

President's Undergraduate Research Awards (PURA) Spring 2009

| Mentor School | Student Name | Student Major | Mentor Name | Project Title | Funding Type |
|---------------|--------------------|---------------|--------------------------|---|--------------|
| COA | | | | | |
| COA | Ash, Andrew | CS | Chordia,Parag Pratap | Applying Content-Based Recommendation to Indian Classical Music | Salary |
| COC | | | | | |
| IC | Bardagjy, Andrew | CS | Dellaert, Frank | Monitoring Mating Mosquitoes to Mitigate Malaria: 3D Tracking With 4D Light Fields | Salary |
| COE | | | | | |
| AE | Antezana, Jose | ME | Lieuwen, Timothy Charles | Turbulent Flame Speed Measurements and Modeling of Syngas Fuels | Salary |
| AE | Barbely, Natasha | AE | Sankar, Lakshmi N | Exploring Helicopter In-Plane Noise Reduction Possibilities via Rotor Blade/Airfoil Geometry Designs | Salary |
| AE | Benegalrao, Suyog | AE | Craig, James I | Adaptive Control Experiments for a Slender Launch Vehicle | Salary |
| AE | Fischer, Matthew | AE | Wilhite, Alan W | Earth to Moon Transportation Optimization | Salary |
| AE | Joiner, Jason | AE | Walker II, Mitchell L.R. | Analyzing Helicon Waves in a Plasma Propellant | Salary |
| AE | Juneau, Jessica | AE | Braun, Robert David | Development of Alternative Thermal Protection System Design to be Used in Low Earth Orbit and Mars Entry Missions | Salary |
| AE | Ma, Hsin-Hsiao | AE | Lieuwen, Timothy Charles | Flame Brush Development in an Oscillatory Turbulent Flame | Salary |
| AE | Natarajan, Shweta | ME | Lieuwen, Timothy Charles | Flame Response of Swirl Premix Flames to Transverse Acoustic Excitation | Salary |
| AE | Pinkerton, Stephen | Physics | Walker II, Mitchell L.R. | Plasma Double Layer Thruster and Ion Engine/DL Hybridization Feasibility | Salary |
| AE | Roan, Alexander | ME | Lieuwen, Timothy Charles | Turbulent Flame Speed Measurements and Modeling of Syngas Fuels | Salary |
| AE | Valdez, Pierre | AE | Komerath, Narayanan M | Closed Gas Cycle for Micro-Renewable Power Systems | Salary |
| AE | Verma, Siddhartha | AE | Ruffin, Stephen M | Computational Analysis and Design of Blunted Re-entry vehicles | Salary |
| BME | Barrett, Andrea | BME | Wang, Dongmei | Mass Spectrometry Imaging Analysis | Salary |

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| BME | Chan, Leslie | BME | Bellamkonda,Ravi Venkat | NOVEL NANOSCALE AGENT FOR MAMMOGRAPHY: | Salary |
| BME | Chen, Theodore | BME | Kemp,Melissa Lambeth | Detection of protein S-glutathionylation during T cell receptor activation | Salary |
| BME | Erdman, Christopher | BME | Boyan,Barbara D | Enrichment of Adipose-derived Mesenchymal Stem Cells for Osteoprogenitor Cells using Resveratrol | Salary |
| BME | Gupta, Aakanksha | BME | Bellamkonda,Ravi Venkat | In vitro phenotypic and genotypic analysis of anti-invasive drug for treatment of malignant glioma | Salary |
| BME | Gupta, Vedant | BME | Boyan,Barbara D | 24,25-dihydroxyvitamin D3 Signaling and Cell Survival during Chondrogenesis | Salary |
| BME | Hussain, Samiya | BME | Yoganathan,Ajit | The Effects of Serotonin Receptors on Cardiac Valves | Salary |
| BME | Im, Sonia | BME | Bellamkonda,Ravi Venkat | Molecular Imaging of VEGF and Its Prognostic Value for Nano-enabled Breast Cancer Chemotherapy | Salary |
| BME | Mets, Joseph | BME | Chaikof,Elliot L | Transfer of Polymer Thin Films from Angioplasty Balloon to Vascular Lumen | Salary |
| BME | Pan, Qingfen | BME | Boyan,Barbara D | The Role of Bone Morphogenetic Proteins in Osteoblast Differentiation on Microstructured Titanium Surfaces | Salary |
| BME | Patel, Nehal | BME | Boyan,Barbara D | The Role of Vascular Endothelial Growth Factor in Angiogenesis and Osteoblast Maturation and Differentiation | Salary |
| BME | Rudra, Soumon | BME | Bellamkonda,Ravi Venkat | Evaluation of Peripheral Nerve Regeneration On Aligned Electrospun Fibers | Salary |
| BME | Trivedi, Rohan | BME | Bellamkonda,Ravi Venkat | Evaluation of drug delivery design in rat model via Flow Cytometry | Salary |
| BME | Vesper, Kathryn | CHM/BCH M | Boyan,Barbara D | N-Terminal of Amelogenin induces osteogenesis and cementogenesis | Salary |
| CHBE | Bergman, Lindsey | CHBE | Taite, Lakeshia | Targeted Drug Delivery of Cytochalasin B into Cancer Cells By Coupling Folic Acid to Dendrimers | Salary |
| CHBE | Detwiler, David | CHBE | Sambanis,Athanassios | Maximizing the Production of Crystallin Protein | Salary |
| CEE | Bailey, Kenneth | CEE | Teizer,Jochen | Modification of Radio Frequency Technology for Use in Reflectively Dense Locations | Salary |
| CEE | O'Har, John | CEE | Teizer,Jochen | Iron Worker Safety Performance Analysis | Salary |

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| CEE | West, Elisabeth | CEE | Kim,Jaehong | Evaluating the Kinetics of Escherichia coli Inactivation by UVA and UVB Emitted by Light Emitting Diode: Application for Water Disinfection in the Developing World | Salary |
| ECE | Bedoya, Geller | ECE | Owen III, Henry L | Forensic Discovery and Extraction Toolkit for Linux Memory | Salary |
| ECE | Digman, Michael | ECE | Harley, Ronald Gordon | Problem-Specific Swarming Algorithm Development for Enhanced Optimization Performance | Salary |
| ECE | Falcone, Jessica | BME | Bhatti, Pamela T | Development of a High-Density Microelectrode Array for a Cochlear Implant | Salary |
| ECE | Hassig, Santiago | ECE | Durgin, Gregory David | Measuring structure penetration loss and indoor propagation at 700 MHz: Spatio-temporal data acquisition system | Salary |
| ECE | Hurst, Michael | ME | Howard, Ayanna MacCalla | Enhancing Extreme Environment Robotic Mobile Sensor Network to Collect Global Warming Data (Sno Motes II) | Salary |
| ECE | Mahmoudabadi, Gita | ECE | Michaels, Thomas E | Development of a microwave technique to measure moisture content in carpet samples | Salary |
| ECE | Quinteros Soria, Rodrigo | ECE | Durgin, Gregory David | Wireless Channel Reconstruction Based on Perimeter Channel Measurements and Fading Statistics of Wireless Channel | Salary |
| ECE | Sanders, Sean | ECE | Owen III, Henry L | Statistical Model for Computer Network Forensics | Salary |
| ECE | Schulz, Andrew | ECE | Vela, Patricio Antonio | Autonomous Trajectory Adjustments to Supplement an Automobile Driver's Reactions | Salary |
| ECE | Varnell, Paul | ECE | Vela, Patricio Antonio | Multi-Scale Visual SLAM for Mobile Robot Navigation | Salary |
| MSE | Benson, James | MSE | Yushin, Gleb | Growth of Carbon Nanotubes on Si particles for Li-ion Batteries with Enhanced Power and Energy Density | Salary |
| MSE | Drewicz, Stephanie | BME | Gall, Kenneth A | Cast Immobilization Using Novel Shape-memory Polymer Systems | Salary |
| MSE | Foote, Andrew | CHBE | Yushin, Gleb | Hybrid vanadium pentoxide-carbon electrodes for supercapacitor applications | Salary |
| MSE | Jakus, Adam | MSE | Thadhani, Naresh N | Modeling and Simulation of the Impact Response of Linear Cellular Alloys for Structural Energetic Material Applications | Travel |
| MSE | Lawlor, Sean | AE | Yushin, Gleb | Ordered High Surface Area Porous Carbon for Supercapacitors with Enhanced Power Density | Salary |

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| MSE | Minneci, Melissa | ME | Ken Gall | Utilizing Butyal-Acrylate semi-batch emulsions to design Shape Memory Polymers networks | Salary |
| MSE | Parpart, Sonya | BME | Milam,Valeria Tohver | Using Mutations to Reverse Assembly of RNA-linked Particles | Salary |
| MSE | Varallo, Amy | NRE | Gall,Kenneth A | Varying e-beam dosage and crosslinking agent to synthesize shape memory polymer networks with tailored mechanical properties | Salary |
| ME | Bajin, Mehmet | CHM/BCH M | Guldborg,Robert E | Engineering Electrospun Nanofiber Meshes for Repair of Bone Defects | Salary |
| ME | Branley, Justin | NRE | Deo,Chaitanya Suresh | Molecular Dynamics of Irradiation Effects in Nuclear Waste Forms | Salary |
| ME | Carney, Haley | ME | Harris,Tequila A. L. | Fabrication and Evaluation of Gas Diffusion Media for a PEM Fuel Cell with Low In-Plane Fluid Resistance | Salary |
| ME | Hurwitz, Jeremy | BME | Ku,David N | Thrombus formation at high shear | Salary |
| ME | Manohar, Nivedh | NRE | Cho,Sang Hyun | Monte Carlo Modeling of an X-ray Fluorescence Detection System | Salary |
| ME | McAnuff, Kadija | BME | Garcia,Andres J | Generation of antibodies against bioengineered materials using phage display technology | Salary |
| ME | Nemat bakhsh, Yasaman | ME | Pucha,Raghuram V | Developments in Nanotechnology and the Status of Engineering Design Education | Salary |
| ME | Pathak, Munir | ISYE | Sulchek,Todd A | Pathogen mimetics to understand receptor mediated pathogen invasion | Salary |
| ME | Semmens, John | ME | Pucha,Raghuram V | Designing DNA Nanostructures Using Analytical and NanoCAD Tools | Salary |
| ME | Stimpson, Shane | NRE | Deo,Chaitanya Suresh | Molecular Dynamics Simulations of Diffusivity in Tungsten and Vanadium | Salary |
| ME | Weber, Joel | ME | Bassiri-Gharb,Nazanin | Development and Analysis of Lead Zirconium Titanate (PZT) based Ferroelectrics | Salary |
| ME | Wildes, Michael | BME | Ku, David N | Thrombotic Occlusion in Stenotic Arteries | Salary |
| PFE | Amatya, Anisha | PFE | Kumar,Satish | The Study of Seed Crystal Growth in Polymer/Carbon Nanotube Dispersions | Salary |
| PFE | Brinson, Robert | PFE | Beckham,Haskell W | Quantitative Analysis of Wicking Behavior in Performance Textile Fabrics | Salary |
| PFE | Wilson, Melissa | PFE | Beckham,Haskell W | Cyclic Macromolecules: Synthesis and Threading Interactions with Linear Chains | Salary |

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| COS | | | | | |
| BIOL | Jung, Yeonjin | BIOL | Jiang,Lin | The effects of ecosystem size on population dynamics and community structure: an experimental approach using laboratory microbial microcosms | Salary |
| BIOL | Terry, Charles | BIOL | Wartell,Roger M | Examining functional significance of selected Hfq protein amino acid residues for sRNA mediated gene regulation in E. coli | Salary |
| CHEM/BCH M | Geng, Yue | CHEM/BC HM | Sherrill,Charles David | Accurately characterizing the pi-pi interaction energy of the indole-benzene complex | Salary |
| CHEM/BCH M | Hardin, Kevin | CHEM/BC HM | Payne,Christine K | The role of GPI-anchors on the endocytic pathway of proteoglycans. | Salary |
| CHEM/BCH M | Kalantari, Roya | CHEM/BC HM | Josowicz,Mirosława | Optimization of Electrochemical Properties of Polypyrrole Bilayers used for DNA Hybridization | Salary |
| CHEM/BCH M | Taylor, Kenneth | CHEM/BC HM | Hud,Nicholas V | Selecting for DNA Duplexes using Intercalators: A Method of G Quadruplex Inhibition | Salary |
| EAS | Jackson, Cynthia | EAS | Stack, Andrew | Mineral Dust Aerosol Shape | Salary |
| Physics | Ballaban, Reuven | Physics | Schatz,Michael F | Measurement of Forces on a Solid Sphere During Impact with a Free Liquid Surface | Travel |
| Physics | Beatty, Robert | Physics | Curtis,Jennifer Erin | High Speed Particle Tracking Microrheology of Monodisperse Hyaluronan 150 -2500 kDa | Salary |
| Physics | Jones, Jeremy | Physics | Sowell,James R | Orbital Solutions and Absolute Elements of the Eclipsing Binary MW Pav | Travel |
| Physics | Larsen, James | Physics | Curtis,Jennifer Erin | Real-Time Control of Holographic Optical Tweezers | Salary |
| Physics | Paprocki, Jonathan | Physics | Schatz,Michael F | Study of Interior Dynamics of a 3-D Fluidized Bed Using X-ray Tomography | Salary |
| Physics | Shah, Sarang | Physics | Finkelstein,David | QUANTUM SPACE-TIME: DEVELOPMENT AND APPLICATION | Salary |
| Psych | Bowden, Emily | Psych | Engle,Randall W | Principles of Short Term Memory | Salary |
| Psych | Newsome, Rachel | Psych | Duarte,Audrey L | The Effects of Aging on Contextual Binding for Emotional Stimuli | Salary |

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| GTRI | | | | | |
| GTRI-Info Tech TL (GTRI-ITTL) | Akin, John | ECON | Lincoln, Jennie | The Role of William Howard Taft's Presidency on his tenure as Chief Justice of the Supreme Court | Salary |
| GTRI Electro-Optical Sys Labs | James, Julian | MSE | Zhitao Kang | Quantum dot/polymer nano-composite for gamma ray detection | Salary |
| GTRI Electro-Optical Sys Labs | Nguyen, Justin | PFE | Ready, William Judson | 3D Amorphous Silicon and Thermoelectric Engines | Salary |
| GTRI Electro-Optical Sys Labs | Soracco, David | MSE | Ready, William Judson | Investigation into the Growth Mechanisms of Carbon Nanotubes | Salary |
| IAC | | | | | |
| LCC | Gravitt, Bryn | LCC | Hassan, Narin | Women, Empire and Colonialism in Nineteenth Century Britain | Salary |
| LCC | Koza, Kyle | LCC | Herrington, TyAnna K | The Differences In Online Communication Between Russian and American Students | Salary |