

# DIMENSIONS *of* DISCOVERY

## Sponsored Program Awards

April 2017

### Abel to Brown

**Abel, Steven R; Ainslie, Paul J and Hicks, Jennifer L;** Office of Engagement, from Indiana Department of Education, \$210,965, "Mathematics in Science, Technology and Engineering."

**Abel, Steven R; Ainslie, Paul J and Hicks, Jennifer L;** Office of Engagement, from Indiana Department of Education, \$7,534, "Mathematics in Science, Technology and Engineering."

**Agrawal, Rakesh and Tawarmalani, Mohit;** chemical engineering, management, from ExxonMobil Research Engineering Company, \$638,665, "Optimization of Oil/Gas Processes and Process Flowsheets."

**Aguilar, Ruben C;** biological sciences, from National Institutes of Health, \$226,623, "Lowe Syndrome: Therapeutic Strategy by Drug Repositioning."

**Ajuwon, Kolapo;** animal sciences, from AB Agri Limited, \$9,980, "Swine Research."

**Allebach, Jan P;** electrical & computer engineering, from Hewlett Packard, \$75,000, "Person Detection and Recognition for Smart-home and Smartoffice – Expansion of Scope."

**Allebach, Jan P;** electrical & computer engineering, from Hewlett Packard, \$75,000, "Machine Learning for Personal Media Discovery."

**Allebach, Jan P and Delp, Edward J;** electrical & computer engineering, from Hewlett Packard, \$75,000, "Real-Time Object Detection and Recognition – Phase 2."

**Applegate, Bruce M;** food science, from Millisecond Technologies, Corp, \$7,000, "Food Microbiology Research."

**Ballard, Roy W;** field extension educators, from Indiana State Department of Agriculture, \$58,000, "Foodlink 2.0- Growing the Adoption and Use of Foodlink a Speciality Crop Decision Making Tool."

**Basaran, Osman A;** chemical engineering, from Dow Agro Sciences, \$12,500, "A Mechanistic Approach to Studying Agrochemical Sprays – Part II."

**Basaran, Osman A;** chemical engineering, from Honeywell Inc., \$25,000, "Purdue Process Safety and Assurance Center(P2SAC)."

**Beaulieu, Lionel J;** Track Express-Center for Regional Development, from Office of Small Business & Entrepreneurship, \$83,490, "Southeast Small Business Development Center (SBDC) 2017 – State."

**Beaulieu, Lionel J;** Track Express-Center for Regional Development, from Office of Small Business & Entrshp, \$148,922, "Southeast Small Business Development Center (SBDC) 2017 – Federal."

**Bertino, Elisa;** computer science, from Electronics and Telecommunications Research Institute, \$50,185, "Study on Key Hiding and Software Integrity Verification for Unmanned Vehicle."

**Bhave, Sunil A;** electrical & computer engineering, from Cornell University, \$12,750, "Control of Mechanical Quantum States Using Diamond Spins."

**Boiarsky, Carolyn R and Morris, Karen L;** English and philosophy – Calumet Campus, from National Writing Project, \$20,000, "2017-2018 Seed Advanced Institute to Scale-Up the NWP College-Ready Writers Program."

**Bolin, Jeffrey T;** Executive Vice President for Research and Partnerships, from Purdue University, \$94, "2016-17 EVPRP Laboratory & University Core Facilities Research Equipment Program."

**Bolin, Jeffrey T;** Executive Vice President for Research and Partnerships, from Purdue University, \$6,800, "1617 Lab & Core Equip: Schaber."

**Bolin, Jeffrey T;** Executive Vice President for Research and Partnerships, from Kinley Trust, \$35,302, "2016 Non-Lab Proposals Tier 1 Funded."

**Boltasseva, Alexandra and Shalaev, Vladimir M;** electrical & computer engineering, from Air Force Office of Scientific Research, \$250,000, "Hot-Electrons Generation in New Plasmonic Materials for Integrated on-Chip Devices." (a Discovery Park award – Birck Nanotechnology Center)

**Bouman, Charles A and Comer, Mary L;** electrical & computer engineering, from Carnegie-Mellon University, \$133,008, "Managing the Mosaic of Microstructure, Amendment 8; Grant 106276."

**Bouman, Charles A;** electrical & computer engineering, from Eli Lilly and Company, \$89,996, "Development of Software Tool Exploiting Novel Algorithms for Reconstructing High Quality Time Varying 3-D Images from Limited Xray Computed Tomography (CT) Data."

**Bouman, Charles A;** electrical & computer engineering, from Innovative Scientific Solutions, Inc., \$79,912, "Analysis of Reconstruction and Model Uncertainty for TDLAS Computed Tomography."

**Braun, James E;** civil engineering, from National Renewable Energy Laboratory, \$50,000, "An Open, Cloud-Based Platform for Whole-Building Fault Detection and Diagnostics; Modification 1; Grant 108860."

**Braun, James E;** mechanical engineering, from Bristol Compressors, Inc., \$25,000, "Center for High Performance Building Consortium."

**Brower, Jeffrey E;** philosophy, from University of Notre Dame, \$62,500, "Medieval Theories of Space and Time."

**Brown, Becky A;** foreign language & literature, from Japan Foundation, \$2,500, "Meshiagare: the Food Culture of Japan."

## Caffee to Dunning

**Caffee, Marc W;** physics, from National Aeronautics and Space Administration, \$109,000, "Radionuclides as Probes of Solar System Processes: Development of AMS Techniques for Their Measurement."

**Cakmak, Mukerrem;** mechanical engineering, from University of Arkansas, \$142,194, "Electric-Field Alignment of Immiscible Polymer Blends with Dispersed Nanoparticles for Mesoporous Reactive Membranes." (a Discovery Park award – Birck Nanotechnology Center)

**Caldwell, Barrett S;** industrial engineering, from University of Southern Indiana, \$1,000, "Indiana Space Grant Consortium (INSGC) Affiliate Dues."

**Caldwell, Barrett S;** industrial engineering, from National Aeronautics and Space Administration, \$10,000, "Purdue Support of Finesse Science and Exploration."

**Caldwell, Barrett S;** industrial engineering, from Purdue Northwest, \$1,000, "Indiana Space Grant Consortium (INSGC) Affiliate Dues."

**Calve, Sarah and Kinzer-Ursem, Tamara L;** biomedical engineering, from PHS-NIH National Institute of Arthritis and Musculoskeletal and Skin Diseases, \$174,788, "Bioorthogonal Labeling of Extracellular Matrix Assembly."

**Campbell, Noll L;** pharmacy practice, from PHS-NIH National Institute on Aging, \$142,448, "Evaluating the Adverse Cognitive Effects of Medications."

**Cason, Timothy N;** economics, from University of Stirling, \$10,000, "Pes Scheme Design for Coastal Ecosystems."

**Casteel, Shaun N;** agronomy, from National Crop Insurance Service, \$10,000, "Soybean Extension Research."

**Chandrasekar, Srinivasan; Bahr, David F; Mann, James B; Trumble, Kevin P and Viswanathan, Koushik;** industrial engineering, materials engineering, from Department of the Army, \$43,010, "Large-Area Optical Surface Profilometry for Advanced Manufacturing and Materials Processing."

**Chaturvedi, Alok R;** management, from Wadhwani Charitable Foundation, \$25,000, "Mentoring for Business Success MOOC."

**Chen, Zhihong;** electrical & computer engineering, from Ford Motor Company, \$211,283, "Implementation of Graphene to Improve Corrosion Behavior and Harvest Energy in EDS System."

**Cherkauer, Keith A and Bowling, Laura C;** agricultural & biological engineering, agronomy, from U.S. Geological Survey, \$3,030, "Communicating the State of Indiana Water Resources."

**Chmielewski, Jean A;** chemistry, from National Science Foundation, \$52,962, "Cationic Amphiphilic Polyproline Helices (CAPHs): Coupling Antibacterial Activity with Mammalian Cell Penetration."

**Cleveland, William S; Crabill, Douglas G; Song, Qifan; Wang, Xiao and Xi, Bowei;** statistics, from Air Force Research Laboratory, \$225,000, "Diagnostic Methods & Software for Fitted-Model Checking."

**Collingsworth, Paris D;** forestry & natural resources, from University of Illinois, \$386,658, "Improving Community Resiliency in the Great Lakes through Applied Research and Extension, Amendment 2; Grant 108149."

**Colon, Bonnie R; Didelot, Mary J and Hollingsworth, Lisa A;** education – Calumet campus, education, from Lilly Endowment Inc., \$20,000, "Comprehensive Counseling Initiative: Enhancing School Principal and Counselor Preparation Program Planning Grant."

**Colon, Bonnie R;** education – Calumet campus, from Indiana Youth Institute, \$750, "Grief and Loss Counseling Training through Grief Recovery Institute Certification Training."

**Connor, Robert J and Lloyd, Jason B;** civil engineering, from Wyoming Department of Transportation, \$142,223, "Field Testing and Long-Term Monitoring of Selected High-Mast Lighting Towers."

**Connor, Robert J and Lloyd, Jason B;** civil engineering, from Michael Baker Jr Inc, \$82,584, "Field Testing and Short-Term Monitoring of Senior-163 Mexican Hat Architectures Bridge."

**Connor, Robert J;** civil engineering, from Wyoming Department of Transportation, \$35,556, "Field Testing and Long-Term Monitoring of Selected High-Mast Lighting Towers."

**Culurciello, Eugenio;** biomedical engineering, from Office of Naval Research, \$50,000, "Software and Hardware for Deep Learning of Video Sequences."

**Culurciello, Eugenio;** biomedical engineering, from Office of Naval Research, \$76,173, "Software and Hardware for Deep Learning of Video Sequences."

**Davis, Susan B;** Track Express-Center for Regional Development, from Office of Small Business & Entrepreneurship, \$70,589, "Hoosier Heartland Small Business Development Center CY 2017 (State)."

**Davis, Susan B;** Track Express-Center for Regional Development, from Office of Small Business & Entrepreneurship, \$144,531, "Hoosier Heartland Small Business Development Center CY 2017 (Federal)."

**Dehr, Karol A;** English & linguistics – Fort Wayne campus, from Starseed Foundation, \$1,500, "Youth Writing Project."

**Delp, Edward J;** electrical & computer engineering, from Air Force Research Laboratory, \$769,154, "Media Forensics Integrity Analytics."

**Delp, Edward J and Zhu, Fengqing;** electrical & computer engineering, from Curtin University of Technology, \$38,463, "Computer-Tailoring Using the TADA Software Tools."

**Dewoody, James A;** forestry & natural resources, from Texas Technology University, \$191,000, "Genomics and Historical Demography of Gray Whales."

**Dewoody, James A;** forestry & natural resources, from Texas Technology University, \$20,000, "Western Gray Whale Biopsy Sample Analyses Program, Amendment 2 & Amendment 3."

**Dilger, C B;** English, from University of Illinois, \$141,708, "Crow: the Corpus & Repository of Writing."

**Dooley, Frank J; Clifford, Rita K; Drake, Brent M and Horne, Pamela T;** Office of the Provost, IT application services, Office of Institutional Research, Assess and Effectiveness, enrollment management administration, from Arizona State University, \$39,745, "University Innovation Alliance Collaborative Agreement."

**Dunning, John B and Riegel, Jeffery K;** forestry & natural resources, from U.S. Forest Service, \$28,980, "Breeding Bird Surveys on the Hoosier National Forest – 2017."

## Ebert to Guan

**Ebert, David S; Butzke, Christian E; Habib, Ayman F; Schulze, Darrell G; Weldon, Sirje L and Cooper, Bruce R;** electrical & computer engineering, food science, civil engineering, agronomy, political science, medicinal chemistry & molecular pharmacology, from Purdue University, \$299,998, "Harnessing Technology and Information Fusion to Enable Resilient and Sustainable Food-Water Balance Under Evolving Environmental Conditions."

**Egel, Daniel S;** botany & plant pathology, from Syngenta Crop Protection Inc., \$2,000, "Potassium Management."

**Elliott, Daniel S;** electrical & computer engineering, from National Science Foundation, \$5,000, "Research Experience for Undergraduates (REU) Supplement to Towards Precision Measurements of Atomic Parity Violation Using Two-Pathway Coherent Control."

**Engel, Bernard A;** agricultural & biological engineering, from Agricultural Research Service, \$99,686, "WEPP Model, Interface, and Database Development and Testing."

**Engel, Bernard A;** agricultural & biological engineering, from Agricultural Research Service, \$33,784, "User Interface and Database for Apex Model."

**Eremenko, Alexandre and Gabrielov, Andrei;** mathematics, from National Science Foundation, \$138,212, "Geometric Methods in the Analytic Theory of Differential Equations."

**Erk, Kendra A;** materials engineering, from National Science Foundation, \$8,000, "Research Experience for Undergraduates (REU) Supplemental Funding for Existing NSF Faculty Early Career Development (CAREER): Water-Based Gels Containing Polymer and Cement-Like Particles for Improved Curing of High-Performance Concrete."

**Erk, Kendra A;** materials engineering, from National Science Foundation, \$9,201, "Supplement for Faculty Early Career Development (CAREER): Water-Based Gels Containing Polymer and Cement-Like Particles for Improved Curing of High-Performance Concrete."

**Farkas, Brian E;** food science, from Carsons Brewery LLC, \$175, "Multi-Sponsored Gift Fermentation."

**Farkas, Brian E;** food science, from Taxman Brewing Company LLC, \$25, "Multi-Sponsored Gift Fermentation."

**Feikes, David J; Warren, Aaron R and Pratt, David M;** mathematics, computer science & statistics – Calumet campus, chemistry and physics – Calumet campus, education – Calumet campus, from Indiana Department of Education, \$200,000, "Conceptual Algebra Readiness with Engineering and Science (CARES); Amendment 2."

**Ferroli, Christina E and Wagoner, Steven D;** field extension educators, from Lilly Endowment Inc., \$4,879, "Teens as Teachers."

**Ferroli, Christina E;** field extension educators, from Lilly Endowment Inc., \$7,500, "Purdue Extension-Marion County Summer Camp Enhancement Program."

**Field, William E;** agricultural & biological engineering, from Life Essentials, LLC, \$7,797, "Breaking New Ground."

**Fisher, Timothy;** mechanical engineering, from The Boeing Company, \$100,000, "Integrated Thermal Management of Aerospace Vehicles Consortium Membership."

**Flaherty, Daniel P;** medicinal chemistry & molecular pharmacology, from University of Rochester, \$124,544, "Rnase E a Novel New Gram-Negative Antimicrobial Target, Amendment 1; Grant 108295."

**Gallant, Kathleen H and Zoss, Donna L;** foods & nutrition, from Indiana Department of Education, \$13,529, "National School Lunch Program Cycle Menu Project for Indiana Schools."

**Garimella, Suresh V;** mechanical engineering, from Rogers Corporation, \$30,000, "Cooling Technologies Research Center (Cooling Technologies Research Center (CTRC)) Membership – Memo Match for 106029."

**Garimella, Suresh V; Lynall, Matthew D and Duval-Couetil, Nathalie A;** Executive Vice President for Research and Partnerships, management, industrial technology, from University of Michigan, \$171,632, "I-Corps Node: Activating the Midwest I-Corps Network." (a Discovery Park award – Burton D Morgan Entrepreneurship Center)

**Garrison, James L;** aeronautical & astronautical engineering, from National Aeronautics and Space Administration, \$81,637, "Assimilation of Global Navigation Satellite System (GNSS)-R Delay-Doppler Maps into Hurricane Models."

**Gentry, Marcia L;** educational studies, from Jack Kent Cooke Foundation, \$150,000, "Project Hope+: Continued Request for the Period March 2017 through February 2019."

**Giannios, Dimitrios;** physics, from National Aeronautics and Space Administration, \$253,831, "Blazar Emission Modeling: Going Beyond the Spherical Cows."

**Gibson, Kevin D; Ahasteen-Bryant, Felica T and Ridgway, Kenneth D;** botany & plant pathology, Native American Cultural Center, earth & atmospheric sciences, from Alfred P. Sloan Foundation, \$383,754, "Sloan Indigenous Graduate Partnership: an Integrated National Program to Support Indigenous Graduate Students in Science, Technology, Engineering & Mathematics (STEM) Di."

**Goodsell, Johnathan E and Sharp, Nathan D;** Composites Manufacturing and Simulations Center, from University of Tennessee, \$30,897, "IACMI 3.2 Project on Modeling to Predict Material and Process Characteristics (PA16-0349-3.2-01, Amendment 3)."

**Grant, Richard H;** agronomy, from Colorado State University, \$2,500, "Climatological Monitoring of Ultraviolet Radiation."

**Groll, Eckhard A and Braun, James E;** mechanical engineering, civil engineering, from America Society of Heating, Refrigeration and Air Conditioning Engineering Inc, \$120,714, "Oil Return and Retention in Unitary Split System Gas Lines with HFC and HFO Refrigerants."

**Groll, Eckhard A and Weibel, Justin A;** mechanical engineering, from Oak Ridge National Laboratory, \$75,000, "Evaluating Adhesive Bonding of Aluminum and Copper in HVAC&R Applications."

**Guan, Wenjing;** horticulture & landscape architecture, from Monsanto Company, \$1,800, "Melon Variety Evaluation."

**Guan, Wenjing;** horticulture & landscape architecture, from Monsanto Company, \$8,000, "Triploid Watermelon Variety Population Study."



## Haddock to Janes

**Haddock, John E**; civil engineering, from Indiana Department of Transportation, \$300,000, “2017 Local Technical Assistance Program Work Plan & Budget (207237).”

**Han, Qingyou**; engineering technology, from Eon Computer Technologies, \$26,181, “Center for Materials Processing Research (CMPR).”

**Harbin, Sherry L** and **Rickus, Jenna L**; biomedical engineering, agricultural & biological engineering, from Indiana University School of Medicine, \$40,000, “Indiana Diabetes Research Center, Amendment 3; Grant 108175.”

**Harbor, Jonathan M** and **Lifton, Nathaniel A**; earth & atmospheric sciences, physics, from National Science Foundation, \$245,415, “Mapping, Measuring and Modeling Geomorphology and Ice Change in Dronning Maud Land, Antarctica.”

**Hartman, Nathan W**; **Bertino, Elisa**; **Brush, Thomas H**; **Crawford, Brett A**; **DeLaurentis, Daniel A**; **Deshmukh, Abhijit V**; **French, Richard M**; **Greenan, James P**; **Hacker, Thomas J**; **Ropp, Timothy D**; **Sangid, Michael D**; **Sutherland, John W** and **Witt, Michael C**; computer graphics technology, computer science, management, industrial technology, aeronautical & astronautical engineering, industrial engineering, engineering technology, curriculum and instruction, computer & information technology, aviation technology, environmental & ecological engineering, library administration, from Purdue University, \$300,000, “Realizing Next-Generation Smart Manufacturing.”

**Heeg, Marlene O**; pharmacy – administration, from Salix Pharmaceuticals, Inc., \$700,000, “2017 IBS Prime Initiative.”

**Heeg, Marlene O**; pharmacy – administration, from Amgen, Inc., \$200,000, “2017 National Educational Initiative: the Annual Review of Therapeutics & Rheumatology for Rheumatology State Societies.”

**Heeg, Marlene O**; pharmacy – administration, from Merck Sharp & Dohme Corp, \$75,000, “Bridge Hcv: Building Bridges to Reach People Who Inject Drugs with the Goal to Eradicate HCV.”

**Hertel, Thomas W** and **Akgul, Zeynep**; agricultural economics, from U.S. International Trade Commission, \$151,966, “Modeling, Parameterization, and Applied Policy Analysis with Global Trade Analysis Project (GTAP) Firm Heterogeneity Framework.”

**Hertel, Thomas W**; agricultural economics, from Beijing DRC-NET Information Co., Ltd, \$40,870, “Global Trade Analysis Project (GTAP) Consortium.”

**Hertel, Thomas W**; agricultural economics, from Centre Detudes Prosp Et Dinfo International, \$20,435, “Global Trade Analysis Project (GTAP) Consortium.”

**Hertel, Thomas W**; **Johnson, David R**; **Baldos, Uris Lantz C**; **Bowling, Laura C**; **Cherkauer, Keith A**; **Huber, Matthew** and **Song, Xiaohui C**; agricultural economics, industrial engineering, agronomy, agricultural & biological engineering, earth & atmospheric sciences, ITaP Research Computing, from Purdue University, \$320,124, “Managing the Global Commons: Sustainable Agriculture and Use of the World’s Land and Water Resources in the 21st Century.”

**Hertel, Thomas W**; agricultural economics, from International Trade Centre, \$20,435, “Global Trade Analysis Project (GTAP) Consortium.”

**Hill, Catherine A** and **Watts, Val J**; entomology, medicinal chemistry & molecular pharmacology, from Bio-Gene Technology Limited, \$90,143, “Characterization of Bio-Gene Flavosone Formulation Invertebrate in Vivo Toxicity and in Vivo Pharmacological Analyses.”

**Hill, Catherine A**; **Raymond, Leigh S**; **Watts, Val J**; **Flaherty, Daniel P**; **Pfeiffer, Linda J**; **Kuhn, Richard J** and **Scharf, Michael E**; Inflammation, Immunology & Infectious Diseases, from Purdue University, \$299,999, “Revolutionizing Control of Vector-Borne Infectious Diseases.”

**Holford, Kenneth C** and **Birchfield, Jennifer L**; Engineering, Mathematics & Science – Calumet campus, from Save the Dunes, \$3,000, “Northwest Indiana Septic System Care Outreach Project.”

**Holford, Kenneth C**; Engineering, Mathematics & Science – Calumet campus, from U.S. Forest Service, \$40,000, “Urban Waters Partnership in Northwest Indiana.”

**Hong, Wei**; foreign language & literature, from Chinese Language Council International, \$45,000, “2017 Proposal to the Confucius Institute Headquarters in Beijing, China.”

**Hook, Tomas O**; **Quagraine, Kwamena K** and **Salazar, Kara A**; forestry & natural resources, agricultural economics, Illinois-Indiana Sea Grant Program, from University of Illinois, \$138,646, “2014-18 IL IN Sea Grant Omnibus.”

**Hopp, Lisa**; nursing – Calumet campus, from University of Illinois at Chicago, \$29,830, “Bridges to the Doctorate for Nursing.”

**Horgan, Briony H**; earth & atmospheric sciences, from Jet Propulsion Laboratory, \$35,000, “Using Composition to Constrain Paleoenvironments and Sites of Organic Preservation in Gale Crater; Modification 2; Grant 108399.”

**Horgan, Briony H**; earth & atmospheric sciences, from Arizona State University, \$15,263, “Mastcam-Z: a Geologic, Stereoscopic, and Multispectral Investigation for the National Aeronautics and Space Administration (NASA) Mars-2020 Rover Mission, Amendment 3.”

**Horgan, Briony H**; earth & atmospheric sciences, from National Aeronautics and Space Administration, \$136,348, “Icy Environments on Mars: Investigating Glacial Weathering in Volcanic Terrains.”

**Hountz, Randall A** and **Clare, Mark K**; industrial engineering, from Indiana State Department of Health, \$38,912, “ISDH Process Improvement.” (a Discovery Park award – Regenstrief Center)

**Hu, Jingwei**; mathematics, from National Science Foundation, \$9,300, “Faculty Early Career Development (CAREER): Predictive Simulations of Complex Kinetic Systems.”

**Huang, Fang**; biomedical engineering, from U.S. Department of Interior, \$173,749, “3-D Super-Resolution Imaging of Intact Animals, Amendment 1; Grant 108616.”

**Ivantysynova, Monika**; agricultural & biological engineering, from Ford Motor Company, \$40,000, “Maha Fluid Power Teaching and Research Laboratory.”

**Jacobs, Douglass F**; forestry & natural resources, from Nature Conservancy, the, \$7,000, “Voluntary Support – American Chestnut.”

**Janes, David B**; Columbia Initiative, from Escuela De Ingenieria De Antioquia, \$12,233, “PII Colombia Multi Sponsor.”

## Johnson to Mengiste

**Johnson, Carla J**; curriculum and instruction, from Battelle Memorial Institute, \$108,699, “Battelle – Army Educational Outreach Program Cooperative Agreement; Modification 6; Grant 108058.”

**Johnson, William G**; botany & plant pathology, from Bayer Crop-science, \$10,000, “Bayer Cropscience.”

**Johnson, William G** and **Young, Bryan G**; botany & plant pathology, from Dow Agro Sciences, \$15,500, “NA17P2E004, NA17R5K001, Corn Showcase Trail.”

**Johnson, William G**; botany & plant pathology, from Syngenta Crop Protection Inc., \$48,500, “Weed Science Research Voluntary Support.”

**Johnson, William G**; botany & plant pathology, from Monsanto Company, \$10,584, “Monsanto Service Order #39.”

**Johnson, William G** and **Young, Bryan G**; botany & plant pathology, from Monsanto Company, \$13,230, “Mesotrione Plus Aceo-chlor Premix- One Pre and Post Tank Mixes.”

**Jordan, Mark A**; biology – Fort Wayne campus, from Indiana Department of Natural Resources, \$74,500, “Efficacy of Using Edna to Detect Kirtlands Snake (Project Number T7R20).”

**Kazemian, Abdolmajid**; biochemistry, from PHS-NIH National Heart, Lung & Blood Institute, \$249,000, “Expression, Regulation and Role of Enhancer RNAs in T Cells.”

**Kenttamaa, Hilka I**; chemistry, from Neste Oil Oyj, \$60,000, “Analytical Method and Instrument Development for Large Paraffins.”

**Key, Nicole L**; mechanical engineering, from Duke University, \$31,912, “Grand Challenges in Turbomachinery Forced Response and NSV (207098).”

**Key, Nicole L**; mechanical engineering, from Honeywell International Foundation Incor, \$360,000, “Honeywell Aerospace Voluntary Support.”

**Kilaz, Gozdem** and **Qiao, Li**; engineering technology, aeronautical & astronautical engineering, from Federal Aviation Administration, \$117,985, “Project #26: Drop-in Aviation Fuel Fire Safety.”

**Kim, Young L**; biomedical engineering, from Rural Development Administration of the Republic of Korea, \$50,000, “Development of Photocatalytic Multifunctional Fabrics for Pathogenic Microorganism Inactivation Using Transgenic Fluorescent Silk.”

**Klimeck, Gerhard**; electrical & computer engineering, from Philips Lumileds Lighting Co, \$75,000, “Network for Computational Nanotechnology (NCN) Membership.”

**Klimeck, Gerhard**; electrical & computer engineering, from Taiwan Semiconductor Manufacturing Co, \$75,000, “Network for Computational Nanotechnology (NCN) Membership.”

**Knapp, Deborah W**; **Dhawan, Deepika** and **Ramos-Vara, Jose A**; veterinary clinical science, comparative pathobiology, from The Puppy Up Foundation, \$100,000, “Improving Molecularly-Targeted Cancer Therapy in Pet Dogs and Humans.”

**Laird, Carl D**; chemical engineering, from Sandia National Laboratories, \$76,898, “Numerical Solution of Large-Scale Network Problems.”

**Lee, Chun-Sing G**; electrical & computer engineering, from Korea Robotics Society, \$10,000, “Intelligent Robots and Systems (IROS).”

**Lee, Linda S** and **Nies, Loring F**; agronomy, civil engineering, from Defense, U.S. Department of, \$73,718, “Quantification of in Situ Chemical Reductive Defluorination (ISCRD) of Perfluoroalkyl Compounds.”

**Liceaga, Andrea M**; food science, from Pasco Foods, Inc, \$3,050, “Multi Sponsored Gift- Sensory.”

**Liceaga, Andrea M**; food science, from Impossible Foods Inc., \$4,000, “Multi Sponsored Gift- Sensory.”

**Liceaga, Andrea M**; food science, from Heartland Food Products Group, \$1,500, “Multi Sponsored Gift- Sensory.”

**Liceaga, Andrea M**; food science, from Heartland Food Products Group, \$3,000, “Multi Sponsored Gift- Sensory.”

**Lin, Xiaojun**; electrical & computer engineering, from National Science Foundation, \$150,000, “WiFiUS: Collaborative Research: Low Overhead Wireless Access Solutions for Massive and Dynamic IoT Connectivity.”

**Liu, Wanqing**; medicinal chemistry & molecular pharmacology, from Indiana University, \$75,745, “Indiana University Center for Pediatric Pharmacology and Precision Medicine.”

**Liu, Zhongming**; biomedical engineering, from PHS-NIH National Institute of Mental Health, \$467,734, “Multimodal Hyperspectral Imaging of Brain Activity and Connectivity.”

**Low, Philip S**; chemistry, from Purdue University, \$75,000, “Malaria Research Project.”

**Lowenberg-Deboer, James M** and **Burniske, Andrea E**; agricultural economics, global engineering programs, from Volunteers Economic Growth Alliance, \$118,606, “Farmer to Farmer (F2F) in Colombias Orinoquia Region.”

**Lucht, Robert P** and **Slabaugh, Carson D**; mechanical engineering, aeronautical & astronautical engineering, from GE Aviation, \$285,000, “High Pressure TAPS Flame Visualization – Rig Test.”

**Madhavan, Krishna** and **Douglas, Kerrie A**; engineering education, from The Boeing Company, \$50,000, “Characterizing User Behaviors in Online Learning Environments.”

**Marais, Karen**; **Davendralingam, Navindran** and **DeLaurentis, Daniel A**; aeronautical & astronautical engineering, from Stevens Institute of Technology, \$44,656, “RT 178: Systems of Systems Analytic Workbench-2017.”

**McCabe, George P** and **Henry, Courtney N**; statistics, from PHS-NIH National Center for Complimentary and Alternative Medicine, \$35,077, “A Simulation Tool to Evaluate Calcium-41 Experimental Study Designs.”

**Mei, Jianguo**; chemistry, from National Science Foundation, \$104,417, “Faculty Early Career Development (CAREER): Impact of Flow-Induced Chain Alignment in Melt-Processed Complementary Semiconducting Polymer Blends.”

**Mengiste, Tesfaye D**; botany & plant pathology, from Rural Development Administration, \$12,656, “Transcriptional Systems in Plant Responses to Pathogens-Grant 208332.”

**Mengiste, Tesfaye D**; botany & plant pathology, from Kansas State University, \$221,660, “Genetic Improvement of Sorghum for Resistance to Fungal Pathogens.”

## Meyer to Prokopy

**Meyer, Terrence R; Goldenstein, Christopher S; Gunduz, Ibrahim E; Slipchenko, Mikhail N; Son, Steven F and Bane, Sally P;** mechanical engineering, aeronautical & astronautical engineering, from Defense Threat Reduction Agency, \$149,854, “Mhz-Rate Burst-Mode Spectroscopy and Imaging of Temperature and Species in Post-Detonation Fireballs.”

**Milkoreit, Manjana;** political science, from Purdue University, \$35,000, “How to Design the ‘global Stocktake’ – Making or Breaking the International Climate Change Regime.”

**Minton, David A;** earth & atmospheric sciences, from Arizona State University, \$88,618, “Stop Hitting Yourself: Did Most Terrestrial Impactors Originate from Terrestrial Planets? (Amendment 1); Grant 108392.”

**Mishra, Dharmendra K;** food science, from Cockram, Joshua J, \$100, “Multi Sponsored Gift.”

**Mohammed, Sulma I; Mittal, Suresh K and Rajwa, Bartlomiej P;** Cancer Research Center, comparative pathobiology, basic medical science, from PHS-NIH National Cancer Institute, \$151,706, “Understanding Breast Cancer Metastasis to Lymph Node.”

**Mohammed, Sulma I;** comparative pathobiology, from PHS-NIH National Cancer Institute, \$50,363, “Understanding Breast Cancer Metastasis to Lymph Node.”

**Monroe, James S and Deering, Amanda J;** field extension educators, food science, from Indiana State Department of Agriculture, \$104,500, “Identification of Food Safety Best Practice for Indiana Cantaloupe Production.”

**Moseson, Alexander J; Arola, Heidi and Burniske, Gary R;** engineering administration engineering experiment, Executive Vice President for Research and Partnerships, chemical engineering, from International Research & Exchange Board, \$150,000, “Mandela Washington Fellowship.”

**Mustillo, Thomas J and Deshmukh, Abhijit V;** political science, industrial engineering, from Purdue University, \$20,000, “The Dynamics of Party Competition with Non-Policy Strategies.”

**Mutchler, Jane F;** management – Calumet campus, from Legacy Foundation, Inc., \$7,900, “Gary Coding Bootcamp.”

**Nagy, Zoltan;** chemical engineering, from Boehringer Ingelheim GmbH, \$62,500, “Development of an Integrated Crystallization Study Platform (ICSP).”

**Neary, Michael and Tower, Jason E;** animal sciences, Southern Indiana-Purdue Agricultural Center, from National Sheep Industry Improvement Center, \$16,622, “Establishment of a Hair Sheep Flock for Research and Education in Indiana and Kentucky.”

**Neumeister, Norbert and Hacker, Thomas J;** physics, computer & information technology, from Princeton University, \$223,401, “U.S. Compact Muon Solenoid (CMS) Group at Purdue University for Activities Related to the US CMS Software & Computing Subsystem.”

**Newton, Jill A;** curriculum and instruction, from University of Southern Indiana, \$3,000, “Creating Algebra Teaching Communities for Hoosiers (CATCH) – Year 2.”

**Niser, John C;** consumer & family sciences – Fort Wayne campus, from Institut De Tourisme Et Hotellerie, \$5,000, “HSD Consortium.”

**Niyogi, Devdutta S; Biehle, Donald J and Scheeringa, Kenneth L;** agronomy, agriculture – administration, from Mary S. Rice Farm Estate, \$249, “Maintenance and Improvement of Purdue Agricultural Centers Weather Station ... Network – 2016.”

**Norman, Eric M and Niser, John C;** Dean of Students – Fort Wayne campus, consumer & family sciences – Fort Wayne campus, from AWS Foundation, \$65,000, “The Bridges to Education and Careers for Student with Intellectual Disabilities Program (a.k.a Bridges Program).”

**O'Donnell, Michael J;** field extension educators, from Indiana State Department of Agriculture, \$10,000, “Small Farms Conference Support 2017.”

**Okuniewski, Maria A;** materials engineering, from Belgian Nuclear Research Centre, \$60,902, “Joint Research Agreement within the Framework of the PhD for Alicia Raftery.”

**Padfield, Jon R;** Columbus Polytechnic, from Indiana Department of Transportation, \$51,581, “SPR-4158-Implementation of Lean Business Processes for Indiana Department of Transportation (INDOT) Maintenance (Training and Tracking Process Improvements).”

**Paniagua Perez, Guillermo;** mechanical engineering, from Rolls-Royce, Inc., \$712,000, “Small Core Turbine Testing.”

**Pastakia, Sonak D;** pharmacy practice, from University of Warwick, \$907, “Ethnic Specific Risk Stratification in Early Pregnancy for Identifying Mothers at Risk of Gestational Diabetes Mellitus in India and Kenya, Amendment 1.”

**Pastakia, Sonak D;** pharmacy practice, from Mount Sinai School of Medicine, \$21,142, “Bridging Income Generation with Group Integrated Care.”

**Payer, Mathias J and Xu, Dongyan;** computer science, from Office of Naval Research, \$175,000, “Towards Transformation-Based Legacy Software Fitness: Usage-Driven Binary Debloating and Hardening.”

**Pekny, Joseph F;** chemical engineering, from Pioneer Oil Company, \$464,948, “Funding for Director of Unconventional Energy, Nathan Schulthesis.”

**Peroulis, Dimitrios;** electrical & computer engineering, from Indiana Microelectronics LLC, \$76,000, “X-Band Tunable Notch Filters.” (a Discovery Park award – Birck Nanotechnology Center)

**Perrault, Evan K and Walenga, Gail A;** communication, Purdue University Student Health (PUSH)/Counseling and Psychological Services (CAPS)/Student Wellness, from Saremi Health & Wellness Foundation, \$500, “Health E Fund.”

**Pourpoint, Timothee L;** aeronautical & astronautical engineering, from Japanese Aerospace Exploration, \$122,937, “Physics of Hypersonic Liquid Jets Impingement.”

**Pratt, David M;** education, from Indiana Campus Compact, \$2,250, “Developing Online Resources for Early Childhood School Readiness Assessments.”

**Prokopy, Linda S;** forestry & natural resources, from The Nature Conservancy, \$86,418, “Saginaw Bay Evaluation Year 2.”

**Prokopy, Linda S;** forestry & natural resources, from U.S. Geological Survey, \$11,891, “National Institutes for Water Resources FY 2017 104(B) Administration.”



## Ratliff to Tomar

**Ratliff, Timothy L;** comparative pathobiology, from Purdue University, \$5,000, "PCCR Director Special Projects."

**Ratliff, Timothy L;** comparative pathobiology, from Purdue University, \$15,000, "PCCR Director Special Projects."

**Rebello, Nobel S;** physics, from Kansas State University, \$316,846, "Research on the Use of Visual Cueing and Feedback to Facilitate Problem Solving."

**Rokhinson, Leonid P;** physics, from National Science Foundation, \$10,469, "Interplay Between Strongly Correlated Quantum Hall States and Superconductivity."

**Rompf, Tiark;** computer science, from Google Inc, \$84,787, "Google 2017 Faculty Research Award."

**Rossmann, Michael G;** biological sciences, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$638,825, "Structural Studies of Bacteriophage T4 and Their Potential Medical Applications."

**Sadeque, Sabiha;** computer & information technology, from Purdue University, \$29,130, "FY16,17 Purdue Research Foundation (PRF) Research Grant."

**Salgado, Rodrigo; Prezzi, Monica and Perissin, Daniele;** civil engineering, from Indiana Department of Transportation, \$15,000, "Verification of Bridge Foundation Design Assumptions and Calculations."

**Sanson, Jeffrey J;** agricultural economics, from Indiana Council for Economic Education, \$57,881, "Smart Indiana: Financial Literacy Project."

**Savaiano, Dennis A;** foods & nutrition, from The A2 Milk Company, \$60,000, "Savaiano Voluntary Support."

**Scacco, Joshua M;** communication, from University of Texas at Austin, \$21,385, "Engaging News Project Election Engagement."

**Scalo, Carlo;** mechanical engineering, from Kord Technologies Inc, \$217,000, "Vortex Preserving and Consistent Large Eddy Simulations with for Naval Applications."

**Schinckel, Allan P;** animal sciences, from The Hanor Company of Wi, LLC, \$1,500, "Continental Grains Research."

**Schoenlein, William E and Durkes, Abigail C;** biomedical engineering, comparative pathobiology, from Cook Research Incorporated, \$180,824, "Pre-Clinical Device Testing Agreement; Studies CI-HMTQ, CI-SPPK, REG-PLAS, CI-SPA1, CI-TJLB, and POC."

**Schultheiss, Nathan C;** chemical engineering, from Pioneer Oil Company, \$94,278, "Funding for EOR Lab Manager, Rituraj Borghain."

**Scott, David E;** Indiana State Chemist, from Environmental Protection Agency, \$377,267, "FY 2017 EPA Pesticide Cooperative Agreement."

**Scutari, Gesualdo;** industrial engineering, from BAE Systems Advanced Technologies, Inc., \$69,500, "Parallel and Distributed Algorithms for Neural Networks."

**Scutari, Gesualdo;** industrial engineering, from Office of Naval Research, \$115,753, "Distributed Optimization Methods for Non-convex In-Network Big Data Analytics."

**Sen, Shreyas;** electrical & computer engineering, from National Science Foundation, \$175,000, "CRII: Software and Hardware Foundations (SHF): IMPLANALYTICS: Smart Implantable with In-Sensor Analytics and Body Coupled Power/Data Transfer."

**Sharp, Nathan D; Tang, Tian and Goodsell, Johnathan E;** Composites Manufacturing and Simulations Center, aeronautical & astronautical engineering, from Institute for Advanced Composites Manufacturing Innovation, \$3,753, "Task 4.2 Thermoplastic Composite Development for Wind Turbine Blades."

**Sheehan, Amy H;** pharmacy practice, from Johnson & Johnson, Inc., \$115,974, "FDA/Purdue/ Janssen Scientific Affairs Drug Advertising and Promotion Pharmaceutical Fellowship."

**Shie, Wesley R;** continuing studies – Fort Wayne campus, from Office of Small Business and Entrepreneurship, \$189,735, "Northeast Indiana Small Business Development Center CY 2017 – Federal."

**Shie, Wesley R;** continuing studies – Fort Wayne campus, from Office of Small Business and Entrepreneurship, \$66,213, "Northeast Indiana Small Business Development Center CY 2017 – State."

**Shih, Tom I;** aeronautical & astronautical engineering, from Ames Laboratory, \$80,000, "Computational Analysis of Advanced Cooling Strategies for High-Efficiency and Long-Service Life Turbines, Amendment 23; [Grant 104396]."

**Spafford, Eugene H;** computer science, from Eli Lilly and Company, \$60,000, "Center for Education and Research in Information Assurance and Security (CERIAS) Voluntary Support."

**Sudhoff, Scott D;** electrical & computer engineering, from Florida State University, \$201,256, "Purdue 2017-2021 Esrdc Efforts, Amendment 2; Grant 108689."

**Szpankowski, Wojciech;** computer science, from National Science Foundation, \$5,000,000, "Emerging Frontiers of Science of Information."

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

**Tao, Weiguo A;** biochemistry, from Tymora Analytical Operations, LLC, \$115,000, "Developing Novel RPPA for the Detection of Metastatic Prostate Cancer."

**Tay, Sien Chieh;** psychological science, from University of Pennsylvania, \$50,000, "Performance Task Measures of Self-Control and Grit."

**Thomovsky, Elizabeth J; Hon, Marcelle; Brooks, Aimee C and Johnson, Paula A;** veterinary clinical science, from The Winn Feline Foundation, \$11,666, "Cryopreservation of Feline Red Blood Cells Using Glycerol and Hydroxyethyl Starch Solutions."

**Thompson, David H;** chemistry, from Cornell University, \$111,312, "Modulation of Lipid Bisretinoids Clearance with Beta-Cyclodextrins."

**Tomar, Vikas and Gunduz, Ibrahim E;** aeronautical & astronautical engineering, from Vanderbilt University, \$120,000, "Multiscale Experiments and Modeling of the Dynamic Energetic Material Failure Including Stochastic Interfaces, Amendment 3 (Grant 107641)."

## Toner to Williams

**Toner, Emily C;** field extension educators, from Indiana State Department of Agriculture, \$57,900, “Purdue Urban Farm Incubator Network.”

**Tong, Yunjie;** biomedical engineering, from Brain & Behavior Research Foundation, \$17,222, “Multimodal Functional Brain Imaging Study of Response to Repetitive Tms (rTMS) Treatment of Major Depression.”

**Trice, Rodney W and Youngblood, Jeffrey P;** materials engineering, from Army Research Office, \$84,500, “Forming Transparent Ceramics via Alignment of Alpha- Al<sub>2</sub>O<sub>3</sub> Platelets: a Fundamental Investigation and Forming Study.”

**Tu, Manghui and Trekles, Anastasia M;** computer information technology – Calumet campus, education, from National Security Agency, \$27,250, “Gencyber Summer Camp for High School Teachers in Chicago Metropolitan Area.”

**Tuinstra, Mitchell R; Weil, Clifford F and Dilkes, Brian;** agronomy, biochemistry, from Kansas State University, \$133,428, “Trait Development Pipeline for Food and Feed Value in Sorghum.”

**Turner, Maria H; Dougan, Janice M and Brothers, Meagan;** field extension educators, from Toyota Motor Manufacturing Inc., \$2,000, “Eat, Play, Grow Creative Activities for a Healthy Start.”

**Umulis, David M;** agricultural & biological engineering, from Indiana University, \$88,626, “Development and Improvement of Tissue Simulation Environment Compucell3D.”

**Underwood-Gregg, Diana L; Higgason, Melissa J and Kraft, Roger L;** mathematics, computer science & statistics – Calumet campus, from Indiana Department of Education, \$80,271, “Supporting Inquiry in Mathematics and Science via Simulations (SimsVSims).”

**Vacca, Andrea;** agricultural & biological engineering, from Rolls-Royce Corporation, \$64,700, “Simulation of a Fuel Pump for Aero-Engines Using Hygesim.”

**Veile, Amanda J;** anthropology, from Purdue University, \$35,000, “Biology and Socioecology of Birth and Early Childhood Maturation Processes: a Semi-Longitudinal Study of Ycatec Maya Subsistence Farmers.”

**Vyn, Tony J;** agronomy, from Yara Phosyn Ltd, \$20,000, “Agricultural Cropping Systems.”

**Wachs, Juan P and Popescu, Voicu S;** industrial engineering, computer science, from Army Medical Research Acquisition Activity, \$964,617, “See-What-I-Do: Increasing Mentor and Trainee Sense of Co-Presence in Trauma Surgeries with the STAR Platform -.”

**Wagner, Robert G;** forestry & natural resources, from U.S. Forest Service, \$2,310, “Data Analysis of Nextgeneration Sequencing Results with Acacia Koa.”

**Wagner, Robert G;** forestry & natural resources, from Indiana Arborists Association, Inc., \$11,250, “Indiana Arborists Association, Inc.”

**Weaver, Connie M;** foods & nutrition, from Tate & Lyle Ingredients Americas, Inc., \$59,672, “Weaver Tate & Lyle.”

**Weaver, Connie M;** foods & nutrition, from The A2 Milk Company, \$25,000, “Multi Sponsored Gift.”

**Weaver, Connie M; Byrn, Stephen R; Campbell, Wayne W; Leidy, Heather J; McCabe, George P; Mesecar, Andrew D; Ratliff, Timothy L; Story, Jon A; Wodicka, George R; Brightman, Andrew O; Freeman, Lynetta; Gavin, Timothy P; Park, Kinam; Savaiano, Dennis A and Teegarden, Dorothy;** foods & nutrition, industrial & physical pharmacy, science – administration, biochemistry, Cancer Research Center, biomedical engineering, veterinary clinical science, health & kinesiology, Bindley Bioscience Center, health and human sciences, from Indiana University Purdue University at Indianapolis, \$922,847, “Clinical and Translational Sciences Institute (CTSI) – Yr. 4 Parent Record.” (a Discovery Park award – Bindley Bioscience Center)

**Weaver, Connie M;** foods & nutrition, from Pfizer Inc, \$6,000, “Corporate Affiliates Fund.”

**Weaver, Connie M and Story, Jon A;** foods & nutrition, from Indiana University Purdue University at Indianapolis, \$94,963, “Clinical and Translational Sciences Institute (CTSI) – Training Grant Year 4.” (a Discovery Park award – Bindley Bioscience Center)

**Weibel, Justin A and Garimella, Suresh V;** mechanical engineering, from Naval Surface Warfare Center Indian HD Div, \$140,161, “Evaluation of the Effects of Dynamic and Nonuniform Operation of Radar-Frequency Electronics on High-Power-Density Thermal Management Strategies; Modification 3; Grant 108220.”

**Weibel, Justin A;** mechanical engineering, from Toyota Motor Manufacturing Inc., \$149,524, “A Two-Layer Evaporator Wick Structure for Area-Scalable High-Heat-Flux Hotspot Spreading with Vapor Chambers, Amendment 2; (Grant 209304).”

**Weiner, Andrew M;** electrical & computer engineering, from Optical Society of America, \$1,250, “The Optical Society – Voluntary Support.”

**Wendt, Michael K;** medicinal chemistry & molecular pharmacology, from Metavivor Research and Support Inc, \$40,000, “Targeting Growth Factor Receptor Discordant Metastases.”

**Wetzel, Todd E;** purdue convocations, from Arts Midwest, \$2,000, “Manual Cinema.”

**Whitacre, Kristi R;** field extension educators, from Wabash Valley Community Foundation, \$2,100, “Purdue Extension – Leadership Vigo County.”

**Williams, Rod N;** forestry & natural resources, from Evansville Zoological Society, \$1,000, “Voluntary Support.”

**Williams, Rod N;** forestry & natural resources, from Indiana Academy of Science, \$2,963, “Investigating Hellbender Immunity and the Advantages of Environmental Microbe Exposure Prior to Reintroduction.”

**Williams, Rod N;** forestry & natural resources, from Cryptobranchid Interest Group, \$984, “Investigating Hellbender Immunity and the Advantages of Environmental Microbe Exposure Prior to Reintroduction.”

**Williams, Rod N;** forestry & natural resources, from Indiana Department of Natural Resources, \$59,900, “A Non-Invasive Environmental DNA Approach to Detect Mudpuppies (Necturus Maculosus).”



## Wise to Zollner

**Wise, Kiersten A;** botany & plant pathology, from Southern Illinois University, \$20,000, “Seedling Diseases: Biology, Management, and Education.”

**Wise, Kiersten A;** botany & plant pathology, from Ohio State University, \$30,000, “Characterization of Phytophthora Sojae and Phytophthora Sansomeana Populations in the North Central Region and an Assess.”

**Woloshuk, Charles P** and **Mengiste, Tesfaye D;** botany & plant pathology, from National Corn Growers Association, \$20,000, “Transgenic Expression of a Major Plant Immunity Gene to Reduce Aflatoxin Contamination.”

**Wynkoop, Ryan D;** agriculture – administration, from Kansas State University, \$9,462, “2017 Air Force Camp Grant.”

**Xu, Dongyan; DeLaurentis, Daniel A; Grama, Ananth Y; Hwang, Inseok; Qu, Ming** and **Spafford, Eugene H;** computer science, aeronautical & astronautical engineering, civil engineering, from Purdue University, \$300,000, “Towards Cyber-Physical Vetting of Critical Infrastructures.”

**Ye, Peide;** electrical & computer engineering, from Army Research Office, \$25,000, “Ballistic Phosphorene Transistor.”

**Yu, Denny;** industrial engineering, from University of Cincinnati – Education and Research Center, \$8,000, “Ergonomics in Veterinary Care.”

**Zavattieri, Pablo D;** civil engineering, from University of California-Riverside, \$211,545, “Convergent Evolution to Engineering: Multiscale Structures and Mechanics in Damage Tolerant Functional Bio-Composite and Biomimetic Materials, Amendment 3; Grant 107466.”

**Zentner, Michael G;** ITaP Research Computing (RCAC), from Leidos, \$14,591, “Establishing a Biomedical Citizen Science Hub for the National Cancer Institute.”

**Zhang, Xiangyu** and **Xu, Dongyan;** computer science, from SRI International, \$256,993, “Transparent Computing; Amendment 2, Grant 107835.”

**Zhang, Zhong-Yin;** medicinal chemistry & molecular pharmacology, from National Institutes of Health, \$481,271, “Development of SHP2 Inhibitors for Targeted Anti-Cancer Therapy.”

**Zollner, Patrick A; Dacunto, Laura E** and **Carlson, Donald E;** forestry & natural resources, from Indiana Department National Research Division of Fish & Wildlife, \$59,527, “Understanding Resource Use by Northern Long Eared Bat in Fragmented Wooded Landscapes of Northern Indiana.” ■

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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). ■