

# DIMENSIONS *of* DISCOVERY

## Sponsored Program Awards

March 2010

**Abbott, Philip C;** agricultural economics, from University of Copenhagen, \$52,386, "Market Economic Institute Development in Vietnam."

**Abraham, Dulcy M;** civil engineering, from Indiana Department of Transportation, \$110,015, "INDOT Construction Inspection Priorities, SPR-3400."

**Abu-Omar, Mahdi M;** chemistry, from U.S. Department of Energy, \$155,000, "Oxo Catalysts for the Conversion of Lingocellulosic Biomass – Modification 4."

**Adams, Douglas E;** mechanical engineering, from Kohler Company, \$168,469, "Characterization of Initial Material State and Transport Loads for Durability Prognosis of Crack Formation and Propagation in Composite Material Fixtures."

**Adams, Douglas E;** mechanical engineering, from University of Florida, \$49,306, "Nonlinear Dynamic Characterization of the Coupled Structural Response of Mechanically Preloaded Bodies Using High Resolution Laser Velocimetry." (a Discovery Park award — Institute for Defense Initiatives)

**Adeola, Olayiwola;** animal sciences, from Danisco Animal Nutrition, \$70,000, "Danisco."

**Ajuwon, Kolapo;** animal sciences, from Danisco Animal Nutrition, \$30,000, "Research Gift Funds."

**Alexeenko, Alina;** aeronautical & astronautical engineering, from IMA Edwards, \$50,000, "IMA Edwards."

**Allain, Jean P;** nuclear engineering, from U.S. Department of Energy, \$98,000, "In-Situ Elemental and Chemical Characterization of D-Recycling on Lithiated Graphitic Surfaces with Applications to NSTX – Modification 2."

**Anderson, Donald J;** consumer & family sciences, from California Travel Industry Association, \$3,599, "CalTIA Strategic Plan Development."

**Anderson, Donald J;** consumer & family sciences, from California Travel Industry Association, \$2,000, "CalTIA Strategic Plan Development."

**Anderson, Donald J and Savaiano, Dennis A;** consumer & family sciences, from Destination Marketing Association International, \$16,259, "DMAL."

**Anderson, Donald J and Savaiano, Dennis A;** consumer & family sciences, from Destination Marketing Association International, \$16,259, "Executive Program in Destination Management."

**Anderson, William E and Matsutomi, Yen Ching Y;** aeronautical & astronautical engineering, from Siemens Corporate Research Inc., \$50,000, "Testing Combustion Response of Secondary Fuel Injection to Acoustice Oscillations-Extension."

**Anderson, William E;** aeronautical & astronautical engineering, from University of Maryland, \$236,751, "Studies and Support of Project Constellation – Modification M."

**Anderson, William E;** aeronautical & astronautical engineering, from University of Maryland, \$45,000, "Studies and Support of Project Constellation – Amendment 12 (Modification L)."

**Aronson, Arthur I;** biological sciences, from Livermore, Lawrence National Laboratory, \$15,349, "Lawrence Livermore National Laboratory-Production of Samples."

**Atallah, Mikhail J;** computer science, from Air Force Office of Scientific Research, \$125,667, "Techniques for Secure and Reliable Computational Outsourcing."

**Barker, Eric L and Nichols, David E;** medicinal chemistry & molecular pharmacology, from PHS-NIH National Institute on Drug Abuse, \$205,666, "Psychostimulant Reconstitution by Serotonin Transporters."

**Bertino, Elisa;** CERIAS, from Sypris Electronics, \$114,820, "Assurable Architectures for Unattended Devices."

**Bethel, James S; Johnson, Steven D and Van Gelder, Boudewijn H;** civil engineering, from Northrop Grumman Space Technology, \$60,735, "Design and Implementation of Control Point Network for Site Model Evaluation."

**Beyrouthy, Craig A;** agronomy, from Mosaic Crop Nutrition LLC, \$20,000, "Potassium Management."

**Bhunja, Arun K;** food science, from Advanced BioImaging, \$50,000, "Shuttleworth North America."

**Bickham, John W;** forestry and natural resources, from National Oceanographic & Atmospheric Administration, \$24,900, "Laboratory Analyses of Sex-Chromosome Specific Genetic Markers for Phylogeographic Analyses of Steller Sea Lions." (a Discovery Park award — Center for the Environment)

**Bigelow, Cale A;** agronomy, from Unison Labs LLC, \$2,500, "Putting Greens Research."

**Bowen, Brenda B;** earth & atmospheric sciences, from New Mexico Institute Mining & Technology, \$35,333, "A Sharp-Interface Model of CO<sub>2</sub> Sequestration Within the Illinois Basin."

**Briggs, Scott D;** biochemistry, from National Institutes of Health, \$22,925, "The Role of Set1-Mediated Ethylation in Chromatin Function."

**Butzke, Christian E; Bordelon, Bruce P and Merritt, Jeanette K;** food science, horticulture & landscape architecture, from Indiana State Department of Agriculture, \$19,647, "Creating a Signature Wine Style for the State of Indiana."

**Caldwell, Barrett S;** industrial engineering, from SA Technologies Inc., \$30,553, "Crew Autonomy Assessment Toolkit and Framework of Influential System and Human Factors."

**Carlson, Gary P;** health sciences, from Styrene Information & Research Council, \$100,000, "Examination of the Relationship Between the Metabolism and the Toxicity of Styrene Using Specific Knockout Mice."

**Caruthers, James M;** chemical engineering, from NAVSEA/NSWC Crane, \$50,000, "Cooperative Interaction Between Purdue and Crane in Energy Storage Systems." (a Discovery Park award — Institute for Defense Initiatives.)

**Cayon, Laura;** physics, from Jet Propulsion Laboratory, \$24,367, "Planck Visualization Project."

**Chandrasekar, Srinivasan;** industrial engineering, from M4 Sciences Corporation, \$45,000, "Modulation-Assisted Machining."

**Chang, Fen-Lei F;** medical education — Fort Wayne campus, from Indiana University, \$12,000, "FY 09-10 IUSM-FW Life Cycle Funding."

**Chappell, William J;** electrical & computer engineering, from BAE Systems Advanced Technologies, Inc., \$80,000, "Center for Electronic Defense Systems."

**Chapple, Clint C;** biochemistry, from Dow Chemical Company Foundation, \$2,000, "Dow Agro Sciences Aid- to-Education."

**Chen, Qingyan;** mechanical engineering, from Boeing Commercial Airplanes Group, \$105,000, "Risk Assessment and Mitigation of Airborne Infectious Disease Transmission in Aircraft Cabins (Phase III)."

**Christmon, Kenneth C;** Division of Multicultural Affairs — Fort Wayne campus, from State Student Assistance Cmsn of Indiana, \$265,014, "Twenty-First Century Scholars Program Site Agreement 2009-2010."

**Cleveland, William S; Neville, Jennifer L and Ward, Mark D;** statistics, computer science, from Ohio State University, \$195,000, "Stochastic Control of Multi-scale Networks: Modeling, Analysis, and Algorithms."

**Comer, Mary L;** electrical & computer engineering, from Space and Naval Warfare Systems Center, \$149,999, "Automated Segmentation of Micrographs."

**Cooks, Robert G;** chemistry, from U.S. Department of Homeland Security, \$102,168, "Hand-held CWA and TIC Sensor Based on a Plastic Rectilinear Ion Trap Array Mass Spectrometer."

**Cooper, James A;** electrical and computer engineering, from University of Notre Dame, \$1,102,200, "State of Indiana Funded Activities for Midwest Institute of Nanoelectronics Discovery (MIND)." (a Discovery Park award — Birck Nanotechnology Center)

**Coppoc, Gordon L;** medical education, from Indiana University Purdue University at Indianapolis, \$20,270, "FY09-10 IUSM-Lafayette Life Cycle Fund."

**Cordes, Samuel M;** Office of Engagement, from Indiana Economic Development Corporation, \$33,332, "Southeastern Small Business Development Center - Federal July-Dec 2009 - \$33,332.23 Increase."

**Crossley, William A;** aeronautical & astronautical engineering, from Massachusetts Institute of Technology, \$29,000, "Advanced Multidisciplinary Optimization Techniques for Efficient Subsonic Aircraft Design — Amendment 4."

**Cushman, Mark S;** medicinal chemistry & molecular pharmacology, from University of Illinois at Chicago, \$208,937, "Novel Antibiotic Development for Biodefense."

**Dadarlat, Marius D;** mathematics, from National Science Foundation, \$102,432, "Operator Algebras and K-Theory — Amendment 2."

**Datta, Supriyo;** electrical & computer engineering, from University of Michigan, \$29,508, "High-Temperature Spin-Based Devices."

**Davies, Patricia; Braun, James E; Chen, Qingyan; Hirleman, E Daniel and Olson, Robert E;** mechanical engineering, physical facilities administration, from National Institute of Standards & Technology, \$11,750,000, "A Center for High Performance Buildings at the Ray W. Herrick Laboratories."

**DeLaurentis, Daniel A and Landry, Steven J;** aeronautical & astronautical engineering, industrial engineering, from Volpe National Trnsprt Systems Center, \$99,000, "Support for NASA Airspace Plan Development with Meta-Solutions Modeling and Decision-Making Approach."

**Delp, Edward J and Chappell, William J;** electrical & computer engineering, from North Carolina State University, \$211,241, "Remote Examination and Manipulation of Electric and Electronic Devices Using Inverse Evaluation of Scattering (Remedies)."

**DeVillez, Philip L;** agronomy, from Pioneer Hi-Bred International, Inc., \$16,000, "2010 Plant Population Response of Corn Hybrids."

**Doerge, Rebecca W;** statistics, from University of California-Davis, \$231,820, "Functional Genomics of Plant Polyploid — Amendment 2."

**Dyke, Shirley J;** mechanical engineering, from National Science Foundation, \$6,329, "NEESR-SG: Performance-Based Design and Real-Time Large-Scale Testing to Enable Implementation of Advanced Damping Systems."

**Elicker, James G;** child development & family studies, from Indiana University, \$84,116, "Infant Toddler Specialist Network Initiative — 2009-2011."

**Eremenko, Alexandre;** mathematics, from National Science Foundation, \$72,942, "Real Meromorphic Functions — Amendment 4."

**Esters, Levon T;** youth development & agricultural education, from National FFA Organization, \$500, "National Agriscience Integration Institute (NAII) Grant."

**Esters, Onikia N;** foods & nutrition, from South Dakota State University, \$75,851, "Development of a Randomized Trial Guided by the Process of Precede-Proceed for Prevention of Excessive Weight Gain in Communities of Young Adults."

**Eugster, Patrick T;** computer science, from National Science Foundation, \$80,000, "CAREER: Pervasive Programming with Event Correlation-Amendment 4."

**Farris, Thomas N;** aeronautical & astronautical engineering, from Purdue University F N Andrews Fellowship, \$18,935, "Fellowship."

**Fekete, Donna M;** biological sciences, from PHS-NIH National Institute Deafness, Comm Disorders, \$360,087, "Development Studies of the Inner Ear."

**Ferruzzi, Mario;** food science, from Sensient Colors Inc., \$3,000, "Hills Pet Nutrition, Inc.."

**Fisher, Timothy;** mechanical engineering, from University of Dayton Research Institute, \$32,280, "Database Development for ThermalHUB." (a Discovery Park award — Birck Nanotechnology Center)

**Foster, Scott P;** field extension educators, from Hendricks College Network, \$3,859, "Hendricks College Network 2009 Carry-forward."

**Franks, Melissa M;** child development & family studies, from Pennsylvania State University, \$20,339, "The Role of Social Relationships and Self-Efficacy in Diabetes Management – Amendment 1."

**Garfinkel, Arthur F;** physics, from Argonne National Laboratory, \$1,500, "Laura Boon Travel."

**Garimella, Suresh V;** mechanical engineering, from Heat Transfer Research Inc., \$30,000, "CTRC 2010 Membership."

**Garimella, Suresh V;** mechanical engineering, from Deere & Company, \$30,000, "CTRC Membership."

**Garimella, Suresh V;** mechanical engineering, from EPRI, \$18,000, "Preliminary Design and Thermal Modeling of Solar Integrated Multi-Cell Thermocline Storage Concept."

**Gerard, Peggy S;** nursing – Calumet campus, from University of Illinois at Chicago, \$72,849, "Bridges to the Doctorate for Nursing."

**Golden, Barbara L;** biochemistry, from Case Western Reserve University, \$20,000, "Characterizing RNA-Metal Binding by Raman Spectroscopy – Amendment 1."

**Groll, Eckhard A;** mechanical engineering, from Boeing Company, \$91,394, "Conduction Cooled Electronic/Electrical Modules in Liquied Cooled Cabinets, Phase II: Experimental Analysis."

**Hacker, Thomas J;** computer & information technology, from National Science Foundation, \$312,499, "CAREER: AON — An Integrative Approach to Petascale Fault Tolerance."

**Hall, Mark C;** biochemistry, from National Science Foundation, \$175,000, "Regulation of the Anaphase-Promoting Complex by Pseudosubstrate Inhibition – Amendment 2."

**Hamaker, Bruce R;** food science, from Solae, LLC, \$6,150, "Carbohydrate Compositional, Linkage and Structural Analysis."

**Han, Bumsoo;** mechanical engineering, from PHS-NIH National Institute of Biomedical Imaging & Bioengineering, \$201,400, "Cryopreservation of Functional Engineered Tissues."

**Han, Bumsoo;** mechanical engineering, from National Institutes of Health, \$297,990, "Cryopreservation of Functional Engineered Tissues."

**Han, Qingyou;** mechanical engineering technology, from Ryobi Die Casting (USA) Inc., \$1,500, "Deformation of A380 Die Casting During Heat Treating."

**Handwerker, Carol A and Stach, Eric A;** materials engineering, from TPF Enterprises LLC, \$25,000, "Solderless Interconnects Based on Silver-Copper Core-Shell Particle Sintering."

**Handy, Rodney G;** mechanical engineering technology, from Odorox Environmental LLC, \$10,000, "The Characterization of Bioaerosol and Surface Contamination Before and after the Operation of a Hydroxyl Generating Air Cleaner."

**Harbin, Sherry L;** basic medical science, from Cook Biotech, Inc., \$38,357, "Subcutaneous Angiogenesis into Porcine Small Intestinal Submucosa: Multiple Formulations of Biomaterial Constructs."

**Harding, Melvyn D;** Educational Opportunities Program – Calumet campus, from City of Hammond, \$11,000, "Project Excel Summer Academic Enrichment."

**Hassanein, Ahmed;** nuclear engineering, from U.S. Department of Energy, \$960,000, "Integrated Prediction and Benchmarking of Material Damage and Lifetime Analysis During Major Plasma Instabilities – Modification 2."

**Heckaman, Kelly L;** field extension educators, from Kosciusko Co Community Foundation Inc., \$1,312, "Shape Up Kosciusko 2009."

**Heister, Stephen D and Li, Ding;** aeronautical & astronautical engineering, mechanical engineering, from Air Force Office of Scientific Research, \$127,316, "Study of Cavitation/Vaporization in Liquid Rocket Thruster Injectors."

**Heister, Stephen D; Mudawar, Issam and Sojka, Paul E;** aeronautical & astronautical engineering, mechanical engineering, from Rolls-Royce Corp - Libertyworks, \$300,000, "Rolls-Royce University Technology Center in High Mach Propulsion-2010."

**Hertel, Thomas W;** agricultural economics, from International Trade Centre, \$19,650, "GTAP"

**Hertel, Thomas W;** agricultural economics, from United Nations Economic Commission for Africa, \$19,675, "GTAP"

**Ho, Nancy WY;** chemical engineering, from U.S. Department of Energy, \$422,633, "Further Improvement of the Robust Recombinant Saccharomyces Yeast for the Conversion of Lignocellulosic Biomass – Amendment 3."

**Hogenesch, Harm; Hem, Stanley L and Johnston, Cliff T;** veterinary medicine-administration, industrial & physical pharmacy, agronomy, from Merck Research Laboratories, \$44,366, "Effect of Sterilization by Gamma Irradiation on the Chemical and Immunological Properties of Aluminum Adjuvants."

**Hong, Wei;** foreign language & literature, from Chinese Language Council International, \$130,000, "Confucius Institute at Purdue University."

**Hooser, Stephen B;** Animal Disease Diagnostic Laboratory, from Indiana Department of Natural Resources, \$9,916, "Indiana Department of Natural Resources."

**Horton, William T; Braun, James E and Groll, Eckhard A;** civil engineering, mechanical engineering, from Herrick Foundation, \$149,600, "Organic Rankine Cycle with Solution Circuit for Waste Heat Recovery."

**Howe, Katherine M;** botany & plant pathology, from Daniel Einstein, \$20, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Marilyn W Ortt, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Todd R or Kim S Bogenschutz, \$20, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Kathleen S or James R Knight, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Charles T or Lynn S Mason Jr, \$33, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Leslie Mehrhoff, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Lauren M Smith, \$20, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Mark J Renz, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Richard or Virginia Beard Van An-del, \$30, "Organized Research (Gift Fund)."



**Howe, Katherine M;** botany & plant pathology, from Friends of Potato Creek State Park, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Amanda J Ward, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** Purdue Memorial Union, from Taltree Arboretum & Gardens, \$50, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Erik F Ulaszek, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from D E Burns, \$50, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Katherine M Howe, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Jennifer Anne Hillmer, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Elizabeth or Terrance McCloskey, \$20, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from David J Schimpf, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Carmen Chapin, or Peter a Weishampel, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Timothy J Banek, \$100, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Liberty Prairie Restorations, \$100, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Willard G & Jessie M Pierce Foundation, \$50, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Rebecca D Knowles, \$30, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Juno Solutions LLC, \$20, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Robert E or Norma J Schutzki, \$20, "Organized Research (Gift Fund)."

**Howe, Katherine M;** botany & plant pathology, from Ellen M Jacquart, \$30, "Organized Research (Gift Fund)."

**Hoyt, Ronald W;** field extension educators, from Keep Indianapolis Beautiful, Inc., \$20,640, "Project Green Schools."

**Huang, Chi-Hua;** agronomy, from Agricultural Research Service, \$31,394, "Acquisition of Goods & Services."

**Huber, Jessica E;** speech, language & hearing sciences, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$365,802, "Use of External Cueing to Treat Hypophonia in Parkinsons Disease."

**Hundley, Gregory S;** management, from University of Illinois, \$1,000, "CIBER Doctoral Symposium on Foreign Pedagogy for Business and the Professions."

**Hunt, Greg J;** entomology, from University of Georgia, \$131,250, "Sustainable Solutions to Problems Affecting Health of Managed Bees."

**Hwang, Inseok;** aeronautical & astronautical engineering, from National Science Foundation, \$80,000, "CAREER: Real-Time Hybrid Estimation and Control for Networked Embedded Hybrid Systems – Amendment 2."

**Ishii, Mamoru;** nuclear engineering, from Nuclear Regulatory Commission, \$67,384, "Task Order 7: TRACE Interfacial Area Transport Model Development – Modification 2."

**Ishii, Mamoru;** nuclear engineering, from Nuclear Regulatory Commission, \$66,772, "Task Order 8: TRACE Code Models and Correlations Development – Modification 2."

**Ivanisevic, Albena;** biomedical engineering, from National Science Foundation, \$6,250, "Surface Engineering of Gallium Nitride with Biomolecules."

**Ivanisevic, Albena;** biomedical engineering, from National Science Foundation, \$6,000, "REU Supplement."

**Jang, Soo Cheong;** hospitality & tourism, from Youlchon Foundation, \$593, "Increase of Award for Grant 204264."

**Jensen, Jakob;** communication, from Indiana State Department of Health, \$39,000, "H1N1 Flu Vaccine Evaluation."

**Jiang, Yi;** building construction & management technology, from Indiana Department of Transportation, \$149,914, "An Ecomonic Analysis Methodology for Project Evaluation and Programming, SPR-3429."

**Jiang, Yi;** building construction & management technology, from Indiana Department of Transportation, \$100,000, "Development of a Design Flexibility Toolkit, SPR-3404."

**Jiao, Dan;** electrical & computer engineering, from National Science Foundation, \$81,761, "CAREER: from O (N) to O (M): Scalable Algorithms for Large Scale Electromagnetics-Based Analysis and Design – Amendment 3."

**Jiao, Dan;** electrical & computer engineering, from Office of Naval Research, \$100,000, "Rigorous and Fast Physics-Based Co-Simulation of Device-Structure-Material Interactions in Complex, Nonlinear, and Time-Variant Mixed Signal Circuits."

**Johnson, William G;** botany & plant pathology, from Brandt Consolidated, \$2,400, "Weed Research."

**Kak, Avinash C and Park, Johnny;** electrical & computer engineering, from Air Force Academy, \$50,000, "Accurate Target Localization Using Multiple Vision-Enables Unmanned Aerial Systems."

**Karpicke, Jeffrey D;** psychological sciences, from National Science Foundation, \$200,000, "Structured Retrieval Practice to Enhance Conceptual Learning."

**Keenan, Douglas L;** field extension educators, from Drug-Free Noble County, \$667, "LEAD Noble County."

**Keenan, Douglas L;** field extension educators, from Noble REMC, \$1,000, "Noble County Health Fair."

**Kelley, Paul J;** Indiana State Chemist, from Agricultural Marketing Service, \$5,232, "Co-operative Pesticide Recordkeeping Program FY 2010."

**Key, Nicole L;** mechanical engineering, from Rolls-Royce, Inc., \$155,000, "Proposal for Axia Three Stagel Compressor Performance Research for Rolls Royce."

**Kim, Chang H and Hogenesch, Harm;** comparative pathobiology, from PHS-NIH National Institute of Diabetes and Digestive and Kidney Diseases, \$294,215, "Therapeutic Delivery of FoxP3+ T Cells to the Intestine."

**Kim, Chang H; Andrisani, Ourania M and Hogenesch, Harm;** comparative pathobiology, basic medical science, veterinary medicine-administration, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$332,083, "FoxP3+ Regulatory T Cells of Mucosal Tissues."

**Kingsbury, Bruce A;** biology – Fort Wayne campus, from DLZ Michigan, Inc., \$38,390, "Technical Services for Herptofaunal Monitoring: Eastern Box Turtle and Eastern Massasauga Rattlesnake."

**Klimeck, Gerhard**; electrical & computer engineering, from University of Notre Dame, \$310,000, "Midwest Institute for Nanoelectronics Discovery (MIND) – Amendment 2."

**Klimeck, Gerhard**; electrical & computer engineering, from Ruhr University Bochum, \$14,640, "Graduate Student Support."

**Klimeck, Gerhard**; electrical & computer engineering, from University of Wisconsin-Madison, \$25,000, "Solid State Quantum Computing Using Spin Qubits in Silicon Quantum Dots."

**Knipp, Gregory T**; industrial & physical pharmacy, from Bioanalytical Systems, Inc., \$8,545, "Testing and Development of Pharmaceuticals on the Pigturn."

**Koch, Andrew K**; Student Access, Transition and Success Program, from Office of Twenty-First Century Scholars — State of Indiana, \$267,713, "Office of Twenty-First Century Scholars West Central Indiana Scholars Support Program."

**Koch, Daphene C**; building construction & management technology, from Pepper Construction of Indiana LLC, \$3,000, "Pepper Construction of Indiana Training Proposal 2010."

**Kruczenski, Luis M**; physics, from National Science Foundation, \$85,000, "CAREER: Understanding Gauge Theories through String Theory."

**Lee, Chun-Sing G**; electrical & computer engineering, from National Science Foundation, \$163,981, "RI: Small: on Robot Motor Capability for Skill Learning – Amendment 1."

**Lee, Chun-Sing G and Lu, Yung-Hsiang**; electrical & computer engineering, from National Science Foundation, \$16,000, "REU Supplement: CRI II New: Adaptive Robotic Testbed for Wireless Sensor Networks and Autonomous Systems."

**Lee, Chun-Sing G**; electrical & computer engineering, from National Science Foundation, \$8,000, "REU: RI: Small: on Robot Motor Capability for Skill Learning."

**Lehnert, James S and Shroff, Ness**; electrical & computer engineering, from Air Force Office of Scientific Research, \$200,000, "Experimental Studies of Coal and Biomass Fuel Synthesis and Flame Characterization for Aircraft Engines."

**Lester, Terri L**; Office of Engagement, from Economic Development Administration, \$169,763, "Using Indiana's University Center Program to Stimulate Regional Competition and Collaboration, Enhance Entrepreneurship and Innovation, and Grow the Economy."

**Leung, Yuk Fai and Li, Zeran**; biological sciences, from Sigma XI, \$2,000, "The Role of Phenylthiorea on Zebrafish Eye Growth Regulation — a Model for Human Refractive Errors."

**Lin, Xiaojun**; electrical & computer engineering, from National Science Foundation, \$76,647, "Career: A Theoretical Foundation for Supporting Delay-Sensitive Applications on Wireless Networks – Amendment 3."

**Liu, Shuang**; health sciences, from Abbott Laboratories, \$21,750, "Abbott Service Agreement with Shuang Liu."

**Lloyd, Lyle L**; educational studies, from Independence Science LLC, \$18,094, "SBIR — Promoting STEM Education for Students Who Are Blind or Print Disabled."

**Lloyd, Lyle L**; educational studies, from Greater Lafayette Area Special Services, \$108,600, "GLASS 2009-11."

**Loew, Tamara F**; student health center, from Indiana Collegiate Action Network, \$3,840, "Reducing High Risk Drinking."

**Logue, Jennifer J**; field extension educators, from Whitewater Valley Remc com Trust Inc., \$500, "Family Nutrition Program."

**Lowe, Zachary E and Dukes, Jeffrey S**; forestry & natural resources, from Indiana Department of Transportation, \$161,054, "Integrated Vegetation Management (IVM) for INDOT Roadsides, SPR-3414."

**Lucht, Robert P**; energy center, from Siemens Corporate Research Inc., \$150,000, "Distributed Combustion Studies in the Purdue High-Pressure Gas Turbine Combustion Test Rig." (a Discovery Park award — Energy Center)

**Luke, Eileen M**; CERIS, from Animal Plant Health Inspection Service, \$456,809, "National Agricultural Pest Information System (NAPIS)."

**Luo, Wei**; communication — Fort Wayne campus, from Indiana Campus Compact, \$2,250, "Incorporating Service Learning into Intercultural Communication Curriculum."

**Luo, Zhao-Qing**; biological sciences, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$111,208, "Modulation of Host Membrane Trafficking by Legionella Pneumophila."

**Marshall, Maria I**; agricultural economics, from Indiana State Department of Agriculture, \$15,000, "MarketMaker Update and Expansion."

**Mathur, Aditya P**; computer science, from Winifred B. Bilsland Endowment, \$9,468, "Student Research."

**Matsuki, Kenji**; mathematics, from National Security Agency, \$38,219, "Toward a Unifying Algorithm for Resolution of Singularities in All Characteristics."

**McKee, Renee K**; youth development & agricultural education, from National 4-H Council, \$78,000, "Cargill 4-H SET."

**McLuckey, Scott A**; chemistry, from U.S. Department of Energy, \$150,000, "The Dynamics and Thermodynamics of Gaseous Macro-Ions – Modification 11."

**McLuckey, Scott A**; chemistry, from PHS-NIH National Institute of General Medical Science, \$227,933, "Instrumentation for Analysis of High Mass Biomolecules."

**Meckl, Peter H**; mechanical engineering, from Cummins, Inc., \$100,000, "Fuel Systems Fuel Injection Virtual Sensor."

**Meilan, Richard**; forestry & natural resources, from Futuragene, Inc., \$44,744, "Futuragene Inc., Match #104267."

**Meilan, Richard**; forestry & natural resources, from Indiana Arborists Association, Inc., \$150, "Samual Grober Treasurer."

**Mengiste, Tesfaye D**; botany & plant pathology, from National Science Foundation, \$160,000, "Genetic, Molecular and Biochemical Basis of Pathogen and Stress Induces Necrosis – Amendment 3."

**Mentzer, Nathan**; industrial technology, from Utah State University, \$212,907, "Exploring Engineering Design Knowing and Thinking as an Innovation in STEM Learning."

**Merkle, Charles L**; aeronautical & astronautical engineering, from IN Space, LLC, \$30,000, "Design Tools for Combustion Stability."

**Michler, Charles H**; forestry & natural resources, from the American Chestnut Foundation, \$10,000, "Voluntary Support: American Chestnut."

**Michler, Charles H**; forestry & natural resources, from Indiana Chapter American Chestnut Foundation, \$1,000, "Voluntary Support: American Chestnut."

**Minchella, Dennis J; Curtis, Jason A; Gardner, Stephanie M and Weaver, Gabriela C**; biological sciences, chemistry, from National Science Foundation, \$200,000, "An Adaptation of a Research-Based Laboratory Model to Life Sciences." (a Discovery Park award — Discovery Learning Center)

**Morgan, Mark A**; building services, from Prove IT LLC, \$9,000, "Food Science Research."

**Naughton, James F; Knapp, Deborah W and Widmer, William R**; veterinary clinical science, from American Kennel Club Health Foundation, \$12,960, "Improved Imaging to Monitor Therapy Response of Urinary Bladder Cancer Using 3-D Volume Ultrasonography."

**Nichols, David E and Watts, Val J**; medicinal chemistry & molecular pharmacology, from PHS-NIH National Institute of Mental Health, \$374,361, "Development of Potentially Selective Dopamine Agonists."

**Nyenhuis, John A**; electrical & computer engineering, from Bioness Inc., \$10,000, "Measurement and Analysis of the Bioness Implanted Lead."

**Nyenhuis, John A**; electrical & computer engineering, from Medline Industries Inc., \$10,000, "MRI Evaluation of Medline Dressing."

**Ohm, Herbert W; Anderson, Joseph M; Knobloch, Neil A; Tuinstra, Mitchell R; Wise, Kiersten A; Woeste, Keith E; Weil, Clifford F; Doerge, Rebecca W; Jackson, Scott A; McCann, Maureen C; Williams, Christie E; Ejeta, Gebisa; Mickelbart, Michael V and Rocheford, Torbert R**; agronomy, youth development & agricultural education, botany & plant pathology, forestry & natural resources, statistics, biological sciences, entomology, horticulture & landscape architecture, from National Institute of Food & Agriculture, \$497,672, "Partnership for Research and Education in Plant Breeding and Genetics at Purdue University."

**Olek, Jan**; civil engineering, from Clemson University, \$155,678, "Performance of Concrete in the Presence of Airfield Pavement Deicers and Identification of Induced Distress Mechanism."

**Olszewski, Lynn T and Oconnell, Kathleen L**; nursing – Calumet campus, Vice Chancellor of Academic Affairs – Fort Wayne campus, from State Department of Health, \$10,157, "Northwest and Northeast Indiana AHEC Training Activities for PROMISE Project."

**Ouyang, Zheng and Cooks, Robert G**; biomedical engineering, chemistry, from AMIPurdue, \$706,927, "Therapeutic Drug Monitoring - Point of Care." (a Discovery Park award — Center for Analytical Instrumentation Development)

**Park, Kinam and Cheng, Ji-Xin**; biomedical engineering, from PHS-CDC Centers for Disease Control, \$305,637, "Adaptable Polymer Micelles for Tumor Targeting."

**Pendleton, Kyle A**; Dean of Students, from Coalition for a Drug Free Tippecanoe County, \$1,500, "Fraternity and Sorority Server Education and Training Program."

**Peroulis, Dimitrios**; electrical and computer engineering, from Rockwell Collins, \$100,000, "Z-Fab Filter." (a Discovery Park award — Birck Nanotechnology Center)

**Peroulis, Dimitrios**; electrical and computer engineering, from National Science Foundation, \$10,000, "CAREER: Liquid Radio Frequency Electronics." (a Discovery Park award — Birck Nanotechnology Center)

**Pinal, Rodolfo**; industrial & physical pharmacy, from Catalent Pharma Solutions, \$35,000, "CPPR."

**Pizlo, Zygmunt**; psychological sciences, from Air Force Office of Scientific Research, \$200,000, "Robotic Navigation Emulating Human Performance: Research Plan."

**Powley, Terry L and Phillips, Robert J**; psychological sciences, from PHS-NIH National Institute of Diabetes and Digestive and Kidney Diseases, \$320,822, "Gastrointestinal Tract Innervation: Patterns of Aging."

**Prezzi, Monica**; civil engineering, from Indiana Department of Transportation, \$63,181, "Use of Fly Ash-Soil-Steel Slag Mixtures in Subgrade Applications, SPR-3477."

**Proctor, Robert W**; psychological sciences, from University of Colorado, \$40,036, "Training Knowledge and Skills for the Networked Battlefield:."

**Prokopy, Linda S**; forestry & natural resources, from University of Wisconsin, \$4,000, "Understanding How Midwestern Agriculture Will Adapt to Climate Change: Proposal Development Meeting Proposal."

**Purcell, Lindsey A**; forestry & natural resources, from Indiana Department of Natural Resources, \$600, "2010 Arbor Day Education Program."

**Radcliffe, John S**; animal sciences, from Alltech Biotechnology Center, \$8,000, "Alltech Biotechnology Center."

**Ramirez, Julio A**; civil engineering, from University of California-Berkeley, \$15,000, "Supplement to Subaward SA5543-21642 NEESR-GC: Mitigation of Collapse Risk in Vulnerable Concrete Buildings."

**Ratliff, Timothy L**; comparative pathobiology, from Walther Cancer Institute Foundation Inc., \$58,500, "Molecular Discovery and Evaluation Shared Resource."

**Reicher, Zachary J**; agronomy, from Midwest Regional Turf Foundation, \$8,750, "Turfgrass Research."

**Reklaitis, Gintaras V**; chemical engineering, from National Institute for Phrmctcl Technology & Education, \$78,830, "NIPTE Subaward Amendment to Prime Award No. HHSF223200810029C, Subaward PU0001."

**Restrepo, Maria H**; field extension educators, from Indiana State Department of Agriculture, \$7,274, "Organic Specialty Vegetable Production Research with a Focus on Fungicide Use in Curcubits."

**Rhodes, Olin E**; forestry & natural resources, from Animal Plant Health Inspection Service, \$26,190, "Use of Trapping Point Transect and Spatially Explicit Capture-Recapture to Estimate the Density of Raccoons and Using Spatial Data to Increase Trap-Based Detection for Raccoons."

**Richert, Brian T**; animal sciences, from Chemgen Corp., \$4,000, "Swine Research."

**Richmond, Douglas S**; entomology, from United States Golf Association, \$5,000, "Turfgrass Entomology Research."

**Ritchie, Kenneth P and Wanner, Barry L**; physics, biological sciences, from PHS-NIH National Institute of General Medical Science, \$276,512, "Single Molecule Study of Receptor Localization in Cellular Membranes."

**Rogers, Marcus K**; computer & information technology, from University of Central Florida, \$166,395, "Computer Forensics Tool Testing."

**Rogers, Marcus K**; computer & information technology, from Indiana State Police, \$10,000, "Law Enforcement Training."

**Rokhinson, Leonid P**; physics, from Army Research Office, \$245,200, "Digital Control of Exchange Interaction in a Spin-Based Silicon Quantum Computer – Modification 1."

**Rossmann, Michael G**; biological sciences, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$412,359, "Structure of Function of Icosahedral Viruses."

**Ruan, Xiulin and Fisher, Timothy**; mechanical engineering, from Air Force Office of Scientific Research, \$145,482, "Optically Modulated Radiative Surface Coatings Using Ordered Array of Vertical Carbon Nanotubes." (a Discovery Park award — Birck Nanotechnology Center)

**Ruhl, Gail E**; botany & plant pathology, from NW Indiana Nursery & Landscape Association Inc., \$125, "Indiana Nursery and Landscape Association."



**Sadeghi, Farshid**; mechanical engineering, from Honeywell Inc., \$90,000, "Tribology Lab Research."

**Sadeghi, Farshid**; mechanical engineering, from Kaydon Corp-Bearings Division, \$75,000, "Tribology Lab Research."

**Saha, Shubin K**; horticulture & landscape architecture, from Abbott & Cobb Inc., \$1,500, "Multi-Sponsored Gift Account."

**Saha, Shubin K**; horticulture & landscape architecture, from Harris Moran Seed Company, \$2,000, "Multi-Sponsored Gift Account."

**Saha, Shubin K**; horticulture & landscape architecture, from Indiana Vegetable Growers Association, \$1,000, "Multi-Sponsored Gift Account."

**Salt, David E**; horticulture and landscape architecture, from Dartmouth College, \$2,456, "The Ionome." (a Discovery Park award — Bindley Bioscience Center)

**Scharenberg, Rolf P**; **Hirsch, Andrew S**; **Wang, Fuqiang** and **Xie, Wei**; physics, from U.S. Department of Energy, \$670,000, "The Experimental Study of the Phase Structure of Hadronic Matter FY2010."

**Schendel, Dan E**; management, from Strategic Management Society, \$2,206, "Strategic Management Society."

**Schendel, Dan E**; management, from Strategic Management Society, \$2,190, "Strategic Management Society."

**Schneider, John A**; Vice President for Research, from Indiana Economic Development Corporation, \$125,000, "Indiana HPC Technical Assistance Program."

**Schneider, Steven P**; aeronautical & astronautical engineering, from Air Force Office of Scientific Research, \$100,000, "Hypersonic Laminar-Turbulent Transition on Slender Cones at Zero Angle of Attack."

**Schoenlein, William E** and **Van Alstine, William G**; biomedical engineering, comparative pathobiology, from Medicine Institute, Incorporated, \$19,954, "Prototype Vascular Stent Testing — Study CI-INFB Grant 203133 Amendment/Continuation 18."

**Schoenlein, William E**; biomedical engineering, from Medicine Institute, Incorporated, \$11,077, "Osteogenic Repair of Calvarial Defects -Study: CG-BONE."

**Schweickert, Richard** and **Dzhafarov, Ehtibar N**; psychological sciences, from Air Force Office of Scientific Research, \$199,375, "Causal Networks with Selectively Influenced Components."

**Shahidi, Freydoon**; mathematics, from National Science Foundation, \$82,511, "Problems in the Theory of Automorphic Forms and L-Functions — Amendment 3."

**Shalaev, Vladimir M**; electrical and computer engineering, from Army Research Office, \$1,052,215, "Tunable and Reconfigurable Optical Negative-Index Materials with Low Losses." (a Discovery Park award — Birck Nanotechnology Center)

**Shalaev, Vladimir M**; electrical and computer engineering, from University of Central Florida, \$146,000, "Multidisciplinary University Research Initiative: Engineered Multifunctional Nanophotonic Materials for Ultrafast Optical Switching." (a Discovery Park award — Birck Nanotechnology Center)

**Shaver, Gregory M**; mechanical engineering, from Cummins, Inc., \$100,000, "Piezoelectric Fuel Injection System: Measurement, Modeling, and Control."

**Shen, Jie**; mathematics, from Air Force Office of Scientific Research, \$101,574, "Solving Boltzmann and Fokker-Planck Equations Using Sparse Representation."

**Shipsey, Ian P**; physics, from U.S. Department of Energy, \$1,903,500, "Experimental and Theoretical High Energy Physics Program — Modification 44."

**Shukle, Richard H**; entomology, from Agricultural Research Service, \$2,500, "Micro-Array Analysis."

**Smith, Anne**; **Weber-Fox, Christine M**; **Goffman, Lisa A** and **Zelaznik, Howard N**; speech, language & hearing sciences, health & kinesiology, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$582,833, "Physiological Correlates of Stuttering."

**Smith, Mjt**; graduate school administration, from National Science Foundation, \$2,000, "09/10 NSF Graduate Fellowship Program."

**Smith, Richard S**; food science, from Canaday, Brett a & Agnew, Tia M, \$1,000, "Sensory Evaluation Research."

**Smith, Richard S**; food science, from Insight Beverages, \$1,600, "Sensory Evaluation Research."

**Smith, Richard S**; food science, from Maplehurst Bakeries Inc., \$2,000, "Sensory Evaluation Research."

**Sojka, Paul E** and **Lucht, Robert P**; mechanical engineering, from Cummins Engine Company Inc., \$72,475, "Diagnostic Testing of a Transonic Injection System in a Super-Critical Diesel Fuel Environment."

**Son, Steven F**; mechanical engineering, from Massachusetts Institute of Technology, \$24,000, "Blast Testing of Novel Helmet Materials."

**Spafford, Eugene H**; computer science, from Lockheed Martin Corp., \$60,000, "CERIAS Voluntary Support."

**Spafford, Eugene H**; computer science, from IBM, \$60,000, "Cerias Voluntary Support."

**Stach, Eric A**; materials engineering, from Honda, \$105,000, "Honda Research Collaboration." (a Discovery Park award — Birck Nanotechnology Center)

**Stefanov, Plamen D**; mathematics, from National Science Foundation, \$83,569, "Scattering and Traveltime Tomography — Amendment 2."

**Stenger, Marcia A**; field extension educators, from Citizens for a Drug Free Ohio County, \$800, "DUMP (Disposal of Unwanted Medicines)."

**Stuart, Jeffrey J**; entomology, from Fred Gould, \$142, "Multi-Sponsor."

**Sullivan, John P**; aeronautical & astronautical engineering, from Cummins Business Services, \$50,000, "PLM Membership 4/1/10-3/31/11."

**Sun, Dengfeng**; aeronautical & astronautical engineering, from University of California-Berkeley, \$78,998, "A Unified Approach to Strategic Models and Performance Evaluation for Traffic Flow Management."

**Swihart, Robert K**; forestry & natural resources, from Indiana Arborists Association, Inc., \$3,000, "Indiana Arborists Association, Inc."

**Swihart, Robert K**; forestry & natural resources, from Walnut Council, \$17,473, "An Expanded Relationship Between the Walnut Council and Purdue University."

**Swihart, Robert K**; forestry & natural resources, from Indiana Forestry & Woodland Owners Association, \$17,473, "Continuing an Expanded Relationship Between the Indiana Forestry and Woodland Owners Association and Purdue University."

**Talbert, Brian A;** youth development & agricultural education, from Indiana Department of Education, \$9,000, "Agricultural Education Assessment System."

**Tao, Bernard Y;** agricultural & biological engineering, from Indiana Corn Marketing Council, \$10,000, "Student Corn Products Innovation Competition 2008-09."

**Topp, Elizabeth M;** industrial & physical pharmacy, from PHS-NIH National Institute of General Medical Science, \$276,543, "Protein Aggregation in Amorphous Solids."

**Towns, Marcy H;** chemistry, from National Science Foundation, \$67,193, "Collaborative Research: a Conference to Promote the Integration of Research on Undergraduate Mathematics, Physics and Chemistry Education."

**Turco, Ronald F; Whitford, Fred; Sepulveda, Maria S and Rao, P Suresh C;** agronomy, botany & plant pathology, forestry & natural resources, civil engineering, from Geological Survey, U.S., \$92,335, "FY 2010 IWRRC General Project."

**Tyner, Wallace E;** agricultural economics, from U.S. Department of Energy, \$216,134, "Global Economic and Environmental Impacts of Increased Bioenergy Production – Modification 2."

**Tyner, Wallace E; Brouder, Sylvie M and Chaubey, Indrajeet;** agricultural economics, agronomy, agricultural & biological engineering, from National Institute of Food & Agriculture, \$174,966, "Integrated Economic and Technical Analysis of Sustainable Biomass Energy Systems."

**Varma, Amit H;** civil engineering, from Indiana Department of Transportation, \$35,000, "Slip Form Barrier in Lieu of Moment Slabs for Concrete Barrier, SPR-3406."

**Varma, Amit H;** civil engineering, from Westinghouse Electric Corporation, \$335,500, "Large-Scale Testing of SC Shield Building Components for Nuclear Power Plants."

**Varma, Amit H and Connor, Robert J;** civil engineering, from University of Pittsburgh, \$50,695, "Effects of Fire Damage on the Structural Properties of Steel Bridge Elements."

**Visalli, Robert J;** biology – Fort Wayne campus, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$220,500, "Varicella-Zoster Virus Encapsidation Proteins."

**Vyn, Tony J;** agronomy, from University of Illinois, \$500, "Agricultural Cropping Systems."

**Vyn, Tony J;** agronomy, from Brandt Consolidated, \$200, "Agricultural Cropping Systems."

**Wakenell, Patricia;** comparative pathobiology, from Immunobiosciences Inc., \$600, "Voluntary Support."

**Wang, Nien-Hwa L;** chemical engineering, from Argonne National Laboratory, \$1,143, "Design, Scale Up, and Optimization of Column Processes for the Recovery of Medical Isotope – Modification 5."

**Watts, Val J and Nichols, David E;** medicinal chemistry & molecular pharmacology, from PHS-NIH National Institute of Mental Health, \$186,786, "Development of Allosteric Modulators of D1 Dopamine Receptors."

**Weaver, Connie M;** foods & nutrition, from Mount Sinai School of Medicine, \$46,546, "Protective Roles of Grape Derived Polyphenols in Alzheimers Disease."

**Weaver, Connie M;** foods & nutrition, from Delavau LLC, \$6,000, "Corporate Affiliates Fund."

**Weaver, Connie M;** foods & nutrition, from Pharmavite, \$6,000, "Corporate Affiliates Fund."

**Weaver, Connie M; Ferruzzi, Mario; Janle, Elsa M; Adamec, Jiri and Raftery, M D;** foods & nutrition, food science, Bindley Bioscience Center, chemistry, from Mount Sinai School of Medicine, \$402,847, "Protective Roles of Grape-Derived Polyphenols in Alzheimers Disease."

**Weaver, Connie M;** foods & nutrition, from Conagra Food Ingredients Co., \$6,000, "Corporate Affiliates Fund."

**Wei, Alexander;** chemistry, from Purdue Research Foundation, \$500, "Multi Sponsor Voluntary Support."

**Weiss, William J and Liu, Judy;** civil engineering, from Propex Inc., \$9,950, "Testing Plastic Shrinkage Tendency for Fiber Reinforced Concrete."

**Weller, Stephen C and Lowenberg-Deboer, James M;** horticulture & landscape architecture, international programs in agriculture, from Indiana University Purdue University at Indianapolis, \$78,559, "AMPATH Project – Amendment 2."

**Weller, Stephen C;** horticulture & landscape architecture, from Monsanto Agricultural Products Co., \$65,000, "Assessing Long-Term Viability of Glyphosate-Based Technology as a Foundation for Cropping Systems."

**Whitford, Fred;** botany & plant pathology, from Indiana Arborists Association, Inc., \$150, "Purdue Pesticide Programs."

**Whitford, Fred;** botany & plant pathology, from Foundation for Agronomic Research, \$200, "Purdue Pesticide Programs."

**Whitford, Fred;** botany & plant pathology, from Northwest Indiana Nursery & Landscape Association, Inc., \$100, "Purdue Pesticide Programs."

**Wilker, Jonathan J;** chemistry, from National Science Foundation, \$150,000, "Metal-Mediated Protein Cross Linking in the Formation of Marine Mussel Adhesive."

**Williams, Sharon R;** anthropology, from World Health Organization, \$40,873, "World Health Organization Study of Global Aging and Adult Health (SAGE)."

**Witt, Jessica K;** psychological sciences, from National Science Foundation, \$114,320, "Actions Effect on Perception."

**Xiu, Dongbin;** mathematics, from Air Force Office of Scientific Research, \$59,518, "Development of Theoretical Framework for Uncertainty-Based Design Problems."

**Xu, Dongyan;** computer science, from Docomo Communications Labs USA Inc., \$68,360, "Towards Openflow-Based Virtual Networked Infrastructures in the Cloud."

**Xu, Dongyan;** computer science, from National Science Foundation, \$71,434, "CAREER: Towards Virtual Distributed Environments in a Shared Distributed Infrastructure – Amendment 4."

**Xu, Dongyan and Spafford, Eugene H;** computer science, from Air Force Office of Scientific Research, \$112,500, "An Integrated Architecture for Automatic Indication, Avoidance and Profiling of Kernel Rootkit Attacks."

**Xu, Jin-Rong;** botany & plant pathology, from Agricultural Research Service, \$29,268, "Genes Regulated by the Gpmk1 Pathway and Pathogenesis in *Fusarium Graminearum*."

**Xu, Xianfan; Yang, Chen; Qi, Minghao; Stach, Eric A and Reifenberger, Ronald G;** mechanical engineering, chemistry, electrical and computer engineering, materials engineering, physics, from Space and Naval Warfare Systems Center, \$756,133, "Nanoscale Optical Antenna Array for Controlled, Massively Parallel Manufacturing of Nanowire Devices – Modification 2." (a Discovery Park award — Birck Nanotechnology Center)



**Xu, Xianfan** and **Fisher, Timothy**; mechanical engineering, from Universal Technology Corporation, \$38,762, “Photoacoustic Measurement of Thermal Conductance at Low Temperatures.” (a Discovery Park award — Birck Nanotechnology Center)

**Xu, Xianfan**; mechanical engineering, from Air Force Office of Scientific Research, \$125,000, “Coherent Control of Thermal Transport.” (a Discovery Park award — Birck Nanotechnology Center)

**Yaninek, John S**; entomology, from Indiana Department of Natural Resources, \$62,668, “CAPS 2009 Second Half.”

**Yeo, Yoon; Mohammed, Sulma I and Knipp, Gregory T**; industrial & physical pharmacy, comparative pathobiology, from PHS-NIH National Cancer Institute, \$197,922, “Peritumorally Transformable Nanoparticles for Intraperitoneal Chemotherapy of Ovarian Cancer.”

**Zheng, Wei** and **Pushkar, Yulia N**; health sciences, physics, from PHS-NIH National Institute of Environment Health Science, \$339,784, “Choroid Plexus as a Target in Metal-Induced Neurotoxicity.”

**Zhou, Chenn Q**; mechanical engineering, from Falk PLI Engineering & Surveying Inc., \$1,500, “Development of 3-D Modeling for a Presentation.”

**Zhou, Chenn Q**; mechanical engineering, from BP Whiting Refinery, \$6,000, “Evaluation of Cooling Tower 7 & 8 Pumps Suction for Vortex Formation for Whiting Refinery Modernization Project.”

**Zhou, Daoguo**; biological sciences, from National Institutes of Health, \$111,358, “Role of E3 Ubiquitin Ligase in Salmonella-Induced Inflammation.”

**Zwier, Timothy S**; chemistry, from American Chemical Society, \$136,080, “The Journal of Physical Chemistry.”

**Zwier, Timothy S**; chemistry, from DOE-ER-Basic Energy Sciences Chemistry, \$250,000, “Isomer-Specific Spectroscopy and Isomerization in Aromatic Fuels.” □

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