

FY2006 Multidisciplinary University Research Initiative (MURI) Program Award Winners

Investigator	Prime Institution	State	MURI #	MURI Title	Project Title	Funding Agency
Charbel Farhat	Stanford University	CA	1	Effects of Implosion on Surrounding Structures	Physics-Based Multidisciplinary Failure Analysis of Submerged Implodable Volumes	ONR
Robert A. Dalrymple	The Johns Hopkins University	MD	2	Remote Sensing of Seafloor Properties in Denied Areas	Mechanisms of Fluid-Mud Interactions under Waves	ONR
Keith A. Nelson	Massachusetts Institute of Technology	MA	3	Energetic Material Initiation Mechanisms for Insensitive Munitions & Counter IED Applications	Response of Energetic Materials to Dynamic Stimuli	ONR
Oscar M. Schofield	Rutgers, The State University of New Jersey	NJ	4	Assimilation of Emerging Remote Sensing Data Types into Dynamic Ocean Models	Rapid Environmental Assessment Using an Integrated Coastal Ocean Observation and Modeling System	ONR
Pietro Perona	California Institute of Technology	CA	5	Image Understanding for Persistent Surveillance	Learning to Recognize for Visual Surveillance	ONR
Alison B. Flatau	University of Maryland - College Park	MD	6	Structural Iron-based Alloys with High Magnetostriction	Structural Magnetostrictive Alloys: Revolutionary Materials for Transducers and Adaptive Systems	ONR
Eduardo Salas	University of Central Florida	FL	7	Reconfigurable Human-Agent Collaboration: Human Performance in Network-Centric Operations	Cognition and Collaboration in Network-Centric Operations: Understanding and Measuring Macrocognition in Teams	ONR
Guruswami Ravichandran	California Institute of Technology	CA	8	Impulse Loading Effects on Marine Structures	Mechanics and Mechanisms of Impulse Loading, Damage, and Failure of Marine Structures and Materials	ONR
David D. Awschalom	University of California - Santa Barbara	CA	9	Multifunctional EMO (Electrical, Magnetic and Optical) Chip	A Single Multifunctional Chip for Reconfigurable Information Processing	ONR
Frank C. Minion	Iowa State University	IA	10	Novel Vaccines and Antibiotics: Targeting and Exploiting the Bacterial Quorum Sensing Pathway	Novel Therapies for Pneumonic Plague Targeting Quorum Sensing Components	ONR
Aditi Chattopadhyay	Arizona State University	AZ	11	Health Monitoring and Materials Damage Prognosis for Metallic Aerospace Propulsion and Structural Systems	A Multidisciplinary Approach to Health Monitoring and Materials Damage Prognosis	AFOSR
Minoru Taya	University of Washington	WA	12	Multi-Functional Design for Combined Load-Bearing and Power Generation Capabilities: Structural Integration of Energy Harvest Function	Energy Harvesting and Storage Systems and Their Integration to AF Aero Vehicles	AFOSR
Roberto D. Merlin	University of Michigan	MI	13	Negative Index Materials (NIMs)	Three Dimensional Approaches to Assembling Negative Index Metamaterials	AFOSR
Peter Palffy-Muhoray	Kent State University	OH	13	Negative Index Materials (NIMs)	MURI on Self-Assembled Soft Optical NIMs	AFOSR
Lionel C. Kimerling	Massachusetts Institute of Technology	MA	14	Silicon-Based Lasers and Nanophotonics	Electrically-Pumped, Silicon-Based Lasers for Chip-Scale Nanophotonic Systems	AFOSR
José Menéndez	Arizona State University	AZ	14	Silicon-Based Lasers and Nanophotonics	Infrared and Terahertz lasers on Si using novel group-IV alloys	AFOSR
Plamen B. Atanassov	University of New Mexico	NM	15	Bioengineering for Compact, Sustainable Power	Fundamentals and Bioengineering of Enzymatic Fuel Cells	AFOSR
Kenneth H. Nealson	University of Southern California	CA	15	Bioengineering for Compact, Sustainable Power	Bioengineered Fuel Cells: Optimization via Genetic Approaches and Multi-Scale Modeling	AFOSR

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Dana Nau	University of Maryland - College Park	MD	16	Dynamic, Adaptive Techniques for Adversary Behavior Modeling	Cognitive Architecture for Reasoning About Adversaries	AFOSR
Richard M. Murray	California Institute of Technology	CA	17	High Confidence Design for Distributed, Embedded Systems	Specification, Design and Verification of Distributed Embedded Systems	AFOSR
Janos Sztipanovits	Vanderbilt University	TN	17	High Confidence Design for Distributed, Embedded Systems	Frameworks and Tools for High-Confidence Design of Adaptive, Distributed Embedded Control Systems	AFOSR
Randolph L. Moses	Ohio State University	OH	18	Performance Prediction and Modeling for Active Vision	Integrated Fusion, Performance Prediction, and Sensor Management for Automatic Target Exploitation	AFOSR
David Martin	University of Michigan	MI	19	Bio-integrating Structural and Neural Prosthetic Materials	Bio-integrating Structural and Neural Prosthetic Materials	ARO
Boris Rozovsky	University of Southern California	CA	20	Spatial-Temporal Event Pattern Recognition	Spatial-Temporal Nonlinear Filtering with Applications to Information Assurance and Counter Terrorism	ARO
A. Welford Castleman	Pennsylvania State University	PA	21	Self Assembling Metallic/Metalloid Cluster Materials	Superatoms as building blocks of new materials	ARO
Vladimir Shalaev	Purdue University	IN	22	OMNI-Optical Materials with Negative Index	Tunable and reconfigurable Optical Negative-Index Materials with Low Losses	ARO
Mark Horn	Pennsylvania State University	PA	23	Monolithic Silicon Microbolometer Materials for Uncooled IR Detectors	Growth, Characterization, and Modeling of Monolithic Silicon Microbolometer Materials for Uncooled Infrared Detectors	ARO
Eric Van Stryland	University of Central Florida	FL	24	Ultrafast Switching for Optical Imaging	Engineered Multifunctional Nanophotonic Materials for Ultrafast Optical Switching	ARO
Martin Richardson	University of Central Florida	FL	25	Ultrafast, Non-equilibrium Laser-Material Interactions	Ultrafast Laser Interaction Processes For Libs and Other Sensing Technologies	ARO
Shankar Shastry	University of California - Berkeley	CA	26	Urban Target Recognition by Ad-Hoc Networks of Imaging Sensors and Low-cost, Nonimaging Sensors	Heterogeneous Sensor Webs for Automated Target Recognition and Tracking in Urban Terrain	ARO

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