flow Induced by Waves and Tsunamis	Engineering
48. Danielle Sullivan, Brian Marks, Dave Brown and William Torruellas	Laser Fuze Transmitter and Receiver Modeling with PRBSs and Gold Sequences	Engineering
49. Samuel Tanner and Stephen Miller	Characterization of the autoinducer-2 processing enzyme LsrG by x-ray crystallography	Biochemistry

50. Bennett Thompson, Nirjal Bhattarai, and Jack T. Stapleton	The Effect of Hepatitis C virus inhibitors on the closely related human Pegivirus	Biology
51. Megan Thompson and Kathleen Howard	Developing a Protocol for the Purification, Spin-Labeling, and Membrane Reconstitution of Cysteine-Tagged Mutations of the Full-Length Influenza A M2 Protein	Biochemistry
52. Josh Turek-Herman and Robert Pasternack	Kinetic Study: Evaluating the Effect of Proteins in the Conversion from Hemin to Hemozoin	Biochemistry
53. Aly Vallian, Milena Perez Mak, Robert J. Cardnell, Ann Marie Bailey, Agda Karina Eterovic, Hao Zhao, Ken Chen, Ignacio I. Wistuba, Funda Meric-Bernstam, Gordon Mills, Lauren Averett Byers, and Don Lynn Gibbons	Molecular Evolution of Lung Adenocarcinoma in a Young Never-smoker Patient	Biology
54. Adrian Wan, David Schaffner, and Michael Brown	Radial Correlation Function Analysis on the SSX MHD Wind Tunnel	Physics
55. Zhengyang Wang, Ying Huang, Zhuo Sun, Kun Qin, Shanyi Zhou, and Rachel Merz	<i>Teinopalpus aureus</i> : Rearing and Conservation of a Butterfly	Biology
56. Jonathan White and Tim Keitt	Niche Modelling of Hall's Panicgrass	Biology
57. Kathryn Wu and Edward Lee	Increased hypermethylation of mutant <i>C9ORF72</i> promoter in affected brain regions of ALS and FTD patients	Biology