

## August 2009 Contract and Grant Awards

### American Reinvestment & Recovery Act Funding:

Bouwmeester, D. (Physics), Petroff, P.M. (Materials), Institute for Terahertz Science & Technology, \$399,914, National Science Foundation, "Solid-State Cavity Electrodynamics."

Bowers, J.E., Colbert, D., Electrical & Computer Engineering, \$15,700,000, Department of Energy, "Center on Materials for Energy Efficiency Applications."

Hacker, B.R. (Earth Science), Mattinson, J.M. (Earth Science), Institute for Crustal Studies, \$341,828, National Science Foundation, "How Does the Lower Crust Thicken and Grow During Continent Collisions? A Case Study of the Pamir."

Kruegel, C., Computer Science, \$405,000, National Science Foundation, "Career: Toward Eliminating Malicious Code."

Leal, L.G., Squires, T., Chemical Engineering, \$314,469, National Science Foundation, "Nanoparticles as Surfactants: Static and Dynamic Properties."

Lipshutz, B.H. (Chemistry & Biochemistry), Institute for Terahertz Science & Technology, \$200,000, National Science Foundation, "EAGER: Chemistry of Water-Intolerant Intermediates...in Water."

Loomis, J.M. (Psychology), Institute for Social, Behavioral, & Economic Research, \$602,322, National Eye Institute, "Multimodally Encoded Spatial Images in Sighted and Blind."

Manjunath, B.S., Electrical & Computer Engineering, \$1,950,000, National Science Foundation, "CDI-Type II: Computational Challenges in the Discovery and Understanding of Complex Biological Structures Through Multimodal Imaging."

McFadden, J. (Geography), King, J. (Geography), Institute for Computational Earth System Science, \$499,945, National Science Foundation, "Collaborative Research: Coupling Human Choice and Biogeochemical Cycling in Urban Ecosystems."

McMeeking, R.M., Mechanical Engineering, \$180,000, National Science Foundation, "GOALI: Collaborative Research: Engineered Surface Microstructures by Machining."

Nuernberger, A., Goodchild, M.F., Geography, \$200,000, National Science Foundation, "Development and Assessment of Self-Assessed Scales for Everyday Environmental Knowledge (Seek)."

Parsons, S.M. (Chemistry & Biochemistry), Neuroscience Research Institute, \$37,280, Washington University, "Vesicular Acetylcholine Transporter Imaging Agents."

Passow, U., Alldredge, A.L. (Ecology, Evolution & Marine Biology), Marine Science Institute, \$705,703, National Science Foundation, "Will Ocean Acidification Diminish Particle Aggregation and Mineral Scavenging, Thus Weakening The Biological Pump?"

Porter, S.M. (Earth Science), Institute for Crustal Studies, \$214,813, National Science Foundation, "Collaborative Research: Ocean Oxidation and the Biosphere During Neoproterozoic Glaciation."

Rodoplu, V., Electrical & Computer Engineering, \$278,770, National Science Foundation, "NeTS: Small: Automated Design of Medium Access Control Protocols."

Seshadri, R., Materials, \$360,000, National Science Foundation, "Materials World Network: Approaches to the Coupling of Dilute Spins in Oxides."

Shell, M., Chemical Engineering, \$403,254, National Science Foundation, "Career: An Integrated Multiscale Platform for Fundamental Studies of Peptide Self-Assembly."

Weimbs, T. (Molecular, Cellular & Developmental Biology), Neuroscience Research Institute, \$8,038, National Institute of Diabetes, Digestive & Kidney Diseases, "Regulation of the mTOR Pathway in Polycystic Kidney Disease."

Wodtke, A.M., Chemistry & Biochemistry, \$333,705, National Science Foundation, "Purchase of a Gas Chromatograph Time-of-Flight Mass Spectrometer for High Resolution Small Molecule Analysis with Cyber Enabled Remote Access for Research, Education, and Outreach."

Zhao, Y., Belding, E.M., Computer Science, \$700,000, National Science Foundation, "NeTS: Medium: Airlab: Distributed Infrastructure for Wireless Measurements."

Zheng, H., Computer Science, \$269,000, National Science Foundation, "NeTS: Small: A Practical and Efficient Trading Platform for Dynamic Spectrum Distribution."

Other Contract & Grant Awards:

Awschalom, D.D. (Physics), California Nanosystems Institute, \$1,000,000, Air Force, "Synthesis and Engineering of Diamond for Nanoelectronics, Photonics, and Quantum Information Processing."

Belkin, A. (Political Science), Institute for Social, Behavioral, & Economic Research, \$25,000, Johnson Family Foundation, "Palm Center Research, Communications, and Military Outreach."

Beltz, G.E. (Mechanical Engineering), College of Engineering, \$5,750, UC MESA, "MESA NSF Scholarship."

Bergstrom, T.C. (Economics), Garratt, R.J. (Economics), Institute for Social, Behavioral, & Economic Research, \$400,000, National Science Foundation, "Bone Marrow Registries and Donor Motives."

Blumenthal, D.J., Bowers, J.E., Electrical & Computer Engineering, \$9,215,092, Advanced Research Projects Agency, "ULLW-PICs: Ultra Low Loss Waveguides for High Performance Integrated Photonic Delays Using Passive/Active InP/SiO<sub>2</sub> and InP/Si/SiO<sub>2</sub> PIC Platforms."

Blumenthal, D.J., Electrical & Computer Engineering, \$300,000, Advanced Research Projects Agency, "Proposal for Seedling on Optical Field Programmable Gate Arrays (OFPGA)."

Blumenthal, D.J., Electrical & Computer Engineering, \$300,000, Army, "Sub-Wavelength Metal Gratings for Slow Light and Optical Communications Applications."

Bowers, J.E., Electrical & Computer Engineering, \$75,000, Hewlett Packard, "High-Speed, Low-Threshold Hybrid Silicon Evanescent Ring Resonator Lasers."

Carlson, C.A. (Ecology, Evolution & Marine Biology), Marine Science Institute, \$339,737, National Science Foundation, "Collaborative Research: ETBC: The Coupling Between Dom, Algae, and Microbes on Coral Reef Platforms."

Carr, D.L., Murtinho, F., Geography, \$11,950, National Science Foundation, "Doctoral Dissertation Research: Adaptation in Watershed Management Among Andean Rural Communities."

Dahlquist, F.W., Chemistry & Biochemistry, \$1,269,423, National Institute of General Medical Sciences, "Mechanistic Studies of Bacterial Chemotaxis."

Feinstein, S.C. (Molecular, Cellular & Developmental Biology), Neuroscience Research Institute, \$226,493, Society for Progressive Supranuclear Palsy, Inc., "Tau-Mediated Effects Upon Microtubule Structure and Kinesin Translocation."

Fredrickson, G.H., Chemical Engineering, \$330,000, National Science Foundation, "Field-Theoretic Polymer Simulations: Free Energy and Multi-Scale Methods."

Gaines, S. (Ecology, Evolution & Marine Biology), Marine Science Institute, \$1,625,000, Department of Commerce, "Ocean Science Education Building, Phase 1."

Gaines, S. (Ecology, Evolution & Marine Biology), Marine Science Institute, \$38,318, Environmental Defense Fund, "Ocean Analytics."

Glassow, M.A. (Anthropology), Institute for Social, Behavioral, & Economic Research, \$100,000, National Oceanic and Atmospheric Administration, "Mal de Mer no Mas: Searching for Early Underwater Sites in The Sea of Cortez."

Grafton, S.T., Psychology, \$131,951, Einstein University, "Prospective Control of Action: Computational Principles, Neural Substrates, and Clinical Implications."

Gurven, M.D. (Anthropology), Von Rueden, C.R. (Anthropology), Institute for Social, Behavioral, & Economic Research, \$11,750, National Science Foundation, "Dissertation Research: The Determinants and Outcomes of Male Social Status in a Rapidly Acculturating Amazonian Society."

Halpern, B.S., Marine Science Institute, \$24,827, University of North Carolina, "Mapping the Vulnerability of Coastal Marine Ecosystems to Anthropogenic Climate Change."

Hampton, S., Marine Science Institute, \$140,793, National Oceanic and Atmospheric Administration, "Cameo: Building the Foundation, New Statistical Tools for Analyzing Community Dynamics with Applications to Marine Zooplankton."

Homsy, G.M., Mechanical Engineering, \$390,000, UC Lab Fees Research Program, "IMMS UC Lab Fees Research Program Contingency Award."

Kanjo-Jurist, K., Gonzales, E., Art Museum, \$35,000, Andy Warhol Foundation for Visual Arts, Inc., "The Imagery of Ruins in Contemporary Art."

Lange, F.F., Materials, \$330,000, National Science Foundation, "Understanding Defects Generated by the Low Temperature Aqueous Synthesis of ZnO."

Levi, C.G., Materials, \$30,052, Directed Vapor Technologies International, Inc., "STTR Phase I: High-Temperature Environmental Barrier Coating for Silicon Carbide Composites."

Lieberman, D.A., Institute for Social, Behavioral, & Economic Research, \$738,445, Robert Wood Johnson Foundation, "National Program Office: Research on Games for Health."

Liu, A.Y., English, \$35,000, UC Office of the President, "Transliterations."

Martinis, J.M. (Physics), Cleland, A.N. (Physics), California Nanosystems Institute, \$8,210,000, Army, "Low-Loss Materials for Josephson Qubits."

Mayer, R., Psychology, \$263,352, Carnegie Mellon University, "Adaptex: Exploring the Learning Benefits of Erroneous Examples and Their Dynamic Adaptations within the Context of Middle-School Mathematics."

Meiburg, E.H., Mechanical Engineering, \$270,000, National Science Foundation, "The Formation of Channels, Gullies and Sediment Waves by Turbidity Currents: A Navier-Stokes Based Framework."

Mishra, U.K., Electrical & Computer Engineering, \$10,000, Navy, "36th International Symposium on Compound Semiconductors (ISCS 2009) - 1."

Mishra, U.K., Electrical & Computer Engineering, \$10,000, Navy, "36th International Symposium on Compound Semiconductors (ISCS 2009) - 2."

Morse, D.E. (Molecular, Cellular & Developmental Biology), Institute for Collaborative Biotechnologies, \$1,100,000, General Technical Services LLC, "Bio-Inspired Low-Temperature Catalytic Synthesis of Nanoparticle Barium Titanate for Fireproof Lithium Ion Batteries."

Morton, C. (Dramatic Art), Chicano Studies Institute, \$6,463, UC Mexus, "Intercambio Teatral."

Ostwald, T., Chemistry & Biochemistry, \$48,000, UC Office of the President, "South Coast Science Project."

Palerm, J. (Anthropology), Lanzas, G. (Anthropology), Chicano Studies Institute, \$1,470, UC MEXUS, "Development in the Tropics: The Case of Plan Chontalpa and its Impacts on a Rural Community in Tabasco, Mexico."

Perona, J.J., Chemistry & Biochemistry, \$1,273,267, National Institute of General Medical Sciences, "Specificity in the Synthesis of Aminoacyl-tRNA."

Segura, D.A. (Sociology), Institute for Social, Behavioral, & Economic Research, \$6,897, American Sociological Association, "Dilemmas of Diversity: Inclusion and Exclusion of Racial-Ethnic Minority Graduate Students in Sociology."

Soh, H.T. (Mechanical Engineering), Xiao, Y., Institute for Collaborative Biotechnologies, \$1,540,331, National Institute of Biomedical Imaging and Bioengineering, "Strain Specific Detection of Influenza at the Point-of-Care."

Sorlien, C.C., Institute for Crustal Studies, \$49,999, National Science Foundation, "Collaborative Research: The North Anatolian Fault in the Marmara Sea, Turkey: The Growth of Continental Transform Basins."

Spafford, J., Keller, U., History of Art & Architecture, \$1,237, Artstor Inc., "Contribution of African Material to Artstor from UCSB's Visual Resources Collection."

Spaldin, N.A. (Materials), Levi, C.G. (Materials), Materials Research Laboratory, \$5,380,000, National Science Foundation, "IMI: International Center for Materials Science (ICMS)."

Stemmer, S., Materials, \$140,000, Semiconductor Research Corporation, "Tunnel Junction Devices for Nonvolatile Memories."

Stemmer, S., Spaldin, N.A., Materials, \$6,250,000, Army, "Emergent Phenomena at Mott Interfaces."

Teel, A.R., Electrical & Computer Engineering, \$321,053, National Science Foundation, "Stability Theory for Set-Valued Stochastic Hybrid Systems."

Thorsch, J.A. (Ecology, Evolution & Marine Biology), D'Antonio, C.M. (Environmental Studies Program), Marine Science Institute, \$272,162, National Science Foundation, "Infrastructure Upgrade and Curation of the Cheadle Center for Biodiversity and Ecological Restoration Herbarium at UCSB."

Data provided by the Office of Research. “()” represent investigators’ home departments when those are different from the administering unit.