

**Worcester Polytechnic Institute  
Report of Proposals Submitted  
October 2005**

Department	PI	Co-PI	Project Title	Sponsor	Proposal Amount	Cost Sharing
Academic Affairs	Lance Schachterle		A Collaboration to Publish Complementary Digital and Print Scholarly Editions of James Fenimore Cooper's "The Bravo"	National Endowment for the Humanities/Natl. Fndn. on the Arts & Humanities (NSF)	\$141,892.00	\$55,979.00
Biology and Biotechnology	Dave Adams		Innate Immune Priming Without Cytokine Transcription	Rhode Island Hospital (NIH)	\$610,488.00	\$0.00
Biomedical Engineering	George Pins		Multiphoton Biomedical Nano and Microfabrication	University of Connecticut (NIH)	\$643,170.00	\$0.00
	Christopher Sotak		Development of MRI Techniques for Imaging Stroke in Animal Models	Emory University (NIH)	\$15,325.00	\$28,579.00
Chemical Engineering	Anthony Dixon		Structured High-Capacity Hydrogen Storage	Advanced Ceramics Manufacturing LLC (DOD)	\$15,000.00	\$0.00
Civil and Environmental Engineering	Rajib Mallick		Investigation of Flow through Low Permeability Transportation Infrastructure Surfaces with Geotechnical Centrifuge	National Science Foundation	\$111,456.00	\$0.00
Computer Science	Matthew Ward		Regional Center for Visual Analytics	University of New York at Stonybrook (National Visualization and Analytics Cntr.)	\$164,721.00	\$28,032.00
	Neil Heffernan		IMPACT: Interspersed Math Problems in the 'Assitement' Cognitive Tutor	University of Kentucky(DoED)	\$159,982.00	\$0.00
	Robert Lindeman		Vibrotactile Feedback for Enhanced Control of Mobile Robots	George Washington University (NIST)	\$11,030.00	\$5,670.00
Electrical and Computer Eng'g.	David Cyganski		Enhancing Extremely Low Data Rate Internet Links	Raytheon (ONR)	\$50,000.00	\$0.00
Mathematical Sciences	Bogdan Vernescu	Joseph Fehribach, Homer Walker, Arthur Heinricher, Balgobin Nandram, William Martin, Dalin Tang, Suzanne Weekes	EMSW21-MCTP: From Applications to Theory: Motivating Students to Study Higher-Level Mathematics	National Science Foundation	\$1,743,231.00	\$0.00
	Dalin Tang		Assessing Plaque Vulnerability with MRI and Biomechanics	Washington University (NIH)	\$121,120.00	\$0.00
	Darko Volkov		Inverse Problems for Land Mines	National Science Foundation	\$99,415.00	\$0.00
	Jason Scot Williford		Algebraically Defined Graphs with Applications to Extremal Graph Theory	National Security Agency	\$29,935.00	\$9,475.00

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	Umberto Mosco		Research on Partial Differential Equations and Fractals	National Science Foundation	\$298,063.00	\$0.00
	William Martin		Problems in Association Schemes	National Security Agency	\$59,688.00	\$0.00
	William Martin	Jason Scot Williford	Problems in Extremal Graph Theory and Association Schemes	National Science Foundation	\$392,738.00	\$0.00
Mechanical Engineering	Jianyu Liang		Synthetic hierarchical adhesives: A Batch Fabrication Approach for Biomimetic Nanostructures and their modeling	National Science Foundation	\$259,337.00	\$0.00
	Yiming Rong		Fundamental Research on Grinding Technology	Saint-Gobain Corporation	\$68,500.00	\$17,924.00
	Yong-Mo Moon		Collaborative Research: a Building Block Synthesis Methodology for Conceptual Design of Compliant Mechanisms	National Science Foundation	\$215,349.00	\$0.00
	Zhikun Hou		Autonomous Ultrasonic Prognostic-Embedded Diagnostics (AUPED) for Damage Interrogation and Failure Prevention	Stanford University (AFOSR)	\$374,750.00	\$4,500.00
Physics	Germano Iannacchione		Quenched Random Disorder in Soft Condensed Matter	National Science Foundation	\$434,919.00	\$0.00
	Ramdas L Ram-Moham		Integrated Spin-Optoelectronic Devices	Northeastern University (ONR)	\$465,000.00	\$0.00
Totals for October 2005 (23 Proposals)					<b>\$6,485,109.00</b>	<b>\$150,159.00</b>