

**Worcester Polytechnic Institute
Report of Proposals Submitted
July 2006**

| Department | PI | Co-PI | Project Title | Sponsor | Total Requested | Cost Sharing |
|-------------------------------------|-------------------|------------------|--|---|-----------------|--------------|
| Biology and Biotechnology | Dave Adams | | Peptide Drug Blocks Beta-Amyloid Neurotoxicity | BioTherapeutix, Inc. | \$32,487.00 | \$0.00 |
| | Joseph Duffy | | Analysis of LIG Molecules: a Novel Class of Signal Transduction Modulators | National Science Foundation | \$324,000.00 | \$0.00 |
| | Lauren M Mathews | | Cryptice Marine Biodiversity and Recent Radiations in a Caribbean Snapping Shrimp Complex | National Science Foundation | \$546,846.00 | \$11,454.00 |
| | Reeta Prusty | | CAREER: Investigating the Role of Indole Acetic Acid as a Quorum Sensing Molecule that Regulates Fungal Pathogenesis | National Science Foundation | \$728,559.00 | \$52,067.00 |
| | Reeta Prusty | Mitchell Sanders | STTR: High Throughput Screen and Identification of Novel Inhibitors of Candida Filamentation | ECI Biotech | \$109,123.00 | \$0.00 |
| Biomedical Engineering | Glenn Gaudette | Kristen Billiar | Myocardial Regeneration in Surgical Ventricular Restoration | American Heart Association | \$260,000.00 | \$196,479.00 |
| | Glenn Gaudette | | Electrospun Nanofiber Membrane to Prevent Postoperative Atrial Fibrillation | University of Akron | \$21,255.00 | \$0.00 |
| | Kristen Billiar | | CAREER: Coupled Mechanical and Biochemical Modulation of Cell Phenotype and Matrix Remodeling | National Science Foundation | \$556,515.00 | \$52,068.00 |
| Chemical Engineering | Susan Zhou | | CAREER: Bimetallic Core/Shell Nanoparticles for Bioseparation and Biosensing | National Science Foundation | \$432,402.00 | \$52,068.00 |
| | Susan Zhou | | Nanoparticle-Based Rapid DNA Hybridization | Air Force Office of Scientific Research | \$327,248.00 | \$0.00 |
| Civil and Environmental Engineering | Jeanine D Plummer | | Significance of Current Methods and Monitoring Strategies for E. coli and Total Coliform Measurements | American Water Works Association | \$298,250.00 | \$71,515.00 |

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| Computer Science | Emmanuel Agu | | CAREER: Multiresolution graphics on mobile devices: an end-to-end framework using wavelets | National Science Foundation | \$646,939.00 | \$101,644.00 |
| | Neil Heffernan | Janice Gobert | Postdoctoral Research Training Using Intelligent Tutoring Systems as a Research Platform for Math Education | Department of Education | \$800,000.00 | \$52,688.00 |
| | Neil Heffernan | George Heineman, Murali Mani | Making Longitudinal Web-Based Assessments Give Cognitively Diagnostic Reports to Teachers, Parents & Students While Employing Mastery Learning | Department of Education | \$1,992,307.00 | \$0.00 |
| | Robert W. Lindeman | | CAREER: Endowed Virtual Objects: Hyper-Realistic Object Properties for Virtual Environments | National Science Foundation | \$422,338.00 | \$47,596.00 |
| Electrical and Computer Eng'g. | Alexander E. Emanuel | James Doyle | Peak Power Demand Reduction | ISO New England | \$63,718.00 | \$0.00 |
| | Wenjing Lou | | CAREER: Security Data Communications in Wireless Sensor Networks | National Science Foundation | \$623,673.00 | \$104,136.00 |
| Mechanical Engineering | Cosme Furlong-Vazquez | | Metrology for Aspheric Domes | Ceranova Corporation | \$20,753.00 | \$0.00 |
| | Gretar Tryggvason | | Disruption and Vaporization of Fuel Droplets Under Supersonic Conditions | University of Washington | \$200,652.00 | \$0.00 |
| | John Blandino | | CAREER: Application of Electrosprays to the Study of Basic Processes in Dusty Plasmas | National Science Foundation | \$410,607.00 | \$49,581.00 |
| Physics | Rafael Garcia | | CAREER: Fundamental Wetting Studies for Polar Liquids, Oil Recovery and Separation | National Science Foundation | \$418,147.00 | \$52,068.00 |
| Total for July (21 proposals) | | | | | \$9,235,819.00 | \$843,364.00 |