8th Annual Undergraduate Research Spring Symposium

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Schedule of Events

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<tr>
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<tr>
<td>Oral Presentations:</td>
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<td>Poster Session:</td>
<td>3:00 - 4:30 pm</td>
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<td>Reception:</td>
<td>4:30 - 5:15 pm</td>
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<td>Awards Ceremony:</td>
<td>5:15 pm</td>
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<tr>
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<tr>
<td>1:00</td>
<td>Virtual Simulation of Medication Delivery in Intensive Care Unit Layouts to Analyze Impact on Nurse Behavior</td>
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<tr>
<td>1:20</td>
<td>Formal Grammar of Ancient Greek Temples</td>
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<tr>
<td>1:40</td>
<td>WARPIC: Animation Tool for Android Tablet</td>
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<tr>
<td>2:00</td>
<td>Living Room Play</td>
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**Session B: Aerospace Engineering and Computing**

**Student Center Room 320**

**Moderator: Ms. Ashley Edgar, DOPP**

<table>
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<tr>
<th>Time</th>
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<th>Mentor</th>
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<tr>
<td>1:00</td>
<td>Improving Robot Behavior through Both Human Interaction and Independent Learning</td>
<td>Ramya Ramakrishnan, CS</td>
<td>Dr. Andrea Thomaz, CS</td>
</tr>
<tr>
<td>1:20</td>
<td>A Simulation-Based Probabilistic Approach to Calculating Airport Runway Capacity</td>
<td>Hasan Tawab, AE</td>
<td>Harold Nikoue, AE</td>
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<td>Dr. John-Paul Clarke, AE</td>
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<tr>
<td>1:40</td>
<td>Streamlining and Optimizing the Implementation of Chemkin</td>
<td>Ramon Romero, ChBE</td>
<td>Dr. Tim Lieuwen, AE</td>
</tr>
<tr>
<td>2:00</td>
<td>Fast Implementations of Cryptographic Schemes based on Lattices</td>
<td>Sam Kim, CS</td>
<td>Dr. Chris Peikert, CS</td>
</tr>
<tr>
<td>2:20</td>
<td>Indian National Autism Registry</td>
<td>Urvashi Goverdhan, CS</td>
<td>Dr. Santosh Vempala, CS</td>
</tr>
</tbody>
</table>

**Session C: Biomedical Engineering**

**Student Center Room 301**

**Moderator: Dr. Sandi Bramblett, IRP/DSS**

<table>
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<tr>
<th>Time</th>
<th>Title</th>
<th>Presenter</th>
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<tbody>
<tr>
<td>1:00</td>
<td>Postural Stability in Animals of Different Sizes, Shapes, and Neural Delays</td>
<td>Harrison Bartlett, BME</td>
<td>Dr. Lena Ting, BME</td>
</tr>
<tr>
<td>1:20</td>
<td>Cellular Response to Surface Wettability Gradient on Microtextured Titanium Surfaces</td>
<td>Marc Plaisance, BME</td>
<td>Dr. Rene Olivares-Navarrete, BME</td>
</tr>
<tr>
<td>1:40</td>
<td>Influencing Encapsulated Stem Cell Factor Secretion through Hypoxic Conditioning</td>
<td>Mohamad Ali Naja, BME</td>
<td>Dr. Todd McDevitt, BME</td>
</tr>
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**Session D: History, Technology and Society & Literature, Media and Communication**

**Student Center Room 343**

**Moderator: Ms. Elizabeth Rolando, Library**

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<th>Presenter</th>
<th>Mentor</th>
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<tr>
<td>1:00</td>
<td>Cinephilia and New Media</td>
<td>Stuart Collier, STC</td>
<td>Dr. Vinicius Navarro, LMC</td>
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<td>1:20</td>
<td>The Historical Context of Unethical Human Experimentation on Disparities in the Modern HIV/AIDS Epidemic</td>
<td>Joyce Sharpe, HTS</td>
<td>Dr. Willie Pearson, HTS</td>
</tr>
<tr>
<td>1:40</td>
<td>The Impact of Cuban Media on Informed Consent in the US Army Yellow Fever Trials of 1900</td>
<td>Marcela Moreno, HTS</td>
<td>Dr. John Tone, HTS</td>
</tr>
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</table>
Session E: Chemistry and Biochemistry, Earth & Atmospheric Sciences, and Psychology  
Student Center Room 321  
Moderator: Dr. Tris Utschig, CETL

1:00 The effect of lowered sea level on climate in the Indo-Pacific region as simulated by the SPEEDY AGCM  
Eleanor Middlemas, MATH  
Mentor: Dr. Kim Cobb, EAS

1:20 Re-scripting the Boring Lecture: Can an Inquiry-based Curriculum Improve 8th Grade Students’ Physics Understanding?  
Lauren Morgan, PSY  
Mentor: Dr. Brian Gane, PSY

1:40 Quantum Sympathetic Heating Spectroscopy  
Karl Burkhardt, CHEM  
James Goeders, Chemistry,  
Yon Choi, Chemistry  
Ken Brown, Chemistry  
Mentor: Dr. Ken Brown, CHEM & BCHM

2:00 Crystallization of Myocilin-OLF mutants K398R and E396D  
Dana Freeman, BCHM  
Mentor: Dr. Raquel Lieberman, CHEM & BCHM

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Session F: Materials Science Engineering and Mechanical Engineering  
Student Center Room 301  
Moderator: Dr. Patrick Anthony, DOPP

2:10 To Drip, Jet or Spray: The Hydrodynamics of Urination  
Jonathan Pham, BME  
Patricia Yang, ME  
Jerome Choo, BME  
Mentor: Dr. David Hu, ME

2:30 Aerodynamics of tilted flexible flapping wings in ground effect  
Tsz Li, ME  
Mentors: Dr. Alexander Alexeev, ME & Peter Yeh, ME

2:50 Self-powered Nano Device as an Active sensor and Energy Generator  
Yean Lee, ME  
Mentor: Dr. Zhong Lin Wang, MSE

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Session G: Biology  
Student Center Room 343  
Moderator: Ms. Sally Hammock, CAE

2:10 A novel direct sRNA target in the quorum sensing pathway of V. cholerae  
Joseph Elsherbini, BIO  
Mentor: Dr. Brian Hammer, BIO

2:30 Ribonucleotides Embedded in Yeast Genomic DNA are Targets of RNase H type 2 and Nucleotide Excision Repair  
Alii Gombolay, BIO  
Lahari Shetty, Major: BIO  
Mentor: Dr. Francesca Storici, BIO

2:50 Genetic Analysis of Differential Paternity and Sex Ratios of Offspring in Polyandrous Red Flour Beetles  
Malvika Kapoor, BIO  
Mentor: Dr. Michael Goodisman, BIO

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Session H: Mechanical Engineering  
Student Center Room 319  
Moderator: Ms. Wendy Hagenmaier, Library

2:30 Epoxy/Copper Interfacial Delamination Study Through Magnetic Actuation  
Luis Valles, ME  
Mentor: Dr. Suresh Sitaraman, ME

2:50 Water Exit of Spheres and Application to Fish Leaping  
Sulisay Phonekhol, ME  
Ke Xu, ME  
Mentor: Dr. David Hu, ME

3:10 Comparison of Uranium Properties using EAM and MEAM Potentials  
Elton Chen, NRE  
Mentor: Dr. Chaitanya Deo, ME
Session I: Biomedical Engineering & Chemical and Biomolecular Engineering
Student Center Room 321
Moderator: Mr. Fred Rascoe, Library

2:50  Comparison of Image Processing Methods for De-blurring DESI-MS Images
Sanaiya Sarkari, BME
Mentor: Dr. May Wang, BME

3:10  A Call to Arms: Oxidative and Phosphorylative Control of T-Cell Receptor Activation
Anish Potnis, BME
Mentor: Dr. Melissa Kemp, BME

3:30  Sorption and Diffusion of Ethanol and Water in Fluoride Mediated Silicalite-1
Michelle Dose, CHBE
Mentor: Dr. William Koros, ChBE

3:50  Synthesis of pNIPAAM by Reversible Addition Fragmentation Chain Transfer (RAFT) Polymerization in Inverse Miniemulsion System
Shun Xi, CHBE
Mentor: Dr. Francis Schork, ChBE

Session J: Economics
Student Center Room 320
Moderator: Ms. Beatriz Hegidio, CAS

2:50  Do Small Businesses Create Jobs: A Cross-Sectional Analysis
Trevor Lindsay, ECON
Justin Bunch, ECON/INTA
J. Dorrier Coleman, EE
Mentor: Dr. Shatakshee Dhongde, ECON

3:10  Taxation in a Recovery: The Effect of State Income Taxes on Economic Output
Trevor Lindsay, ECON
Mentor: Dr. Shatakshee Dhongde, ECON

3:30  Does Greater Campaign Spending Lead to a Higher Chance of Electoral Victory?
Yameen Huq, ECON
Alice Kwak, ISYE
Darion Carter, BA/ECON
Mentor: Dr. Shatakshee Dhongde, ECON

3:50  Who Will Strike Next? An Economic Regression of Terrorism and Poverty
Andrew Townsend, ECON
Ryan Birmingham, ECON/CS
Ben Goldberg, ECON/INTA
Mentor: Dr. Shatakshee Dhongde, ECON

Session K: Chemical & Biomolecular Engineering and Electrical & Computer Engineering
Student Center Room 301
Moderator: Ms. Sally Hammock, CAE

3:20  A Network Security Attack Repository for a Competition-Based Network Security Lab
Priya Bajaj, EE
Mentor: Dr. John Copeland, ECE

3:40  A sparse coding model of V1 produces surround suppression effects in response to natural scenes
Allison Del Giorno, ECE
Mentor: Dr. Christopher Rozell, ECE

4:00  A Precise System for the 3-D tracking of Tongue Movements
Shurjo Banerjee, CMPE
Mentor: Dr. David Anderson, ECE

Session L: International Affairs & History, Technology and Society
Student Center Room 343
Moderator: Ms. Caroline Anderson, DOPP

3:20  Digital Gaming and Weapons of Mass Destruction: Adherence to International Laws and Treaties
Adam Thigpen, EIA
Mentor: Dr. Margaret Kosal, IA

3:40  U.S. Nuclear Weapons Testing
Shaudie Fassih, IAML
Mentor: Dr. Margaret Kosal, IA

4:00  Nuclear Proliferation and Interstate Conflict
Sarah Grace Parr, IAST
Mentor: Dr. Margaret Kosal, IA

4:20  The FBI's Missed Opportunity: Sebold, Duquesne, and Nazi Espionage in America
Ben Belden, HTS
Mentor: Dr. Kristie Macrakis, HTS
1. A Behavioral Imaging Approach to Characterize Progression of Mild Cognitive Impairment (MCI) and Alzheimer’s Disease (AD) by Analysis of Walking Motions
   - Daniel Castro, CS
   - Mentor: Dr. Irfan Essa, CS

2. Using Machine Learning to Classify Smart Phone Users Based on Behavior
   - Samuel Clarke, CS
   - Mentor: Dr. Dueng Horng (Polo) Chau, CS

3. Usable Context-Aware Policy scheme for Android
   - Suk Hwan Hong, CS
   - Mentor: Dr. Santosh Pande, CS

4. Searching for Informal Learning Opportunities in the Atlanta-area
   - Cecili Reid, CS
   - Mentor: Dr. Betsy DiSalvo, CS

5. American Sign Language Assessment Instrument
   - Pavleen Thukral, CS
   - Mentor: Dr. Thad Starner, CS

6. Comparing the performance of plasma impedance probes and Langmuir probes for RF plasma diagnostics
   - Ethan Dale, AE
   - Mentor: Dr. Mitchell Walker, AE

7. Expansions to the Turbulent Flame Speed Testing Facility
   - John Forbes, AE
   - Tim Heffner, ME
   - David Bertram, AE
   - Mentor: Dr. Tim Lieuwen, AE

8. High Pressure Full Scale Single Nozzle Testing with Traditional and Alternative Fuels
   - Kelvin Murphy, ME
   - David Wu, ME
   - Mentor: Dr. Tim Lieuwen, AE

9. Characterization of covarying surface protein expression in T-cell populations
   - Marisa Casola, BMED
   - Mentor: Dr. Linda Kipper, BMED

10. Does vascular occlusion play a role in sickle cell disease bone destruction?
    - Binbin Chen, BMED
    - Jonathan Lin, ChBE
    - Mentor: Dr. Manu Platt, BMED

11. Cell to Cell Variation of ROS Production in T-Cells under Antimycin A and Rotenone Inhibition over Time
    - Adam Cooke, BMED
    - Mentor: Dr. Melissa Kemp, BMED

12. Mass Spectrometry Analysis of Traumatic Brain Injury
    - Connor Crowley, BCHM
    - Brian Rooney, BCHM
    - Facundo Fernandez, BCHM
    - Rachel Bennett, BCHM
    - Mentor: Dr. Michelle LaPlaca, BMED

13. Minor in Neurotechnology
    - Eric Eisner, BMED
    - Josh Cherian, BMED
    - Mentor: Dr. Barbara Fasse, BMED

14. Characterization of Osteoarthritis Progression in a Mouse Medial Meniscal Destabilization Model Using Contrast-Based Micro-CT
    - Chelsea Fechter, BMED
    - Mentor: Dr. Robert Guldberg, BMED

15. Fabrication Parameters of Small Intestinal Submucosa Scaffolds Modulate the Shear-Induced Expression of PECAM-1 and eNOS
    - Ruth Fogg, BMED
    - Mentor: Dr. Ajit Yoganathan, BMED

16. Leg, Vertical, and Joint Stiffness Levels in Rear-foot and Fore-foot Strike Landings
    - Allison Gainer, BMED
    - Mentor: Dr. Young-Hui Chang, BMED

17. Agarose Cryogel Scaffold as a Vehicle for EG7-OVA Cell Delivery
    - Unbyeol Goh, BMED
    - Mentor: Dr. Julia Babensee, BMED

18. The Role of Shear Stress on Thrombospondin-1 Expression in Human Aortic Valvular Endothelial Cells
    - Shuntol Holloway, BMED
    - Mentor: Dr. Hanjoong Jo, BMED
19 Clustering analysis of single-unit action potentials recorded in vivo from a rat barrel cortex model
   Robert Kretschmar, BMED
   Mentor: Dr. Ravi Bellamkonda, BMED

20 The Effects of Osmoyltes on Viability and Differentiation of Cells Microencapsulated in Alginate
   Eric Pinsker, BMED
   Mentor: Dr. Barbara Boyan, BMED

21 Angular Tuning in Layer 2/3 of the Rat Barrel Cortex
   Dylan Richards, BMED
   Mentor: Dr. Garrett Stanley, BMED

22 Effect of Flow Pulsatility and Wall Compliance on the Energy Loss in the Total Cardiovascular System
   Harish Srinivasan, BMED
   Sulisay Phonekeo, ME
   Mentor: Dr. Ajit Yoganathan, BMED

24 Enzymatic Hydrolysis of Phosphoric Acid Swollen Cellulose
   Jessica Curtis, Chemistry
   Mentor: Dr. Andreas Bommarius, ChBE

25 Design of a Microfluidic-Based Platform for Spatially Controlled Drug Treatment in Cichlid Early Development
   Jiyuan Ding, ChBE
   Mentor: Dr. Hang Lu, ChBE

26 Effects of Substrate Rigidity on Metastatic Cancer Cell Adhesion
   Jason Landolfo, BMED
   Daniel J. McGrail, BMED
   Quang Kieu, BMED
   Mentor: Dr. Michelle Dawson, ChBE

27 Colloidal Sand Castles
   Kyle Jones, ChBE
   Mentor: Dr. Sven Behrens, ChBE

28 Engineering Gelatin Scaffold Mechanics for Tissue Engineering
   Min Jeong Kim, ChBE
   Tuyet Lam, Biochemistry
   Mentor: Dr. Michelle Dawson, ChBE

30 Investigation of mass transfer limitations in the heterogeneous oxidative Heck reaction
   Joshua Mysona, ChBE
   Mentor: Dr. Christopher Jones, ChBE

31 Role of Fiber Length on Phagocytosis & Inflammatory Response
   Carahline Stark, ChBE
   Mentor: Dr. Julia Champion, ChBE

32 Characterization of different types of Aerosols in Midtown Atlanta Using Factor Analysis
   Sriram Suresh, ChBE
   Mentor: Dr. Nga Lee Ng, ChBE

33 Role of SDF-1-CXCR4 Axis on the Mobility of Metastatic Breast Cancer Cells
   Vinh Trang, Biochemistry
   Mentor: Dr. Michelle Dawson, ChBE

34 Measurement of Transcriptional Insulin Gene Expression in Genetically Engineered Enteroendocrine Cells for the Treatment of Insulin-Dependent Diabetes (IDD)
   Jose Vasquez Porto-Viso, BMED
   Mentor: Dr. Athanassios Sambanis, ChBE

35 Polymerization of Malic Acid
   Jingya Ying, ChBE
   Irena Mamajjanov, ChBE
   Francis J Schork, ChBE
   Chelsea A Walker, ChBE
   Mentors: Dr. Martha Grover, ChBE and Dr. Nicholas Hud, ChBE

36 Isolation and Identification of Bacteria from Lake Lanier that Biodegrade 2,4-Dichlorophenoxyacetic Acid and 3-Nitrotyrosine
   Rajkumar Krishnan, ENVE
   Mentor: Dr. Konstantinos Konstantinidis, CEE

37 Integrating Building Information Modeling and RFID Technology for Increased Construction Site Safety and Production
   Audrey Shaak, CE
   Aaron Costin, CE
   Mentor: Dr. Jochen Teizer, CEE
38 Potential of Leading Indicator Data Collection and Analysis for Proximity Detection and Alert Technology in Construction
Jeremy Wetherford, CE
Eric Marks, CE
Mentor: Dr. Jochen Teizer, CEE

40 RFID Optimization for a Pharmaceutical Compliance Monitoring System
Jessica Block, EE
Mentor: Dr. Maysam Ghovanloo, ECE

42 A Biocompatible, Biodegradable Battery Utilizing Lactic Acid Solutions
William Cangelosi, ChBE
Mentor: Dr. Mark Allen, ECE

43 GUSTO: Gesture-based 3D User Authentication Technique with Biometric Features
Penyen Chi, ECE
Mentor: Selcuk Uluagac, ECE

44 Multi-Dimensional Model of US Power Network during Hurricane Sandy
Suvrat Jain, ECE
Mentor: Dr. Chuanji Yi, ECE

45 Voltage-Dependent Magnetization of Li1-xMO2 via In Situ Lithium-Ion Battery Testing
Kevin Bogaert, MSE
Mentor: Dr. Faisal Alamgir, MSE

46 Alzheimer’s Disease Drug Candidates Erythrosine B and Brilliant Blue G as Amyloid ß Oligomer Inhibitors: a Molecular Dynamic Simulation Approach
Lydia Choi, Chem
Doyeon Koo, BMED
Juho Lee, Chem
Euisun Pyo, Biochemistry
Mentor: Dr. Seung Soon Jang, MSE

47 Co-precipitation synthesis of YAG:Dy nanophosphor and its temperature dependent luminescent properties
Joo Chong, ChBE
Mentor: Dr. Zhitao Kang, MSE

48 Thin Films Made from Colloidal Antimony Tin Oxide Nanoparticles for Transparent Conductive Applications
Abigail Halim, MSE
Mentor: Dr. Rosario Gerhardt, MSE

49 Effect of Temperature on Nanophase-segregation and Transport in Polysulfone-Based Anion Exchange Membrane Fuel Cell: Molecular Dynamics Simulation Approach
Kwan Ho Ko, ME
Mentor: Dr. Seung Soon Jang, MSE

50 Molecular Dynamics Simulations of DNA-Mediated Aggregation of Bi-Disperse Nanoparticles
Rolando Lama, BMED
Mentor: Dr. Kenneth Sandhage, MSE

51 Ceramic Graphite Coatings for the Transport of Molten Metals
Patrick Shower, MSE
Mentor: Dr. Chaitanya Deo, ME

52 Molecular Dynamics Simulations of Radiation-Induced Damage in Zirconium Niobium Compounds
Variga Agarwal, NRE
Mentor: Dr. Chaitanya Deo, ME

53 Characterizing Cell Mimetic from PDMS using Atomic Force Microscopy
Arnab Barua, BMED
Lorraine Arambu, BMED
Mentor: Dr. Todd Sulchek, ME

54 Mosquitos are Unable to Fly in Fog
Bruce Berry, NE
Peter Shankles PTFE
Mentor: Dr. David Hu, ME

55 Mediating Internalin A-dependent Internalization of a Pathogen Mimetic in Host Cells
Kshama Bhyravabhotla, BIO
Maya Ramachandran, ISyE
Mentor: Dr. Todd Sulchek, ME

56 Application of MEMS and Microfluidic Technologies for Malaria Diagnosis and Surveillance
Becky Byler, BMED
Mentor: Dr. Todd Sulchek, ME

57 Mechanistic modeling of biological cells
Monique Chang, ME
Mentor: Dr. Alexander Alexeev, ME

58 How eyelashes reduce shear on eye surface
Joel Clewis, ME
Mentors: Dr. David Hu, ME & Guillermo Aramador, ME
Measuring Energetic Cost of Snake Locomotion Using NMR Spectroscopy
James Cook, NRE
Mentors: Dr. David Hu, ME & Hamidreza Marvi, ME

Nanoindentation of Fused Silica and Copper
Katie Cook, NRE
Mentor: Dr. Chaitanya Deo, ME

Physical, Chemical and Biological Propulsion Methods of Microparticles
Jordan Garth, BMED
Tanvi Dave, BMED
Dave McNavish, BMED
Derek Globin, CMPE
Du Som Heo, BMED
Nick Emamifar, BMED
Mentor: Dr. Todd Sulchek, ME

A Vector Autoregressive Model for Interpolating Missing Meteorological Data for Use in Building Simulation
Alisha Kasam, ME
Mentor: Dr. Chris Paredis, ME

Selectin Adhesion Assay Chamber Design
Mason McClatchey, ME
Mentor: Dr. Susan Thomas, ME

Shear Pre-Conditioning Enhances the Pericyte Function of Mesenchymal Stem Cells in vitro
Rachel Meltzer, ChBE
Mentors: Dr. Robert Nerem, ME & Dr. Lisa McGinley, ChBE

Modeling Synthetic Vesicles that Release and Capture Solutes
Katherine Polhemus, ME
Mentor: Dr. Alexander Alexeev, ME

The Mechanics of Sidewinding on Sand
Jason Stieh, ME
Gladys Tamayo, ME
Kim Quyen Tran, ME
Mentor: Dr. David Hu, ME

Multi-scale CAD/CAE Tools for Nanocomposites
Johnny Worthy, AE
Ravi Haskar, ME
Davis Hoffman, ME
Joshua Price, AE
Mentor: Dr. Raghu Pucha, ME

Gang Prevention and Intervention Through Boys & Girls Clubs of America
Hattie Arnau, HTS
Mentor: Dr. Willie Pearson, HTS

The Future of the Iran – Hezbollah Alliance
Nicholas Barker, INTA
Soheil Shayegh, ISyE
Mentor: Dr. Lawrence Rubin, INTA

Investigating the causes of the rising rate of unintended pregnancies in the U.S.
Amanda Figaredo, EIA
Jess Shimko, MATH
Lauren Foley, ECON
Mentor: Dr. Shatalshee Dhongde, ECON

Analyzing the Impact of Educational Attainment and Income on Home Ownership
Nabila Nazarali, ECON
Lawrence Kim, ECON
Muhammad Yadudu, ECON
Mentor: Dr. Shatalshee Dhongde, ECON

Income Inequality and Violent Crime
Julian Quiñones, ECON
Alexa Steingaszner, ECON
Istvan A Papp-Chang, ECON
Mentor: Dr. Shatalshee Dhongde, ECON

More: The Socio-Cultural Implications of Artificial Intelligence
Nikita Rao, STC
Mentor: Dr. Hugh Crawford, LCC

Cognitive Heuristics in Science & Technology Policymaking (and the Implications for Educating Future Participants in the Policymaking Process)
Jordan Lockwood, PUBP
Mentor: Dr. Roberta Berry, PUBP

Cellular Basis of Brain Overgrowth in Pten Haploinsufficient Mice
Ankit Kaushik, BMED
Mentor: Dr. Damon Page, BMED

Locomotor compensations after peripheral nerve injury revealed by analysis of ground reaction forces
Fariha Alam, BMED
Mentor: Dr. Boris Prilutsky, AP

Motor Adaptation to Orthotic Ankle Constraint during Walking
Jaemin Sung, BMED
Katie Eckert, BMED
Mentor: Dr. Christopher Hovorka, AP
Changes in the electromyographic activity and joint moments due to the self-reinnervation of the lateral gastrocnemius and soleus muscles
Wendy Wang, BMED
Mentor: Dr. Boris Prilutsky, AP

PLA2 Expression Profiling of C2C12 and C57 Differentiated Myotubes
Gary Mallow, BIO
Mentor: Dr. Thomas Burkholder, AP

Biomimetic rocker profile restores lower limb progression when walking with constraint of ankle motion
Simisola Oludare, AP
Tiffany Yan, BMED
Mentor: Dr. Christopher Hovorka, AP

Copepod Sex Appeal: Determining Male Scent Preference in Hesperodiaptomus shoshone According to Female Life Stage
Brooke Beaulieu, BIO
Mentor: Dr. Jeannette Yen, BIO

Initiation and cryopreservation of Fraser fir (Abies fraseri [Pursh] Poir.) embryogenic tissue for somatic embryogenesis
Taylor Fischer, BIO
Mentor: Dr. Gerald Pullman, BIO

Spatial Variation of Picoplankton Community Structure in the Northern Gulf of Mexico
Katie Geddes, BIO
Mentor: Dr. Joseph Montoya, BIO

Analyses of Patterns of Gene Expression in Acropora millepora Under Exposure to Differential Sunscreen Treatments
Agnes Ho, BIO
Mentor: Dr. Terry Snell, BIO

Effects of Hsp104 levels on prion poisoning within Saccharomyces paradoxus
Kudo Jang, BIO
Mentor: Dr. Yury Chernoff, BIO

The response of beach sand microbial communities to the Deepwater Horizon oil spill
Kala Marks, BIO
Mentor: Dr. Joel Kostka, BIO

Examining allelopathic competition of red tide alga Karenia brevis within two different marine communities
Elizabeth McMillan, BIO
Mentor: Dr. Julia Kudanaek, BIO

The origin of eye size differences in cichlid fish ecotypes
Mary Michaels, BIO
Mentor: Dr. Todd Streelman, BIO

Defining Tooth And Taste Bud Density Through Development
Kristine Phillips, BIO
Mentor: Dr. Todd Streelman, BIO

Exogenous expression of miR-429 induces mesenchymal-to-epithelial transition in ovarian cancer cells
Ashley Reavis, BMED
Mentor: Dr. Frank Stewart, BIO

The Effects of Host-Association on the Genetic Expression of Deep-Sea Symbionts
Abigail Shockey, BIO
Mentor: Dr. John McDonald, BIO

Synthesis of Gold Nanoparticles for Cancer Theranostic Applications
Ant Yucesoy, BMED
Mentor: Dr. Tianmeng Sun, BMED

Narrowband composite pulse sequences for addressing errors
John Addison, PHYS
Mentor: Dr. Ken Brown, CHEM

Mercury Remediation via Functionalized Magnetic Nanoparticles
Austin Bennett, CHEM
Mentor: Dr. John Zhang, CHEM

Assessing the Conformational Shift of transfer RNA-Phenylalanine in the Presence of Magnesium(II)
Spencer Hoskyns, BCHM
Mentor: Dr. Loren Williams, CHEM

Synthesis of Triaryl-substituted Pyrazoline Fluorophore
Vishwa Ravleker, CHEM
Mentor: Dr. Christoph Fahrni, CHEM
102 Precise Size Control in Microgel Synthesis for “Designer Polydispersites”  
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