

# DIMENSIONS *of* DISCOVERY

## Sponsored Program Awards

March 2017

### Abbott to Bugusu

**Abbott, Angela R; Bailey, Regan K; Eicher-Miller, Heather A and Savaiano, Dennis A;** foods & nutrition, from Indiana Family and Social Services Administration, \$6,154,723, “Snap ED/FNP Project FY 2017 (Snap ED/ FNP Project FY 2017 (#018261)).”

**Abraham, Dulcy M;** civil engineering, from Indiana Department of Transportation, \$80,500, “Outsourcing of Laboratory Testing and Inspection Activities at State Highway Agencies: Synthesis of Current Practices.”

**Abrahamson, Kathleen A and Arling, Gregory W;** nursing, from University of Minnesota, \$24,325, “Home and Community Based Services Performance-Based Incentive Payment Program.”

**Ajuwon, Kolapo;** animal sciences, from JBS United Inc, \$25,000, “Nutritional Physiology Program.”

**Ajuwon, Kolapo;** animal sciences, from Biovet SA, \$35,422, “Use of Alquerat Liver Protector and Mycotoxin Binder to Optimize Growth and Health of Pigs.”

**Allebach, Jan P;** electrical & computer engineering, from Poshmark Inc, \$60,000, “Automatic Tools for Evaluating and Improving Quality of Fashion Photographs.”

**Allebach, Jan P;** electrical & computer engineering, from Hewlett Packard, \$30,000, “Development of Novel Halftoning Algorithms for HP Scitex Inkjet Machines.”

**Allebach, Jan P;** electrical & computer engineering, from Hewlett Packard, \$75,000, “Training-Based Halftoning Algorithms for Better Halftone Image Quality for the HP Digital Press Phase 12.”

**Ardekani, Arezoo M and Vlachos, Pavlos;** mechanical engineering, from Pioneer Oil Company, \$109,850, “Numerical Simulation of Chemical Enhanced-Oil-Recovery.”

**Bagchi, Saurabh;** electrical & computer engineering, from Lawrence Livermore National Laboratory, \$75,000, “Efficient Launching of GPU Kernels in the Raja Programming Model.”

**Basaran, Osman A;** chemical engineering, from ExxonMobil Chemical Company, \$25,000, “Purdue Process Safety and Assurance Center(P2SAC).”

**Benes, Bedrich;** computer graphics technology, from Arizona State University, \$79,234, “Solution for Predictive Physical Modeling in CdTe and Other Thin-Film PV Technologies.”

**Bhunja, Arun K;** food science, from Hemocleanse, Inc., \$2,500, “Shuttleworth North America.”

**Bobet, Antonio;** civil engineering, from Indiana Department of Transportation, \$144,834, “Subgrade Stabilization Alternatives.”

**Bolin, Jeffrey T;** Executive Vice President for Research, from Purdue University, \$1,561,032, “16-17 Evprp Laboratory & University Core Facilities Research Equipment Program.”

**Bolin, Jeffrey T;** Executive Vice President for Research, from Purdue University, \$244,961, “Purr: Purdue University Research Repository.”

**Boltasseva, Alexandra and Shalae, Vladimir M;** electrical & computer engineering, from Office of Naval Research, \$174,996, “Optical Characterization System for Novel on-Chip Nanoscale Light Sources.” (a Discovery Park award – Birck Nanotechnology Center)

**Boor, Brandon E;** civil engineering, from America Soc Heating Refrig/Air Cond Engineering Inc, \$140,000, “Reproducing a Representative Urban Atmospheric Aerosol Distribution at High Concentration in the Laboratory for Air Filter Ageing to Be Used In ASHRAE GPC 35P for Determining the Energy Consumption.”

**Boudouris, Bryan W;** chemical engineering, from Air Force Office of Scientific Research, \$199,521, “Manipulating Excited State Energy Flow in Organic Systems Using Radical Polymers.”

**Bouman, Charles A;** electrical & computer engineering, from UT-Battelle LLC, \$60,000, “Ultrasonic Phased Arrays and Interactive Reflectivity Tomography for Nondestructive Inspection of Injection and Production Wells in Geothermal Energy Systems.”

**Bouman, Charles A;** electrical & computer engineering, from Universal Technology Corporation, \$60,936, “The Use of Physics Modeling for Fusion and Inversion of Image Data at Multiple Acquisition Resolutions, Amendment 1; Grant 108456.”

**Braun, James E;** mechanical engineering, from Siemens Corporate Research Inc., \$50,000, “Center for High Performance Building Consortium.”

**Braun, James E;** civil engineering, from National Renewable Energy Laboratory, \$50,000, “An Open, Cloud-Based Platform for Whole-Building Fault Detection and Diagnostics.”

**Bugusu, Betty A; Hamaker, Bruce R; Lowenberg-Deboer, James M; Nielsen, S S; Bauchet, Jonathan J; Ileleji, Klein; Ricker-Gilbert, Jacob E and Woloshuk, Charles P;** food science, agricultural economics, consumer science & retail, agricultural & biological engineering, botany & plant pathology, from Agency for International Development, \$950,000, “Feed the Future Innovation Lab for Food Processing and Post-Harvest Handling.”

## Caffee to Fisher

**Caffee, Marc W;** physics, from U.S. Geological Survey, \$13,080, "Burial Chronologies in Central Washington State."

**Cakmak, Mukerrem;** mechanical engineering, from Hitachi Chemical Research Center, Inc, \$10,000, "Filler Orientation Project." (a Discovery Park award – Birck Nanotechnology Center)

**Caldwell, Barrett S;** industrial engineering, from National Aeronautics and Space Administration, \$58,871, "Purdue Support of Basalt Program."

**Carpita, Nicholas C;** botany & plant pathology, from DOE-ER-Basic Energy Sciences Chemistry, \$7,160, "Support for the 253rd ACS Symposium on Cellulose Structure and Biosynthesis."

**Casteel, Shaun N;** agronomy, from Indiana Soybean Alliance, \$5,000, "USB Double Crop Initiative."

**Catlin, Ann C;** ITaP Research Computing (RCAC), from National Institute for Pharmaceutical Technology and Education, \$120,000, "NIPTE-FD Excipient Risk Assessment Database."

**Chandramouli, Magesh and Jin, Ge;** computer information technology – Calumet campus, from National Science Foundation, \$881,425, "Maneuver: Manufacturing Education Using Virtual Environment Resources."

**Chandrasekar, Srinivasan and Trumble, Kevin P;** industrial engineering, materials engineering, from Army Research Office, \$92,000, "Fluid-Like Flow, Surface Instabilities and Folding in Metal Plasticity and Wear."

**Chen, Weinong W;** aeronautical & astronautical engineering, from Army Research Office, \$62,222, "STIR: Impact Energy Dissipation through Force Chain Interruption."

**Choi, Jong Hyun;** mechanical engineering, from National Science Foundation, \$10,000, "UNS:Visible/Near-Infrared Sub-Diffraction Imaging of DNA Walkers."

**Chopra, Gaurav;** Cancer Research Center, from Purdue University, \$10,000, "Multitarget Design and Synthesis of Potent Leads to Combat Castration Resistant Prostate Cancer."

**Claridge, Shelley A;** chemistry, from National Science Foundation, \$405,000, "Faculty Early Career Development (CAREER): Standing, Lying, and Sitting: Restructuring Intermolecular Forces in Molecular Monolayers."

**Cole, Connie S;** health & human services – Fort Wayne campus, from Indiana Family Health Council, \$8,000, "Lafayette Street Family Health Clinic Title X."

**Cooks, Robert G;** chemistry, from Merck Sharp & Dohme Corp, \$40,000, "Accelerated Degradation of Pharmaceuticals and Their Degradation Product Monitoring by Mass Spectrometry." (a Discovery Park award – Bindley Bioscience Center)

**Cooks, Robert G;** chemistry, from Merck Sharp & Dohme Corp, \$40,000, "New Ion Trap Experiments and Their Applications." (a Discovery Park award – Bindley Bioscience Center)

**Croney, Candace C;** comparative pathobiology, from Center for Canine Welfare, \$5,000, "Center for Animal Welfare Science."

**Csonka, Leslie N;** biological sciences, from National Science Foundation, \$233,004, "The Role of Mg<sup>2+</sup> Transport in Bacterial Heat Tolerance."

**Culurciello, Eugenio;** biomedical engineering, from Office of Naval Research, \$63,185, "Efficient Hardware-Acceleration for Sparse-Matrix Computation."

**Davisson, Vincent J;** medicinal chemistry & molecular pharmacology, from Purdue University, \$37,500, "Office of the Vice President for Research (OVPR) Bridge Funding."

**Deering, Amanda J;** food science, from Beakkm Environmental LLC, \$1,800, "Multi-Sponsored Gift Account."

**Doudareva, Natalia and Morgan, John A;** biochemistry, chemical engineering, from National Science Foundation, \$217,362, "Deciphering Molecular Mechanisms Involved in Plant Volatile Emission."

**Egel, Daniel S;** botany & plant pathology, from Holganix, LLC, \$10,500, "Potassium Management."

**Engelberth, Abigail S; Huang, Jen-Yi; Suwal, Shyam K and Redcorn, Raymond M;** agricultural & biological engineering, food science, from Grow Plastics, \$994, "Electrodialytic Removal of Lactic Acid from Pickle Juice."

**Farkas, Brian E;** food science, from Paul F & Sara A. Williams III, \$30, "Multi-Sponsored Gift Fermentation."

**Fernandez-Juricic, Esteban;** biological sciences, from National Fish and Wildlife Foundation, \$122,596, "Laser Technology for Seabird Bycatch Prevention in Commercial Fisheries."

**Fernandez-Juricic, Esteban;** biological sciences, from Packard, David and Lucile Foundation, \$75,000, "Effects of Lasers on Seabirds: Implications for Bycatch Prevention."

**Fernandez-Juricic, Esteban;** biological sciences, from National Fish and Wildlife Foundation, \$57,369, "Laser Technology for Seabird Bycatch Prevention in Commercial Fisheries."

**Fernandez-Juricic, Esteban;** biological sciences, from Innosense LLC, \$44,062, "Mosaic Reflective Surfaces as Avian Collision Deterrents."

**Field, William E;** agricultural & biological engineering, from Sigma Alpha, \$878, "Breaking New Ground."

**Field, William E;** agricultural & biological engineering, from Monsanto Company, \$10,000, "Breaking New Ground."

**Field, William E;** agricultural & biological engineering, from First Farmers Bank & Trust, \$550, "Breaking New Ground."

**Figueiredo, Marxa L;** basic medical science, from PHS-NIH National Cancer Institute, \$315,579, "Disrupting Tumor/Bone Malignant Interactions with Multifunctional Cytokine Sonodelivery."

**Filley, Timothy R and Chaubey, Indrajeet;** earth & atmospheric sciences, from University of Illinois at Champaign-Urbana, \$74,281, "Critical Zone Observatory for Intensively Managed Landscapes (Iml-Czo); Amendment 4; (Grant 106743)."

**Fineran, Kerrie R;** professional studies – Fort Wayne campus, from Lilly Endowment Inc., \$20,000, "School Counselor Preparation Enhancement Planning Grant."

**Fisher, Timothy; Heister, Stephen D and Shih, Tom I;** mechanical engineering, aeronautical & astronautical engineering, from Air Force Research Laboratory, \$100,000, "Center for Integrated Thermal Management of Aerospace Vehicles; Modification 13; Grant 106951."

## French to Heister

**French, Richard M;** engineering technology, from Sinclair Community College, \$21,166, “Lead Guitars in Science, Technology, Engineering & Mathematics (STEM).”

**Garcia, R Edwin;** materials engineering, from Toyota Res Institute of North America, \$750,000, “D3BATT: Data-Driven Design of Li-Ion Batteries.”

**Garimella, Suresh V;** mechanical engineering, from Ford Motor Company, \$30,000, “Cooling Technologies Research Center (CTRC) Membership – Memo Match for 106029.”

**Garimella, Suresh V;** mechanical engineering, from Qualcomm Technologies Inc, \$30,000, “Cooling Technologies Research Center (CTRC) Membership - Memo Match for 106029.”

**Garimella, Suresh V;** mechanical engineering, from Tenneco Inc, \$30,000, “Cooling Technologies Research Center (CTRC) Membership – Memo Match for 106029.”

**Garimella, Suresh V;** mechanical engineering, from Kinley Trust, \$41,455, “2016 Non-Lab Proposals Tier 2 Funded.”

**Giannios, Dimitrios;** physics, from Research Corporation for Science Advancement, \$30,000, “Identifying the Origin of the Extreme Scattering Events.”

**Gkritza, Konstantina and Fricker, Jon D;** agricultural & biological engineering, civil engineering, from Indiana Department of Transportation, \$165,375, “Economic Development Impact of Corridor Improvements and Preservation Projects.”

**Gletsu-Miller, Nana A;** foods & nutrition, from Cura Global Health, Inc, \$5,000, “Nana Gletsu-Miller.”

**Goldenstein, Christopher S;** mechanical engineering, from Defense Threat Reduction Agency, \$49,699, “Wavelength-Modulation Absorption Spectroscopy for Mhz Thermometry & Species Sensing in Optically Dense Fireballs.”

**Gray, Colin M;** computer graphics technology, from National Science Foundation, \$167,290, “CRII: CHS: Dark Patterns, Pragmatist Ethics, and User Experience.”

**Groll, Eckhard A;** mechanical engineering, from Bristol Compressors, Inc., \$19,112, “Herrick Labs Donation.”

**Groll, Eckhard A;** mechanical engineering, from Whirlpool Corp, \$50,000, “Multi Sponsor Groll.”

**Guan, Wenjing;** horticulture & landscape architecture, from Siegers Seed Co, \$350, “Chris Gunter General Research Activities.”

**Guan, Wenjing;** horticulture & landscape architecture, from University of Minnesota, \$29,791, “Using Grafting Technology to Enhance Greenhouse Cucumber Production in High Tunnels.”

**Haddock, John E;** civil engineering, from Indiana Department of Transportation, \$927,638, “2016- 2017 Local Technical Assistance Program Work Plan & Budget.”

**Haddock, John E;** civil engineering, from Indiana Department of Transportation, \$251,250, “Management of the Hazard Elimination Program for Existing L Roads and Street (Helpers) Program for Local Public Agencies.”

**Hamaker, Bruce R;** food science, from Nestle, \$467,913, “The Impact-of Alpha-Glucan Fine Structure on Rate of Glucose Release During Digestion.”

**Hamaker, Bruce R;** food science, from Mondelez Global LLC, \$128,608, “Study and Identification of Starch Sources with Improved Slowly Digestible Property in Intermediate Moisture Systems –Year 2.”

**Han, Bumsoo and Konieczny, Stephen F;** Cancer Research Center, from Purdue University, \$500, “Confocal Microscopic Imaging of Tumor-Stroma Interactions Using in Vitro Pancreatic Cancer Model.”

**Han, Bumsoo and Konieczny, Stephen F;** Cancer Research Center, from Purdue University, \$30,000, “Genotype-Specific Cancer Associated Fibroblast Mechanics of Pancreatic Cancer.”

**Harris, Jason T; Bean, Robert S; Hoffman, Aaron M and Shimko, Keith L;** health sciences, nuclear engineering, political science, from Pacific Northwest National Laboratory, \$99,982, “Nuclear Security Education Program Expansion to Purdue University – Phase I.”

**Harris, Jason T;** health sciences, from Stanton Foundation, \$50,000, “Development of New Nuclear Security Course at Purdue University.”

**Haynes, Kyle E;** political science, from Purdue University, \$12,129, “Offsetting Uncertainty: Interstate Signaling with Two-Sided Incomplete Information.”

**Heeg, Marlene O;** pharmacy – administration, from Celgene Corporation, \$25,000, “2017 National Educational Initiative: the Annual Review of Therapeutics & Rheumatology for Rheumatology State Societies.”

**Heeg, Marlene O;** pharmacy – administration, from Boehringer Ingelheim Pharmaceutical Inc, \$115,000, “Dialogue with the Experts: Strategies for Improving Interstitial Lung Disease Diagnosis and Treatment.”

**Heeg, Marlene O;** pharmacy – administration, from Takeda Pharmaceutical International Inc US Region, \$200,000, “Mechanistic Approaches to Ibd: Current & Future Management Strategies a 2016 - 2017 Gihf National Alliance Education Initiative.”

**Heeg, Marlene O;** pharmacy – administration, from Amgen, Inc, \$60,000, “Evidence in Practice: The Evolving Migraine Paradigm.”

**Heeg, Marlene O;** pharmacy – administration, from Gilead Sciences, Inc., \$434,550, “Bridge HCV: Building Bridges to Reach People Who Inject Drugs with the Goal to Eradicate HCV.”

**Heister, Stephen D; Gore, Jay P; Pourpoint, Timothee L and Scalo, Carlo;** aeronautical & astronautical engineering, mechanical engineering, from Rolls-Royce, Inc., \$380,000, “University Technology Center in Advanced Thermal Management Systems at Purdue University.”

**Heister, Stephen D;** aeronautical & astronautical engineering, from Hammond Group, Inc, \$33,921, “Design and Fabrication of Novel Lead Oxide Combustion Injector – Phase II.”

**Heister, Stephen D;** aeronautical & astronautical engineering, from Air Force Office of Scientific Research, \$200,000, “Rotating Detonation Engine (RDE) Combustion for Rocket Applications.”



## Liceaga to Ortalan

**Liceaga, Andrea M;** food science, from Impossible Foods Inc., \$2,000, “Multi-Sponsored Gift - Sensory.”

**Liceaga, Andrea M;** food science, from Post Foods LLC, \$1,000, “Multi-Sponsored Gift - Sensory.”

**Liceaga, Andrea M;** food science, from Heartland Food Products Group, \$10,500, “Multi-Sponsored Gift - Sensory.”

**Liceaga, Andrea M;** food science, from Whirlybird Granola LLC, \$1,000, “Multi-Sponsored Gift - Sensory.”

**Liceaga, Andrea M;** food science, from Conagra Food Ingredients Co., \$1,500, “Multi-Sponsored Gift - Sensory.”

**Liceaga, Andrea M;** food science, from Weaver Popcorn Company, \$3,000, “Multi-Sponsored Gift - Sensory.”

**Lin, Xiaojun;** electrical & computer engineering, from Ohio State University, \$27,149, “Exploiting the Multi-Channel Advantage for Wireless Ad Hoc Networks: Achieving Both High Throughput and Low Delay with Low-Complexity Control; Modification 3; Grant 107216.”

**Love, David J;** electrical & computer engineering, from Massachusetts Institute of Technology Lincoln Lab, \$99,484, “Deployment of Multiple Antennas in Multi-Way Distributed Wireless Relay Networking.”

**Low, Philip S;** chemistry, from John Thomas & Julie Ann Hurvis, \$500,000, “Hurvis Malaria- Hollow Research.”

**Main, Joyce B;** engineering education, from Ohio State University, \$309,860, “Collaborative Research: Why We Persist: an Intersectional Study to Characterize and Examine the Experiences of Women Tenure-Track Faculty in Engineering.”

**Manfra, Michael J;** physics, from Alcatel-Lucent, \$60,000, “Gallium Arsenide (GaAs) Heterostructures: Design and Optimization.”

**Martinez, Kimber J;** youth development & agricultural education, from Indiana State Department of Health, \$110,629, “Multicultural Efforts to End Sexual Assault (MESA).”

**Mason, Linda J;** graduate school administration, from The Agribusiness Council of Indiana, \$4,813, “Urban and Industrial Pest Management Research.”

**McNamara, Kevin T; Lowenberg-Deboer, James M and Oliver, Haley F;** agricultural economics, food science, from Family Health International, \$1,163,602, “Afghanistan University Support & Workforce Development Program; Modification 4; Grant 107437.”

**Menekse, Muhsin;** engineering education, from University of Pittsburgh, \$10,945, “Investigating Motivation and Transfer in Physical Science through Preparation for Future Learning Instruction, Amendment 1; Grant 108341.”

**Mishra, Dharmendra K;** food science, from Indiana Craft Jerky, \$50, “Multi-Sponsored Gift.”

**Mishra, Dharmendra K;** food science, from John or Linda Norris, \$50, “Multi-Sponsored Gift.”

**Mishra, Dharmendra K;** food science, from Gooch's BBQ LLC, \$225, “Multi-Sponsored Gift.”

**Mohammed, Sulma I;** comparative pathobiology, from Frank P Lloyd Jr, \$2,000, “Breast Cancer Research.”

**Nauman, Eric A;** mechanical engineering, from Harris Foundation, \$35,000, “Engineering Honors Continuous Quality Improvement Program - Cyberphysical Integration Course.”

**Neumeister, Norbert;** physics, from U.S. Department of Energy, \$594,405, “An Experimental and Theoretical High Energy Physics Program.”

**Neumeister, Norbert; Finley, John P; Jones, Timothy M and Kruczenski, Luis M;** physics, from U.S. Department of Energy, \$530,000, “An Experimental and Theoretical High Energy Physics Program.”

**Niser, John C;** consumer & family sciences – Fort Wayne campus, from University of Stavanger, \$5,000, “HSD Consortium.”

**Niser, John C;** consumer & family sciences – Fort Wayne campus, from Hotelschool the Hague, \$5,868, “HSD Consortium.”

**Niser, John C;** consumer & family sciences – Fort Wayne campus, from Escuela Hotelaria Turismo Sant Pol, \$3,568, “HSD Consortium.”

**Niser, John C;** consumer & family sciences – Fort Wayne campus, from Haaga Helia University, \$7,000, “HSD Consortium.”

**Niser, John C;** consumer & family sciences – Fort Wayne campus, from International University Bad Honnef Bonn, \$7,000, “HSD Consortium.”

**Niser, John C;** consumer & family sciences – Fort Wayne campus, from Niagara University, \$4,000, “HSD Consortium.”

**Niyogi, Devdutta S;** agronomy, from Indian Institute Tropical Meteorology, \$125,188, “Improved Understanding and Representation of Land Surface Processes for Short, Medium and Long Range Prediction of Monsoon.”

**Ogas, Joseph P;** biochemistry, from National Science Foundation, \$12,000, “Research Experience for Undergraduates (REU) Supplement: Understanding the Contribution of Chromatin Remodeler to Regulation of Tissue-Specific Gene Expression in Arabidopsis Plants.”

**Ohland, Matthew W;** engineering education, from National Science Foundation, \$200,000, “Expanding Access to and Participation in the Multiple-Institution Database for Investigating Engineering Longitudinal Development.”

**Olek, Jan;** civil engineering, from Cementos Argos, \$9,500, “Volume Stability of Concrete Relative to Delayed Ettringite Formation (DEF) and Optimum.”

**Oliver, Haley F;** food science, from Sealed Air Corporation, \$9,861, “Disinfectant Performance Curves for Antibiotic Resistant and Multi-Drug Resistant Pathogens.”

**Ortalan, Volkan; Chen, Weinong W; Koslowski, Marisol; Son, Steven F and Strachan, Alejandro H;** materials engineering, aeronautical & astronautical engineering, mechanical engineering, from Office of Naval Research, \$350,000, “Universal Streak Camera System for Multimodal Ultrafast Investigation of the Chemistry and Physics in Energetic Material at High Pressures and Temperatures.”

## Panchal to Semperlotti

**Panchal, Jitesh H** and **Atallah, Mikhail J**; mechanical engineering, computer science, from Naval Postgraduate School, \$120,000, "Computing without Revealing: a Cryptographic Approach to Eprocurement."

**Paniagua Perez, Guillermo**; mechanical engineering, from Rolls-Royce Corporation, \$373,000, "Rig Conceptual Design for Capital Equipment Milestone 1."

**Paniagua Perez, Guillermo**; mechanical engineering, from Von Karman Institute for Fluid Dynamics, \$106,680, "Boundary Layer Establishment and Separation: Discovering the Dynamic Scales."

**Park, Min K**; visual & performing arts, from Purdue University, \$25,000, "Indecisive Moment – Finding Freedom in Photographic Form."

**Pasupathy, Raghu**; statistics, from Office of Naval Research, \$59,000, "Sampling Controlled Numerical Optimization."

**Patton, Aaron J**; horticulture & landscape architecture, from Midwest Regional Turf Foundation, \$15,500, "Turfgrass Research."

**Patton, Aaron J**; horticulture & landscape architecture, from Midwest Regional Turf Foundation, \$7,188, "Midwest Regional Turf Foundation."

**Peterson, John R**; physics, from University of Arizona, \$15,000, "Implementation of the JWST NIR Instrument in the Photon Simulator (PhoSim)."

**Pipes, R Byron**; aeronautical & astronautical engineering, from Boeing Commercial Airplanes Group, \$150,000, "Molding Simulation & Strength Prediction of Chopped Fiber Composites for Bca-2012-001-7."

**Pipes, R Byron**; composites manufacturing&simulations cnt, from University of Tennessee, \$136,180, "VW IACM Modeling & Simulation Project 1 (Pa16-0349-3.7-01 )."

**Poggie, Jonathan**; aeronautical & astronautical engineering, from Office of Naval Research, \$100,000, "Predicting Hypersonic Laminar-Turbulent Transition with Direct Numerical Simulation."

**Pourpoint, Timothee L**; aeronautical & astronautical engineering, from Sandia National Laboratories, \$49,500, "Development of Hypergolic Solid Fuels and Propellants."

**Prokopy, Linda S**; forestry & natural resources, from the Nature Conservancy, \$257,902, "Non-Operator Landowners and Soil Health."

**Purpura, David J**; child development & family studies, from Early Learning Indiana, \$250,000, "ISTAR-KR Enhancement Project."

**Qi, Minghao**; electrical & computer engineering, from Stanford University, \$50,000, "Laser Accelerators on a Chip; Amendment 1; Grant 208855."

**Ramanathan, Shriram**; materials engineering, from Army Research Office, \$66,996, "Structural and Electrical Properties of Metastable Oxide Phase Created Under Extreme Oxygen Pressures."

**Ramanathan, Shriram**; materials engineering, from Office of Naval Research, \$35,587, "Tunable Electronic Composites with Phase Change Materials and Controlled Disorder."

**Ramkrishna, Doraiswami**; chemical engineering, from Abbvie Inc, \$30,000, "Modeling of Crystal Morphology and Polymorphs."

**Rasche, Nancy J**; computer graphics technology, from Ford Motor Company, \$99,000, "Ford URP – Nancy Rasche."

**Rhoads, Jeffrey F**; **Chiu, George T** and **Son, Steven F**; mechanical engineering, from Defense Threat Reduction Agency, \$349,388, "Securemems: Fundamental Research in Microelectromechanical System (MEMS)/Energetic Material Integration."

**Rhodes, David**; horticulture & landscape architecture, from ENP Investments, \$6,000, "ENP Investments."

**Ribeiro, Bruno**; chemical engineering, from Raytheon, \$17,188, "Discovering Network Processes in Time-Evolving Networks."

**Ross, Charles S**; English, from Purdue University, \$52,268, "Digitizing the Countess of Pembrokes Arcadia."

**Rossmann, Michael G** and **Kuhn, Richard J**; biological sciences, from Vanderbilt University, \$222,869, "Human Monoclonal Antibodies that Neutralize Chikungunya Virus."

**Rotar, Sean M**; horticulture & landscape architecture, from Indiana State Fair Board, \$350, "Multi-Sponsored Gift Account."

**Roy, Kaushik**; electrical & computer engineering, from The Boeing Company, \$179,282, "Integrity & Reliability of Integrated Circuits (Iris), Phase III."

**Sangid, Michael D**; aeronautical & astronautical engineering, from Rolls-Royce Corporation, \$100,000, "Location-Specific Fatigue Modeling."

**Savage, Michael L**; WBAA, from Indiana University, \$28,000, "IPBS RJC."

**Scachitti, Susan M**; engineering technology – Calumet campus, from Veterans Affairs, Department of, \$286,672, "Lean Management System Facilitation - Jesse Brown Veterans Administration Medical Center."

**Scalo, Carlo** and **McNally, Helen A**; mechanical engineering, engineering technology, from Ford Motor Company, \$200,000, "Thermoacoustic Electric Power Generator (Tags) Harnessing F-150 Exhaust Waste Heat."

**Schoenlein, William E** and **Durkes, Abigail C**; biomedical engineering, comparative pathobiology, from Cook Research Incorporated, \$69,328, "Pre-Clinical Device Testing Agreement; Studies: CI-ZSLE, WCI-TSL3, CI-RAAS, CI-SCRF, WCE-FRVA, REG-PLAS, CBI-VCM and POC."

**Scott-Moncrieff, Joanna C**; veterinary clinical science, from North Central Veterinary Emergency Center LLC, \$4,931, "ECC Residency Training Program."

**Seleem, Mohamed**; comparative pathobiology, from Egyptian Cultural and Educational Bureau, \$80,000, "ECEB 16-20 Nader Shawky Mohammed Mohammed Abutaleb, GM-1073."

**Semperlotti, Fabio**; mechanical engineering, from University of Notre Dame, \$32,756, "Multi-Resolution Functionality Graded Meta-Structures for the Passive Control of Broadband and Non-Stationary Dynamics in Thin-Walled Structures; Amendment 2; Grant 108182."

## Shakouri to Whelton

**Shakouri, Ali**; electrical & computer engineering, from Applied Materials, \$8,750, "Consortium on Printing and Scalable Manufacturing of Aware and Responsive Thin Films (SMART)."

**Shalaev, Vladimir M**; electrical & computer engineering, from US Army Research, Development and Engineering Command (RDE-COM), \$50,000, "Flat Photonics with Metasurfaces."

**Sharp, Nathan D; Tang, Tian** and **Goodsell, Johnathan E**; Composites Manufacturing and Simulations Center, aeronautical & astronautical engineering, from University of Tennessee, \$16,936, "Task 4.2 Thermoplastic Composite Development for Wind Turbine Blades."

**Sheffield, John W**; Lafayette Polytechnic, from International Association for Hydrogen Energy, \$2,500, "IAHE Expenses."

**Shields, Cleveland G**; child development & family studies, from Indiana University, \$15,847, "Leadership Education in Adolescent Health."

**Simpson, Garth J** and **Das, Chittaranjan**; chemistry, from PHS-NIH National Institute of General Medical Science, \$259,830, "Nonlinear Optical Imaging for Guiding Protein Structure Determination."

**Slabaugh, Carson D** and **Anderson, William E**; aeronautical & astronautical engineering, from Siemens Energy & Automation Inc., \$200,000, "Siemens Premixed Combustion Instability, Phase 2b, Extended Experimental Studies in Viper-S."

**Slabaugh, Carson D; Paniagua Perez, Guillermo** and **Heister, Stephen D**; aeronautical & astronautical engineering, mechanical engineering, from Aerojet Rocketdyne Inc, \$311,156, "Advanced Turbine Components for Combined Cycle Power Applications; Change Order 5; Grant 108544."

**Solorio, Luis**; biomedical engineering, from National Institutes of Health, \$249,000, "Engineering the Cancer Microenvironment."

**Spencer, David A**; aeronautical & astronautical engineering, from Jet Propulsion Laboratory, \$106,335, "Rendezvous and Capture of an Orbiting Sample."

**Steinbach, Sarah M**; veterinary clinical science, from Idexx Laboratories, Inc., \$25,000, "Clinical Nephrology & Urology."

**Strickland, Elizabeth A** and **Heinz, Michael G**; speech, language & hearing sciences, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$269,556, "Temporal Effects in Forward Masking, Suppression, and Simultaneous Masking."

**Sundaram, Shreyas**; electrical & computer engineering, from National Science Foundation, \$500,000, "Faculty Early Career Development (CAREER): Distributed Optimization, Learning, and Estimation Under Attacks and Failures."

**Taleyarkhan, Rusi P**; nuclear engineering, from Oak Ridge Associated Universities, \$3,750, "Fellowship Check TBD."

**Tu, Manghui** and **Yang, Shuhui**; computer information technology – Calumet campus, mathematics, computer science & statistics – Calumet campus, from National Security Agency, \$43,020, "A Core Cybersecurity Course Development: Secure Programming in an Immersive Learning Environment."

**Tuinstra, Mitchell R; Crawford, Melba M; Delp, Edward J; Habib, Ayman F; Weil, Clifford F; Cherkauer, Keith A; Ebert, David S** and **Leasure, Michael L**; agronomy, electrical & computer engineering, civil engineering, agricultural & biological engineering, aviation technology, from U.S. Department of Energy, \$12,291, "Automated Sorghum Phenotyping and Trait Development Platform."

**Tzempelikos, Athanasios**; civil engineering, from Kawneer Company Inc, \$60,000, "Kawneer Company Inc."

**Ulrich, Bernd**; mathematics, from National Science Foundation, \$11,000, "Algebra and Geometry Meetings in the Midwest."

**Wagner, Robert G** and **Woeste, Keith E**; forestry & natural resources, from State of New Hampshire, \$500, "Assay of Butternut Samples from New Hampshire for Presence of Hybrids."

**Wang, Haiyan**; materials engineering, from National Science Foundation, \$115,749, "Materials Discovery through Novel Nanocomposite Design."

**Wang, Haiyan**; materials engineering, from Office of Naval Research, \$160,600, "Probe the Fundamentals in Field-Enhanced Sintering Process of High Temperature Ceramics via in Situ Tem."

**Wang, Nien-Hwa L**; chemical engineering, from American River Nutrition Inc, \$12,000, "Wang Research ARMN Voluntary Support."

**Wassgren, Carl R**; mechanical engineering, from Idaho National Laboratory, \$46,555, "Multiscale Flow Modeling of Compressible, Cohesive and Anisotropic Bulk Solid Materials."

**Weake, Vikki M**; biochemistry, from PHS-NIH National Eye Institute, \$343,488, "Epigenetic Regulation of Gene Expression in the Aging Eye."

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

**Weaver, Connie M**; foods & nutrition, from Padilla Speer Beardsley Inc, \$25,000, "Coca-Cola Gift."

**Weaver, Connie M**; foods & nutrition, from Sugar Association, Inc. (the), \$6,000, "Corporate Affiliates Fund."

**Weaver, Connie M**; foods & nutrition, from Nestle, \$5,000, "IBCN Support."

**Weaver, Connie M**; foods & nutrition, from Tate & Lyle Ingredients Americas, Inc., \$6,000, "Corporate Affiliates Fund."

**Wei, Alexander** and **Yuan, Chongli**; chemistry, chemical engineering, from Sumitomo Chemical Company, \$302,730, "Nano-Brighteners for Chemical Sensing of Urinary Analytes."

**Wendt, Michael K**; medicinal chemistry & molecular pharmacology, from PHS-NIH National Cancer Institute, \$349,399, "Overcoming Metastatic Resistance to Erbb-Targeted Therapies."

**West, Terry R**; earth & atmospheric sciences, from Association of Engineering Geologists, \$300, "AEG Travel."

**Whelton, Andrew J**; civil engineering, from Environmental Protection Agency, \$1,989,000, "Right Sizing Tomorrows Water Systems for Efficiency, Sustainability, and Public Health."

## Wise to Zwier

**Wise, Kiersten A**; botany & plant pathology, from University of Wisconsin-Madison, \$20,000, “Improving Our Understanding of Science, Technology, Engineering & Mathematics (STEM) Canker and How to Manage IT in Soybean Across the Midwest.”

**Wise, Kiersten A**; botany & plant pathology, from United Phosphorus Inc, \$7,800, “Voluntary Support Account.”

**Wise, Kiersten A**; botany & plant pathology, from FMC Corporation, \$8,000, “Voluntary Support Account.”

**Wise, Kiersten A**; botany & plant pathology, from E.I. du Pont de Nemours and Company, \$16,500, “Voluntary Support Account.”

**Xu, Dongyan**; computer science, from Hidden Villa Ranch, \$100,000, “Center for Education and Research in Information Assurance and Security (CERIAS) Voluntary Support.”

**Ye, Peide and Bermel, Peter A**; electrical & computer engineering, from Office of Naval Research, \$300,000, “Co-Development of an Environment-Controlled Atomic Layer Deposition Cluster System for Epitaxial Dielectric Integration on Gan and Beyond.” (a Discovery Park award – Birck Nanotechnology Center)

**Ye, Peide**; electrical & computer engineering, from Army Research Office, \$50,000, “Ballistic Phosphorene Transistor.”

**Yeo, Yoon; Elzey, Bennett D and Galinsky, Raymond E**; industrial & physical pharmacy, comparative pathobiology, from PHS-NIH National Institute of Biomedical Imaging & Bioengineering, \$349,200, “Environmentally-Adaptive Nanoparticles with Focal Irradiation for Cancer Therapy.”

**Young, Bryan G**; botany & plant pathology, from Syngenta Crop Protection Inc., \$32,000, “Multi-Sponsored Gift Account.”

**Young, Bryan G and Johnson, William G**; botany & plant pathology, from Helm Agro US, Inc, \$32,000, “Helm Agro Weed Management.”

**Young, Bryan G**; botany & plant pathology, from Schirm, Dustin & Kimberly, \$1,300, “Multi-Sponsored Gift Account.”

**Youngblood, Jeffrey P and Trice, Rodney W**; materials engineering, from Office of Naval Research, \$150,000, “Injection Molding and Additive Layer Manufacturing of Boron Carbide for Ballistic Testing.”

**Yu, Denny and Wachs, Juan P**; industrial engineering, from Intuitive Surgical Inc, \$50,000, “A Non-Intrusive Tool to Measure Cognitive Workload During Surgery.”

**Yu, Wenbin**; aeronautical & astronautical engineering, from Georgia Technology, \$19,401, “VABS as a Tool for Real Blade Analysis, Design, and Certification.”

**Zavattieri, Pablo D**; civil engineering, from Velcro USA Inc, \$86,980, “A Multiscale Strategy for the Modeling of the Mechanical Performance of Hook and Loop Fasteners Based on a Detachment Zone Model (DZM). Stage IV: Development of a More Versatile Loop Generator and Int.”

**Zhang, Guangjun**; comparative pathobiology, from Mayo Clinic, \$1,393, “IRF4 and Immunity to Influenza Infection.”

**Zhang, Guangjun**; comparative pathobiology, from Mayo Clinic, \$18,413, “IRF4 and Immunity to Influenza Infection.”

**Zhou, Chenn Q**; mechanical engineering – Calumet campus, from Nucor Steel Corp., \$45,000, “Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership.”

**Zhou, Chenn Q**; mechanical engineering – Calumet campus, from Steel Dynamics Inc, \$45,000, “Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership.”

**Zhou, Chenn Q**; mechanical engineering – Calumet campus, from Praxair Inc, \$45,000, “Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership.”

**Zhou, Chenn Q**; mechanical engineering – Calumet campus, from Union Gas Limited, \$45,000, “Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership.”

**Zhou, Chenn Q**; mechanical engineering – Calumet campus, from U.S. Steel Corporation, \$45,000, “Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership.”

**Zhu, Yu Michael**; statistics, from Ohio State University, \$55,473, “Media Literacy Intervention for Indoor Tanning Prevention.”

**Zwier, Timothy S**; chemistry, from DOE-ER-Basic Energy Sciences Chemistry, \$154,696, “Isomer-Specific Spectroscopy of Aromatic Fuels and Their Radical Intermediates.” ■

### Notice Regarding Sponsored Program Awards

The Sponsored Program Awards list is generated by Sponsored Program Administration. Questions concerning the information contained in these pages should be directed to Stephanie Willis at [swillis@purdue.edu](mailto:swillis@purdue.edu). ■