

**Worcester Polytechnic Institute  
Report of Proposals Submitted  
October 2009**

Department	Principal Investigator	CoPI(s)	Project Title	Sponsor	Prime Sponsor	Program Type	Amount Requested	Cost Sharing	VUCS	Proposal Code	Submitted Date
Biology & Biotechnology	Prusty Rao, R.	Kaminski, G.	Identification of Small Molecule Inhibitors of Cap1 as Antimycotics	NIH		Research	2,530,945		48,798	10094	05-Oct-2009
	Vidali, L.		RIG: Analysis of the Role of Myosin XI in Plant Cell Polarized Growth	NSF		Research	199,998			10107	13-Oct-2009
	<b>Subtotal: 2</b>						<b>2,730,943</b>		<b>48,798</b>		
Biomedical Eng.	Chon, K.		A Novel Method to Assess Cardiovascular Diabetic Autonomic Neuropathy	Juvenile Diabetes Foundation		Research	107,166	50,725		10101	01-Oct-2009
	Illanes, D.	Pins, G.	Living Sutures to Promote Tissue Regeneration in Pelvic Organ Prolapse Treatment	American Urogynecologic Society		Research	25,000	13,050		10114	16-Oct-2009
	Rolle, M.	Billiar, K.	Molecular Basis of Tissue Compliance: The Importance of Elastin for Sub-Failure Mechanics of Cell-Derived Tissues	NSF		Research	380,958		28,424	10091	01-Oct-2009
	Sotak, C.		Hyperpolarized Gas MRI of the Lungs and Brain	UMass Medical School	Commonwealth of Massachusetts	Training/Education	21,263	11,099		10102	12-Oct-2009
	<b>Subtotal: 4</b>						<b>534,387</b>	<b>74,874</b>	<b>28,424</b>		
Chemical Eng.	Zhou, H.		Engineering Biosensing System with Hybrid Nanomaterials	NSF		Research	268,014		28,408	10099	01-Oct-2009
	<b>Subtotal: 1</b>						<b>268,014</b>		<b>28,408</b>		
Civil & Environmental Eng.	Pietroforte, R.		Renewable Energy Guide for Maintenance Facilities	University of New Mexico	National Cooperative Highway Research Program	Research	128,473		9,375	10201	27-Oct-2009
	<b>Subtotal: 1</b>						<b>128,473</b>		<b>9,375</b>		
Computer Science	Heffernan, N.		Enhancing a Web-based Cognitive Tutor with Online Professional Learning Communities: Transforming Mathematics Teaching and Learning	DOEd		Research	1,499,977			10090	01-Oct-2009

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	Sarkozy, G.		A Conference in honor of the 70th birthday of Endre Szemerédi	National Security Agency		Conference/Travel	14,700			10097	04-Oct-2009
	Sarkozy, G.		Graph Partitions and their Applications	National Security Agency		Research	43,637			10098	20-Oct-2009
	Sarkozy, G.		A Conference in Honor of the 70th Birthday of Endre Szemerédi	NSF		Conference/Travel	15,000			10116	01-Oct-2009
	<b>Subtotal: 4</b>						<b>1,573,314</b>				
Electrical & Computer Eng.	Duckworth, R. J.	Cyganski, D.	WPI Directional Search and Rescue System	Federal Emergency Management Agency		Research	973,036		27,594	10117	23-Oct-2009
	Emanuel, A.		Street Light Wind Turbine Application	Massachusetts Electric		Research	65,162		9,196	10106	13-Oct-2009
	Makarov, S.		Semiconductor Integrated Antenna: Proof of Concept	NSF		Research	92,072		9,191	10103	07-Oct-2009
	Pedersen, P.		Ultrasound Simulators for Improved Maternal/Neonatal Outcome	Bill and Melinda Gates Foundation		Research	100,000	37,952		10205	30-Oct-2009
	<b>Subtotal: 4</b>						<b>1,230,270</b>	<b>37,952</b>	<b>45,981</b>		
Interdisciplinary & Global Studies	DiBiasio, D.		Computational Toxicology	EPA		Training/Education	6,240			10109	09-Oct-2009
	<b>Subtotal: 1</b>						<b>6,240</b>				
Mechanical Eng.	Blandino, J.	Gatsonis, N.	Experimental and Computational Investigation of Dust Charging in a Partially Ionized DC Generated Plasma	NSF		Research	359,497		27,736	10118	20-Oct-2009
	Demetriou, M.		Collaborative Research: Heterogeneous Sensor Network Optimization for Complex Spatially Distributed Processes	NSF		Research	188,091		31,582	10084	01-Oct-2009
	Demetriou, M.		Collaborative Research: Fault Tolerant Controller Design for Complex Spatially Distributed Processes	NSF		Research	207,878		31,852	10095	07-Oct-2009
	Fischer, G.		MRI-Guided Deep Brain Stimulation with Robotic Assistance	NIH		Research	3,719,473		135,550	10096	05-Oct-2009

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	Fischer, G.		Enabling Technologies for Robot-Assisted Interventional MRI	NIH		Research	2,218,644		97,644	10200	27-Oct-2009
	Fofana, M.		Nonlinear Time Delay Stability With Deterministic and Stochastic Perturbations	NSF		Research	395,406		61,690	10086	01-Oct-2009
	Fofana, M.		High Speed Milling and Categorical Stability Regimes	NSF		Research	395,106		61,695	10089	01-Oct-2009
	Fofana, M.		REU Site: Coupling of Numerically Controlled Process Machining and Workpiece Dynamics	NSF		Research	327,815			10113	22-Oct-2009
	Gatsonis, N.		Assessment of Iodine Thruster Plume-Spacecraft Interactions	Busek Company, Inc.	NASA	Research	28,037			10115	01-Oct-2009
	Hussein, I.		Decentralized Information Management in Large-Scale Wireless Mobile Sensor Networks	NSF		Research	217,363		28,423	10100	07-Oct-2009
	Lados, D.		Collaborative Research: A Non-Traditional Method for In-Situ Processing of Aluminum Matrix nanoCeramic Composites Using the Casting Route	NSF		Research	289,970		31,582	10085	01-Oct-2009
	Liang, J.	Brown, C., Camesano, T.	Engineering Bacterial-Surface Interactions	NSF		Research	291,385		26,399	10105	01-Oct-2009
	Makhlouf, M.	Diran Apelian	Development of Thermally Stable Nano-Structured Aluminum Matrix Composite Alloys	NSF		Research	667,297		63,163	10204	30-Oct-2009
	Olinger, D.		Airdrop Research Project	Natick Soldier Center	US Army	Training/ Education	5,000			10111	07-Oct-2009
	Rong, Y.		In Process Residual Stress Regulation in Grinding of Aerospace Alloys	NSF		Research	609,716		29,567	10112	01-Oct-2009
	Van de Ven, J.		Switch-Mode Hydraulic Circuit for UGV Manipulator	Boston Engineering Corporation	Robotics Technology Consortium (RTC)	Research	155,634		18,668	10108	07-Oct-2009
	<b>Subtotal: 16</b>						<b>10,076,312</b>		<b>645,551</b>		

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Mathematical Sciences	Weekes, S.	Tilley, B.	REU Site: Research Experiences for Undergraduates in Industrial Mathematics and Statistics	NSF		Research	362,917			07035CR1	22-Oct-2009
	Wu, Z.		Studying model-selection strategies for gene mapping with the aid of gene-gene interactions	NIH		Research	355,299		37,335	10119	16-Oct-2009
	Yakovlev, V.		CAD of Microwavable Multi-Component Food Products	General Mills, Inc.		Research	77,048		4,464	10110	20-Oct-2009
	<b>Subtotal: 3</b>						<b>795,264</b>		<b>41,799</b>		
Physics	Tuzel, E.		Computational Modeling of Microtubule Bending and Transport in Gliding Assays	The Eppley Foundation for Research, Inc.		Research	25,586	3,238		10206	28-Oct-2009
	<b>Subtotal: 1</b>						<b>25,586</b>	<b>3,238</b>			
Social Science & Policy Studies	Doyle, J.		Soludel: Solution Models for Complex Problems	Aptima, Inc.	DARPA	Research	20,000			10104	01-Oct-2009
	Saeed, K.		Nanotica	ICAN Productions	NSF	Research	765,883			10202	28-Oct-2009
	<b>Subtotal: 2</b>						<b>785,883</b>				
	<b>Total: 39</b>						<b>18,154,686</b>	<b>116,064</b>	<b>848,336</b>		