

DIMENSIONS *of* DISCOVERY

Sponsored Program Awards

July 2019

Agrawal to Bolin

Agrawal, Rakesh; Tuinstra, Mitchell R; Bermel, Peter A; Brouder, Sylvie M; Felisberto Martins Ribeiro, Bruno; Gitau, Margaret W and Sesmero, Juan P; chemical engineering, agronomy, electrical & computer engineering, computer science, agricultural & biological engineering program, agricultural economics, from National Science Foundation, \$1,402,276, "INFEWS/T2: Solar Solutions for Food, Energy and Water Systems (S2FEWS)."

Ajuwon, Kolapo; animal sciences, from Adisseo, \$55,911, "Environmental Effects on Efficacy of Carbohydrase Admixture (Xylanase-Arabinofuranosidase and B-Glucanase) in Growing Pigs Fed Wheat-Based Diet; Amendment 2; Grant 40002530."

Alexeenko, Alina; aeronautics & astronautics, from Pfizer Inc, \$10,000, "LyoHub Consortium (Pfizer)."

Alexeenko, Alina; aeronautics & astronautics, from Janssen Research and Development, \$10,000, "LyoHub Consortium (Pfizer)."

Alexeenko, Alina; aeronautics & astronautics, from Evonik Corporation, \$10,000, "LyoHub Consortium (Evonik)."

Alexeenko, Alina; aeronautics & astronautics, from Baxter Medical Products R & D, \$10,000, "LyoHub Consortium (Baxter Medical)."

Alexeenko, Alina; aeronautics & astronautics, from Pfanstiehl, \$10,000, "LyoHub Consortium (Pfanstiehl)."

Allebach, Jan P; electrical & computer engineering, from Hewlett Packard, \$75,000, "Embedding of Data on 3-D Surfaces."

Allebach, Jan P; electrical & computer engineering, from Mime, Inc, \$18,946, "Tools for Analysis of Skin Color from Portrait Photos and Recommendations for Makeup Color and Fashion Accessory Colors."

Allert, Beate I; language & culture, from International Institute of Education, \$18,216, "Foreign Fulbright Pakistan – Muhammad Hassan Qadeer Butt."

Ardekani, Arezoo Motavalizadeh; mechanical engineering, from Purdue University F N Andrews Fellowship, \$31,904, "Abhijit Dandekar, Raj."

Arola, Heidi; Office of Corporate and Global Partnerships administration, from Andhra University, \$267,000, "Activity Agreement with Andhra University."

Arola, Heidi; Office of Corporate and Global Partnerships administration, from Sri Venkateswara University, \$267,000, "Activity Agreement with Sri Venkateswara University."

Bagchi, Saurabh; electrical & computer engineering, from Sandia National Laboratories, \$30,943, "Testing Embedded System Firmware through Fuzzing and Symbolic Execution."

Bahr, David F; materials engineering, from George Washington Carver Fellowship, \$26,527, "Deneke, Naomi."

Bahr, David F; materials engineering, from Purdue University F N Andrews Fellowship, \$31,904, "Marconie, Tess D."

Basaran, Osman A; chemical engineering, from Acutech Group, Inc, \$5,000, "Purdue Process Safety and Assurance Center(P2SAC)."

Beckerman, Janna L; botany & plant pathology, from BASF Corporation, \$4,000, "Fungicide Trials for Ornamentals."

Berger, Edward J; DeBoer, Jennifer J and Rhoads, Jeffrey Frederick; engineering education, mechanical engineering, from National Science Foundation, \$2,504,959, "IUSE:EHR:ICT Propagation, Research, and Evaluation of an Educational Innovation in Multiple Settings with a Focus on the Role of Institutional Culture."

Bergeson, Scott M; biology, from Ball State University, \$10,781, "Proposal to Track Indiana Bats on Sparta Training Area."

Bertino, Elisa; computer science, from Smart Information Flow Technologies, \$113,468, "Neutron Phase II."

Bertino, Elisa; computer science, from Schlumberger Foundation, \$29,232, "Schlumberger Foundation Faculty for the Future Program-Shagufta Mehnaz."

Bhave, Sunil A; electrical & computer engineering, from University of Chicago, \$126,394, "Mechanical Control of Spin-States in Silicon Carbide; Amendment 6; Grant 13000403."

Bhunja, Arun K; food science, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, "Gallina, Nicholas L."

Bilionis, Ilias; mechanical engineering, from University of Notre Dame, \$111,823, "Physics-Informed Learning for Multiscale Systems (Pilgrims)-Phase I and II; Amendment 1."

Bilionis, Ilias; mechanical engineering, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, "Alberts, Alexander."

Blankenship, Bonnie T; health & kinesiology, from Indiana Department of Education, \$90,500, "PALS Camp."

Bobet, Antonio; civil engineering, from Purdue University F N Andrews Fellowship, \$31,904, "Han, Kyungsoo."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Showalter Trust, \$5,000, "FY 20 – Showalter Scholar."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue University, \$42,814, "FY18-19 Purdue Research Foundation (PRF) Research Grants (60000019)."

Bolin to Csathy

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$30,657, “19-20 Purdue Research Foundation (PRF) Research Grants (60000025).”

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Showalter Trust, \$9,366, “FY 17-18 Showalter Awards Young Investigator (41000370).”

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$153,285, “19-20 Purdue Research Foundation (PRF) Research Grants (60000025).”

Bolshakova, Virginia L J; curriculum & instruction, from U.S. Department of Education, \$3,500,000, “Indianas Gear Up Program.”

Boudouris, Bryan W; chemical engineering, from Sandia National Laboratories, \$60,000, “Novel Propagation Barriers.”

Braun, James; mechanical engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, “Kim, Junyoung.”

Braun, James E; mechanical engineering, from Whirlpool Corp, \$25,000, “Multi-Sponsor Voluntary Support – James Braun.”

Brightman, Andrew O; biomedical engineering, from Indiana University Purdue University at Indianapolis, \$162,622, “NRSA Training Core.” (a Discovery Park award – Bindley Bioscience Center)

Brouder, Sylvie M and **Volenc, Jeffrey J**; agronomy, from National Institute of Food & Agriculture, \$499,876, “The Nutrinet Knowledgebase for Synthesis of North American Tile Drainage Research.”

Brown, Nadia E; political science, from National Science Foundation, \$210,103, “Collaborative Research: #Metopolisci: Leveraging a Professional Association to Address Sexual Harassment in Political Science.”

Buganza Tepole, Adrian; mechanical engineering, from National Science Foundation, \$189,786, “Collaborative Research: An in Vivo/ in Silico Approach to Delineate the Effect of Age on Pressure Ulcer Susceptibility.”

Bullock, Darcy M and **Li, Haoxiang Howell**; civil engineering, from Indiana Department of Transportation, \$373,747, “SPR-4440: an Integrated Critical Information Delivery Platform for Smart Segment Dissemination to Road Users.”

Butzke, Christian E; wine grape, from Jesse Kiste, \$300, “Wine Grape Program.”

Buzzard, Gregory T; mathematics, from Purdue University F N Andrews Fellowship, \$30,428, “Stewart, Henry Howard.”

Buzzard, Gregory T; mathematics, from Purdue University F N Andrews Fellowship, \$20,065, “Weinert, Alexandra E.”

Byrn, Stephen Robert and **Clase, Kari L**; industrial & physical pharmacy, agricultural & biological engineering program, from Merck Company Foundation, \$47,564, “Merck Fellows Application for Tanzania – Business Plan Development.”

Byrn, Stephen Robert; industrial & physical pharmacy, from National Institute for Pharmaceutical Technology and Education, \$50,000, “Formulation of Hydrocodone Bitartrate Opioid Drug Product Expected to Have Similar Rate and Extent of Release as Hysingla Intact Tablet But Designed to Be Inferior Product When Chewed.”

Caffee, Marc W; physics & astronomy, from National Aeronautics and Space Administration, \$152,000, “Cosmic-Ray-Produced Radionuclides from Returned Samples as Indicators of Dynamic Surface Regolith Processes: Improvements in Ams Analytical Techniques.”

Cai, Hua; engineering education, from Purdue University F N Andrews Fellowship, \$30,428, “Hardaway, Kendrick C.”

Cai, Hubo; civil engineering, from International Institute of Education, \$19,340, “Fulbright Scholarship for MS Beyza Kiper.”

Cai, Hubo; civil engineering, from Purdue University F N Andrews Fellowship, \$31,904, “Yang, Liu.”

Capano, Michael A; electrical & computer engineering, from Purdue University F N Andrews Fellowship, \$21,527, “Fitzgerald, Bradley Jacob.”

Capano, Michael A; electrical & computer engineering, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, “Avalos Baddouh, Cesar Octavio Manuel.”

Capano, Michael A; electrical & computer engineering, from Purdue University F N Andrews Fellowship, \$21,527, “Lin, Frank.”

Capano, Michael A; electrical & computer engineering, from Purdue University F N Andrews Fellowship, \$21,527, “O’Malley, Nathan P.”

Cappelleri, David J; mechanical engineering, from George Washington Carver Fellowship, \$36,954, “Rojas, Salvador.”

Carlson, Erica; physics & astronomy, from Research Corp for Science Advancement, \$50,000, “Understanding Surface Probe Images in Strongly Correlated Quantum Matter via Machine Learning.”

Carroll, Chad C and **Patel, Shivam H**; health & kinesiology, from American College of Sports Medicine, \$4,966, “Moderate Treadmill Exercise to Improve Tendon Healing in Diabetes.”

Chang, Leifu; biological sciences, from Showalter Trust, \$75,000, “Molecular Mechanism of the Augmin Complex in Mitotic Spindle Assembly.”

Christian, John A; comparative pathobiology, from Western University of Health Sciences, \$5,655, “Cytology Resource Center (40001198).”

Claridge, Shelley A and **Calve, Sarah**; biomedical engineering, from Showalter Trust, \$75,000, “Transforming the Cell Membrane to Guide Cell Growth.”

Conroy, Renee M; history & philosophy, from Indiana Humanities Council, Inc., \$2,000, “Womens Voices – A Celebration of Womens History Month.”

Cooks, Robert Graham; chemistry, from National Science Foundation, \$467,540, “Accelerated Reactions in Droplets and Thin Films : Surface Effects and Analytical Implications.”

Cosier, Richard A; organizational behavior & human resources, from Foundation Center-Cleveland, \$4,638, “2019 Increase: Kranert School of Managements Graduate Program to Provide Scholarships to First-Year Students Based on Academic Merit (41000236).”

Csathy, Gabor A; physics & astronomy, from National Science Foundation, \$406,558, “Complex Electron Solids Forming in the Two-Dimensional Electron Gas.”

Cui to Gowher

Cui, Meng; electrical & computer engineering, from PHS-NIH National Institute Neurological Disorders and Stroke, \$149,613, “High-Throughput 3-D Random Access Three-Photon Structural and Functional Imaging.”

Davis, Frederick R; history, from Purdue University F N Andrews Fellowship, \$26,027, “Boyer, Yvonne Alexine.”

Davis, John M; aviation & transportation technology from Woodward FST, \$10,000, “Woodward Test Phase 2.”

DeBoer, Jennifer J and **Madamanchi, Aasakiran;** engineering education, applied research, from Backyard Brains, \$161,000, “PBL for Neurorobots.”

DeLaurentis, Daniel A; Davendralingam, Navindran and **Raz, Ali Khalid;** aeronautics & astronautics, from Washington Headquarters Services, \$120,000, “A System of Systems Approach to Enterprise Analytics Design: Acquisition Support in the Age of Machine Learning and Artificial Intelligence.”

Devabhaktuni, Vijaya Kumar and **Elkin, Colin P;** electrical & computer engineering, from Arcelormittal USA, \$10,000, “Early Concept Exploratory Summer Research: Improvement of Arcelor Mittal Mill Operation through Incorporation of Data Fusion and Machine Learning.”

DeWoody, James Andrew; forestry & natural resources, from Texas A&M Agrilife Research, \$34,946, “Pupfish Population Genomics.”

Dou, Letian and **Boudouris, Bryan W;** chemical engineering, from National Science Foundation, \$116,258, “EAGER: Tuning Performance in Perovskite Thermoelectric Devices with Organic Radical Dopants.”

Duvall, John N; English, from Johns Hopkins University, \$15,282, “Journal of Modern Fiction Studies.”

Ebert, David S; Hands, Nicole M; Rasmus, Joel A and **Rogers, Marcus K;** electrical & computer engineering, computer information technology, from CRDF Global, \$154,543, “Ukraine – Purdue Center for Education and Research in Information Assurance and Security (CERIAS) Cybersecurity Studytour and Curriculum Development.” (a Discovery Park award – Center for Education and Research in Information Assurance and Security)

Eddy, Michael M; digital education, from Purdue University F N Andrews Fellowship, \$30,428, “Okhai, Disha C.”

Elliott, Daniel S; electrical & computer engineering, from National Science Foundation, \$303,183, “Precision Measurement of Parity Non-Conserving, Weak-Force Induced Transitions in Atomic Cesium.”

Farkas, Brian E; food science, from Circle City Kombucha, \$80, “Multi Sponsored Gift Fermentation.”

Farkas, Brian E; food science, from Land Locked Hops Inc, \$50, “Multi Sponsored Gift Fermentation.”

Felisberto Martins Ribeiro, Bruno; computer science, from Raytheon, \$324, “Discovering Network Processes in Time-Evolving Networks.”

Finley, John P; physics & astronomy, from Ross Graduate Fellowship-Assistantship, \$20,065, “Khalid, Bilal.”

Finley, John P; physics & astronomy, from Purdue University F N Andrews Fellowship, \$20,065, “Hunter, John Martin.”

Finley, John P; physics & astronomy, from Purdue University F N Andrews Fellowship, \$20,249, “Li, Kangle.”

Finley, John P; physics & astronomy, from Purdue Doctoral Program, \$20,065, “Cadiante, Jeremy Scott.”

Finley, John P; physics & astronomy, from Ross Graduate Fellowship-Assistantship, \$20,065, “Robertson, Charles William.”

Finley, John P; physics & astronomy, from Ross Graduate Fellowship-Assistantship, \$20,064, “Shen, Kunhong.”

Forman, Michele R; nutrition science, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, “Edwards, Cristiana Kay.”

Forman, Michele R; nutrition science, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, “Clapp, Anna R.”

Forman, Michele R; nutrition science, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, “Schmitz, Kendal Mayer.”

Frisbee, Marty D; earth, atmospheric & planetary sciences, from National Science Foundation, \$374,618, “Collaborative Research: Quantifying the Contribution of Alpine Glacier Meltwater to Mountain-Block Recharge Using Microbiological Markers and Environmental Isotopes.”

Garcia Bravo, Jose M; French, Richard Mark and **Newell, Brittany A;** engineering technology, from Purdue Research Foundation, \$409,259, “Lateral Micro-Drilling Autonomous Robotic System.”

Garcia Bravo, Jose M; French, Richard Mark and **Newell, Brittany A;** engineering technology, from Pioneer Oil Company, \$144,642, “Lateral Micro-Drilling Development Corporation.”

Garner, Allen L; nuclear engineering, from Purdue Doctoral Program, \$31,904, “Darr, Adam Michael.”

Gaskill, Brianna N; animal sciences, from Agricultural Research Service, \$33,273, “Determining the Thermal Preference of Weanling Pigs.”

Giannios, Dimitrios and **Zhang, Haocheng;** physics & astronomy, from National Science Foundation, \$174,617, “Collaborative Research: WoU-MMA: Multi-Scale and Multi-Messenger Modeling of Jets in Active Galactic Nuclei.”

Ginzel, Matthew D; forestry & natural resources, from U.S. Forest Service, \$50,000, “Scolytine Beetles Colonizing TCD Symptomatic Juglaus Nigra.”

Goldberg, David; mathematics, from National Science Foundation, \$50,000, “2019 Field of Dreams Conference.”

Goldenstein, Christopher S; mechanical engineering, from National Science Foundation, \$91,492, “Characterization of Reactor-Assisted Burner Flames Using Ultrafast Infrared Spectroscopy.”

Gomez Diaz, Hector; mechanical engineering, from Purdue University F N Andrews Fellowship, \$31,904, “Nandy, Aniruddha.”

Gowher, Humaira; biochemistry, from PHS-NIH National Institute of General Medical Science, \$320,631, “Regulation of Dnmt3 Activity at Enhancers of Cell Identity Genes During Differentiation.”

Grant to Jiao

Grant, Richard H; agronomy, from Wood Environment & Infrastructure Solutions Inc, \$16,568, “Dry Deposition Monitoring at Vincennes Indiana; Amendment 3.”

Greeley, Jeffrey P; chemical engineering, from 3M General Offices, \$30,151, “Ultrathin Film Catalysts for the Oxygen Reduction Reaction.”

Grigorescu, Elena and Blocki, Jeremiah M; computer science, from National Science Foundation, \$499,202, “CIF: Small: Ultra-Efficient Codes for Communication and Verifiable Storage.”

Grigorescu, Elena; computer science, from National Science Foundation, \$268,072, “AF: Small: New Efficient Algorithms for Complex Data.”

Habib, Ayman F; civil engineering, from International Institute of Education, \$24,144, “Fulbright Scholarship for Mr. Wildan Firdaus.”

Handwerker, Carol A; materials engineering, from Ames Laboratory, \$500,000, “Critical Material Institute Year 6 and 7; Modification 2; Grant 14000382.”

Harbin, Sherry L; Cox, Abigail C and Plantenga, Jeannie M; basic medicine science, comparative pathobiology, veterinary clinical sciences, from Geniphs LLC, \$53,336, “Biologic Filler for Regenerating Tissue Following Breast Conserving Surgery.”

Hardiman, Brady S; forestry & natural resources, from National Science Foundation, \$240,237, “Collaborative Research: MSA: Incorporating Canopy Structural Complexity to Improve Model Forecasts of Functional Effects of Forest Disturbance.”

Hart, Patricia; language & culture, from Purdue Doctoral Program, \$36,448, “Maldonado, Alan Alberto.”

Hassanein, Ahmed and Sizyuk, Valeryi; nuclear engineering, from U.S. Department of Energy, \$353,889, “Comprehensive Simulation of Various Plasma Transients Effects on Reactor Components and Critical Assessment of Different Mitigation Methods.”

Hertel, Thomas W; agricultural economics, from Stanford University, \$204,862, “A Multi-Model, Multi-Scale Research Program in Stressors, Responses, and Coupled Dynamics at the Energy-Water-Land Nexus and for Concentrated, Interde; Amendment 3; Grant 14000281.”

Hirleman, E Daniel; Mattson, Marifran; Perrault, Evan K and Rogers, Marcus K; Center for Education & Research in Information Assurance and Security (CERIAS), communications, computer information technology, from Rolls-Royce Corporation, \$1,225,142, “Cyber-Readiness Partnership.”

Hoffmann, Stephen R; chemistry, from Purdue Doctoral Program, \$33,419, “Estes, Kiera Monet.”

Hoffmann, Stephen R; chemistry, from Ross Graduate Fellowship-Assistantship, \$30,483, “Vilza, Igi.”

Hoffmann, Stephen R; chemistry, from Ross Graduate Fellowship-Assistantship, \$31,483, “Shahriar, Imrul.”

Hoffmann, Stephen R; chemistry, from Ross Graduate Fellowship-Assistantship, \$30,428, “Liu, Mingxin.”

Hoffmann, Stephen R; chemistry, from Ross Graduate Fellowship-Assistantship, \$30,483, “Muhoberac, Matthew Thomas.”

Hoffmann, Stephen R; chemistry, from Ross Graduate Fellowship-Assistantship, \$30,483, “Kempen, Allison Lea.”

Hook, Tomas O; Carlton, Joshua S and Quagrainie, Kwamena K; forestry & natural resources, Indiana-Illinois Sea Grant, agricultural economics, from National Oceanographic & Atmospheric Administration, \$70,000, “Supplement: A NCRAC-Sea Grant Partnership for Regional Aquaculture Extension Focused on Marketing and Consumer Demand.”

Horgan, Briony H; earth, atmospheric & planetary sciences, from Arizona State University, \$47,898, “Mastcam-Z: A Geologic, Stereoscopic, and Multispectral Investigation for the National Aeronautics and Space Administration (NASA) Mars-2020 Rover Mission.”

Hountz, Randall A; industrial engineering, from Indiana State Department of Health, \$80,000, “Systems Change Partnerships – Quality Improvement Services.” (a Discovery Park award – Regensrief Center for Healthcare Engineering)

Howell, Kathleen; aeronautics & astronautics, from National Aeronautics and Space Administration, \$40,000, “A Numerical Method to Generate Reference Trajectories for Optimization Methods to Support Low-Thrust Mission Design – Robert Pritchett.”

Hrycyna, Christine A; chemistry, from National Science Foundation, \$238,000, “Collaborative Research: Mechanism of Ste24, a Novel Integral Membrane Zinc Metalloprotease that Promotes Catalysis within an Intramembrane Chamber.”

Hu, Jingwei; mathematics, from National Science Foundation, \$87,106, “Faculty Early Career Development (CAREER): Predictive Simulations of Complex Kinetic Systems.”

Hu, Y Charlie and Bertino, Elisa; electrical & computer engineering, computer science, from National Science Foundation, \$29,556, “Icn-Wen: Collaborative Research: Splice: Secure Predictive Low-Latency Information Centric Edge for Next Generation Wireless Networks.”

Huang, Rong; medicinal chemistry & molecular pharmacy, from PHS-NIH National Institute of General Medical Science, \$304,211, “Protein N-Terminal Methylation Mechanisms and Inhibition.”

Hung, Chen-Lung; physics & astronomy, from Air Force Office of Scientific Research, \$135,449, “Long-Range Quantum Magnetism in Atom-Nanophotonic Hybrid Lattices.”

Hwang, Inseok; aeronautics & astronautics, from Intelligent Automation Inc, \$96,440, “Safety Analysis for Evaluating (Safe) Suas.”

Iyer-Pascuzzi, Anjali; botany & plant pathology, from National Science Foundation, \$85,801, “Dynamic Control of Columella Root Cap Cell Loosening and Release in Arabidopsis.”

Jacob, Zubin; electrical & computer engineering, from Department of the Army, \$100,793, “General Model of Single Photon Detection.”

Jafvert, Chad T; civil engineering, from Amideast – Fulbright, \$13,565, “Omar Tantawi Fulbright Scholarship.”

Jahanshahi, Mohammad Reza; civil engineering, from Bentley Systems Inc, \$25,000, “M. Janhanshai Voluntary Support.”

Jiao, Dan; electrical & computer engineering, from Air Force Research Laboratory, \$304,279, “Rapid Response Research (RAPID) Modeling and Analysis Framework for Full-Chip/Package/Board Layout and Parasitic-Driven and Variations-Aware.”

Johnson to Lyutikov

Johnson, William G; botany & plant path, from Monsanto Agriculture Company, \$6,000, "Service Order Number 64."

Johnson, William G; botany & plant path, from Monsanto Agriculture Company, \$9,600, "Service Order Number 62."

Johnson, William G; botany & plant path, from Monsanto Agriculture Company, \$4,500, "Service Order Number 63."

Johnson, William G; botany & plant path, from Monsanto Agriculture Company, \$7,000, "Service Order Number 66."

Johnson, William G; botany & plant path, from Monsanto Agriculture Company, \$7,000, "Service Order Number 65."

Johnson, William G; botany & plant path, from Monsanto Agriculture Company, \$2,500, "Service Order Number 67."

Jones-Hall, Yava L and Cox, Abigail C; comparative pathobiology, from New River Labs, \$391, "Histology-Guided Mass Spectrometry of Melanocytic and Mast Cell Tumors."

Kazemian, Abdolmajid and Chopra, Gaurav; biochemistry, chemistry, from Showalter Trust, \$75,000, "Immune Checkpoint Therapy for Epstein-Barr Virus (EBV) Associated Tumors."

Key, Nicole L; mechanical engineering, from Duke University, \$19,158, "Enhanced Physical Understanding of Forced Response, Inlet Distortion, and Blade Row Interactions in the Purdue 3-Stage Compressor."

Key, Nicole L; mechanical engineering, from Office of Naval Research, \$761,545, "Research on Casing Treatments for Performance Enhancement of High-Speed Fans."

Key, Nicole L; mechanical engineering, from Duke University, \$5,934, "Enhanced Physical Understanding of Forced Response, Inlet Distortion, and Blade Row Interactions in the Purdue 3-Stage Compressor."

Kokini, Jozef L; food science, from Laspau, \$4,997, "LASPAU Scholarship for Cindy Mayorga Perez."

Konieczny, Stephen F; biological sciences, from Purdue University F N Andrews Fellowship, \$30,428, "Lee, Jennifer J."

Labi, Samuel; DeLaurentis, Daniel A; Gkritza, Konstantina; Fricker, Jon D; Mousas, Christos; Pitts, Brandon J and Souders, Dustin J; civil engineering, aeronautics & astronautics, agricultural & biological engineering program, computer graphics technology, industrial engineering, from University of Michigan, \$819,270, "Purdue UTC/CCAT" (a Discovery Park award – Discovery Park Administration)

Lacount, Douglas J; medicinal chemistry & molecular pharmacy, from Washington University, \$271,250, "Structural and Functional Characterization of the Ebola Virus Replication Complex."

Lang, Rafael F and Milisavljevic, Danny; physics & astronomy, from National Science Foundation, \$518,074, "WoU-MMA: Collaborative Research: A Next-Generation Supernova Early Warning System for Multimessenger Astronomy."

Lang, Rafael F; physics & astronomy, from National Science Foundation, \$191,900, "Collaborative Research: Continuation of the Dark Matter Search with XENON1T and its Upgrade XENONnT at LNGS."

Laskin, Julia and Park, Joon Hyeong; chemistry, electrical & computer engineering, from PHS-NIH National Heart, Lung & Blood Institute, \$375,000, "Novel Platform for Quantitative Subcellular Resolution Imaging of Human Tissues Using Mass Spectrometry."

Lee, Chi Hwan; mechanical engineering, from UES Inc., \$50,000, "Defect-Free Integration of Plasmonic Thin Film."

Lee, Hyowon; biomedical engineering, from Samsung Electronics Co., Ltd, \$120,000, "Implantable Neuromonitoring Interface for Personalized Medicine."

Leonard, Laurence B; speech, language & hearing sciences, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$525,328, "Retrieval-Based Word Learning in Specific Language Impairment."

Leonard, Laurence B and Kueser, Justin B; speech, language & hearing sciences, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$45,016, "Comprehension of Passive Sentences in Developmental Language Disorder."

Lewis, Melissa J and Mehra, Jaya M; veterinary clinical sciences, from America College of Veterinary Internal Medicine, Foundation, \$9,270, "The Effect of Omeprazole on the Development of Gastrointestinal Signs and Bleeding in Dogs Treated Surgically for Acute Thoracolumbar Intervertebral Disc Herniation."

Li, Tongcang; physics & astronomy, from Gordon and Betty Moore Foundation, \$25,000, "Multi Sponsor Voluntary Support."

Liceaga, Andrea M; food science, from Impossible Foods Inc., \$2,500, "Multi Sponsored Gift- Sensory."

Liceaga, Andrea M; food science, from M&M Mars, \$4,500, "Multi Sponsored Gift- Sensory."

Lie, Victor D; mathematics, from National Science Foundation, \$250,000, "Topics in Harmonic Analysis: Time-Frequency Analysis and Connections with Additive Combinatorics and PDE."

Lim, Seung-Oe and Huang, Rong; medicinal chemistry & molecular pharmacy, from Showalter Trust, \$75,000, "A New Immunology Drug Development to Combat Acquired Resistance to Cancer Immunotherapy."

Lindemann, Stephen R; food science, from Showalter Trust, \$74,855, "In Vitro and in Silico Models to Identify the Role of Oligosaccharide Metabolism in Enteropathogenesis."

Linnes, Jacqueline C; biomedical engineering, from George Washington Carver Fellowship, \$33,550, "Colbert, Ashlee J."

Lu, Jin; political science, economics, world languages & cultures, from University of Notre Dame, \$65,000, "Chinese Soul in Global Catholicism: Chinese Catholic Intellectuals Before Vatican II (1912-1965)."

Lu, Na and Lynall, Matthew D; civil engineering, management, from National Science Foundation, \$250,000, "Prototyping Thermoelectric Device for Powering Sensors in Pipeline Monitoring."

Lu, Yung-Hsiang; Cappelleri, David J and Yin, Ming; electrical & computer engineering, mechanical engineering, computer science, from National Science Foundation, \$54,997, "CCRI: Planning: Collaborative Research: Low-Power Computer Vision."

Luo, Zhao-Qing and Das, Chittaranjan; biological sciences, chemistry, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$392,206, "Effector-Mediated Ubiquitin Manipulation in Legionella Pneumophila Pathogenesis."

Lyutikov, Maxim Y; physics & astronomy, from National Science Foundation, \$270,628, "Collaborative Research: WoU-MMA: Electrodynamics of Magnetospheric Interaction in Merging Neutron Stars Binaries."

Ma to Oliver

Ma, Jianxin; agronomy, from Indiana Soybean Alliance, \$90,000, "Utilization of Novel Sources of Resistance to Soybean Soil-Borne Diseases."

Mansson, Jan-Anders E; chemical engineering, from Hexagon, \$90,918, "Smart Composites (Smart-C)."

Mason, Rose A; educational studies, from U.S. Department of Education, \$479,602, "Para-Impact: Professional Development with Teacher-as-Coach for Paraeducators of Elementary Students with Moderate-to-Severe Developmental Disabilities."

Mattes, Richard D; public health, from Gelesis, Inc, \$349,440, "Randomized, Controlled, 2 X 2, Cross-Over Metabolic Trial."

Mayes, Amanda S; Purdue Memorial Union, Student Activities and Organizations, Purdue Convocations & Hall of Music Productions, from New England Foundation for the Arts, \$5,000, "NEFA Funding for Sin Salida."

Maynard, Elizabeth T; horticulture & landscape architecture, from Rispens Seeds Inc, \$330, "Research for 1995 Vegetable Variety Trial Program."

McCullough, Bobby G; construction engineering & management, from Indiana Department of Transportation, \$19,992, "SPR-4225 Proposal for the Development of the Return on Investment (ROI) Analysis of the Indiana Department of Transportation (INDOT) Research Program."

McMillan, Sara K; agricultural & biological engineering program, from National Science Foundation, \$51,523, "INFEWS N/P/H2O: Nitrogen and Phosphorus Dynamics in Restored Floodplains of Intensively Managed Watersheds."

McMillan, Sara K; agricultural & biological engineering program, from George Washington Carver Fellowship, \$21,927, "Scarlett, Rachel D."

Mei, Jianguo; chemistry, from National Science Foundation, \$220,887, "Faculty Early Career Development (CAREER): Impact of Flow-Induced Chain Alignment in Melt-Processed Complementary Semiconducting Polymer Blends."

Menekse, Muhsin; engineering education, from U.S. Department of Education, \$332,785, "Enhancing Undergraduate Science, Technology, Engineering & Mathematics (STEM) Education by Integrating Mobile Learning Technologies with Natural Language."

Mengiste, Tesfaye D; botany & plant path, from National Science Foundation, \$780,000, "Plant Immune Signaling Network: Connecting Pathogen Perception, Chromatin Modification and Activation of Immune Responses."

Mesecar, Andrew D; biochemistry, from Ross Graduate Fellowship-Assistantship, \$31,904, "Shukla, Mithila S."

Mesecar, Andrew D; biochemistry, from Purdue University F N Andrews Fellowship, \$31,904, "Lee, Ji Hee."

Meyer, Terrence R; Schneider, Steven P and Slipchenko, Mikhail N; mechanical engineering, aeronautics & astronautics, from Sandia National Laboratories, \$90,000, "Spatially and Temporally Resolved Velocimetry for Hypersonic Flows."

Mickelbart, Michael V; horticulture & landscape architecture, from Ross Graduate Fellowship-Assistantship, \$31,959, "Lopez, Santiago Franco."

Miller, Jeffrey T; chemical engineering, from Argonne National Laboratory, \$15,000, "Catalyst Characterization to Support Catalyst Development for Converting Biomass."

Mishra, Dharmendra K; food science, from Nora Lee Company, LLC, \$300, "Multi Sponsored Gift."

Mishra, Dharmendra K; food science, from Shahn & Kari A Riley, \$50, "Multi Sponsored Gift."

Mishra, Dharmendra K; food science, from Mashed Hot Sauce, LLC, \$75, "Multi Sponsored Gift."

Mishra, Dharmendra K; food science, from Bryan & Randie Essex,, \$50, "Multi Sponsored Gift."

Mishra, Dharmendra K; food science, from Alan S & Rita G Mal-lory, \$50, "Multi Sponsored Gift."

Mishra, Dharmendra K; food science, from Ameriquel Group LLC, \$12,000, "Multi Sponsored Gift."

Mishra, Dharmendra K; food science, from Nathan M Partin, \$225, "Multi Sponsored Gift."

Mishra, Dharmendra K; food science, from Kyle Heiny, \$75, "Multi Sponsored Gift."

Mohammadi, Mohsen and Scofield, Steven R; agronomy, from Agricultural Research Service, \$34,141, "Acquisition of Goods and Services-Steve Scofield."

Mohammadi, Mohsen; agronomy, from Agricultural Research Service, \$83,213, "Genetic Improvement of Grain Yield and Disease Resistance in Wheat."

Morisette, Dallas T; electrical & computer engineering, from Son-risa Research Inc, \$975,963, "A New Class of SiC Power MOSFETs."

Morris, Aaron B; mechanical engineering, from American Chemical Society, \$110,000, "Elucidating the Fluid Dynamics of Non-Spherical Particles."

Morris, Aaron B; mechanical engineering, from Colorado School of Mines, \$165,002, "Economic Long-Duration Electricity Storage by Using Low-Cost Thermal Energy Storage and High-Efficiency Power Cycle."

Nemali, Krishna; horticulture & landscape architecture, from Foreign Agricultural Service, \$49,830, "Development of an Affordable and Efficient Hydroponic or Aeroponic Crop Production Technology for Small-Scale Producers in Egypt and Their Adoption through Extension."

Ngambeki, Busiime Ida; computer information technology, from National Science Foundation, \$238,127, "SaTc: EDU: Collaborative: an Assessment Driven Approach to Self-Directed Learning in Secure Programming (SecTutor)."

Noinaj, Nicholas; biological sciences, from PHS-NIH National Institute of General Medical Science, \$301,027, "Unraveling the Mechanism by Which the Bam Complex Mediates Omp Biogenesis."

O'Donnell, Michael J; field extension, from Becks Superior Hybrids, Inc., \$1,114, "O'Donnell Field Day."

Oliver, Haley F; food science, from Diversey, Inc, \$62,298, "Retail Food Safety Prediction Tool."

Ostaneck to Robicheaux

Ostaneck, Kristine M and **Mishra, Aura Ankita**; human development & family studies, from PHS-NIH National Institute on Drug Abuse, \$37,345, “The Role of Substance Use Trajectory on the Association Between Childhood Maltreatment and Intimate Partner Violence: A Geneenvironment Study.”

Owada, Takashi; statistics, from National Science Foundation, \$57,346, “Random Alegebraic Topology.”

Parkinson, Elizabeth I and **Seleem, Mohamed**; chemistry, comparative pathobiology, from Showalter Trust, \$75,000, “Discovery of Bioactive Natural Products by Inducing Biosynthetic Gene Clusters.”

Patton, Aaron J; horticulture & landscape architecture, from Nufarm Americas Inc., \$8,000, “Patton Multi Sponsored #2 (Orig 301226).”

Patton, Aaron J; horticulture & landscape architecture, from Midwest Regional Turf Foundation, \$9,000, “MRTF Extension & Research.”

Perez-Torres, Carlos J; health sciences, from University of Nebraska-Lincoln, \$49,699, “Synthesis of Metal-Free Magnetic Resonance Imaging Contrast Agents.”

Peroulis, Dimitrios; **Alexeenko, Alina**; **Macheret, Sergey O** and **Semnani, Abbas**; electrical & computer engineering, aeronautics & astronautics, from Office of Naval Research, \$347,926, “Wideband and High-Power Reconfigurable Plasma Matching Network for Compact and Efficient Phased Array Emitters.”

Peterson, Jonathon R; mathematics, from Simons Foundation, \$42,000, “Self-Interacting Random Walks.”

Pienaar, Elsje; biomedical engineering, from Purdue University F N Andrews Fellowship, \$31,904, “Liu, Xiao.”

Pires Dos Santos, Andrea; comparative pathobiology, from Purdue University F N Andrews Fellowship, \$31,904, “Varvil, Mara S.”

Pothen, Alex; computer science, from The Krell Institute, \$5,000, “Caitlin Whitter Fellowship.”

Pourpoint, Timothee L; aeronautics & astronautics, from National Aeronautics and Space Administration, \$71,367, “Preignition Behavior and Combustion Stability of Storable Propellants for Deep Space Missions.”

Pourpoint, Timothee L; aeronautics & astronautics, from National Aeronautics and Space Administration, \$71,367, “Bi-Monopropellants: A Path to Deep Throttling Rocket Engines.”

Pushkar, Yulia N; physics & astronomy, from National Science Foundation, \$450,000, “Advanced Times-Resolved Studies of the O-O Bond Formation Mechanisms: Interplay of the Metal and Ligand Redox Reactivity.”

Qu, Ming; civil engineering, from Oak Ridge National Laboratory, \$39,249, “Development and Modeling of an Innovative Solid Desiccant Dehumanization System.”

Rainey, Katherine Martin; agronomy, from Colfuturo, \$9,378, “Fulbright Laspau Fellow Miguel Angel Lopez Murcia.”

Ramanathan, Shriram and **Roy, Kaushik**; materials engineering, electrical & computer engineering, from Department of the Army, \$474,000, “W911nf-17-S-0002: Plasticity Mechanisms and Neuro-morphic Learning with Correlated Semiconductors.”

Ramirez, Julio Alfonso; civil engineering, from National Science Foundation, \$900,000, “Nheri Network Coordination Office.”

Raymond, Leigh S; political science, from University of Ottawa (Canada), \$6,610, “Greening Growth Partnership.”

Redick, Thomas S; psychological sciences, from National Science Foundation, \$5,000, “Research Experience for Undergraduates (REU) Supplement: Collaborative Research: Testing Individualized Cognitive Training Interventions Based on a Multifaceted Theory of Working Memory.”

Reed, Willie M; veterinary medicine administration, from Indiana Dog Tax, \$6,295, “Indiana State Dog Tax (20000146).”

Remis, Melissa J; anthropology, from Ross Graduate Fellowship-Assistantship, \$20,065, “Guilbault, Kari Anne.”

Remis, Melissa J; anthropology, from Purdue University F N Andrews Fellowship, \$35,944, “Narvaez Rivera, Giselle Marie.”

Remis, Melissa J; anthropology, from Purdue University F N Andrews Fellowship, \$20,263, “Narvaez Rivera, Giselle Marie.”

Ribeiro, Fabio H; chemical engineering, from the Heritage Group, \$60,000, “CISTAR Industrial Consortium (40001938).”

Ribeiro, Fabio H; chemical engineering, from Chevron Chemical Co., \$30,000, “CISTAR Industrial Consortium (40001938).”

Ribeiro, Fabio H; chemical engineering, from BASF Corporation, \$60,000, “CISTAR Industrial Consortium (40001938).”

Ribeiro, Fabio H; chemical engineering, from Tenawa Resource Management, LLC, \$10,000, “CISTAR Industrial Consortium (40001938).”

Riley, Donna M; engineering education, from Ross Graduate Fellowship-Assistantship, \$31,904, “Dustker, Srinivas Mohan.”

Riley, Donna M; engineering education, from Ross Graduate Fellowship-Assistantship, \$31,904, “Curry, Fantasi Nicole.”

Riley, Donna M; engineering education, from Purdue Doctoral Program, \$21,527, “Matters, Memoria Elizabeth.”

Riley, Donna M; engineering education, from George Washington Carver Fellowship, \$26,527, “Brown, Harriet Paige Lewter.”

Riley, Donna M; engineering education, from Ross Graduate Fellowship-Assistantship, \$31,904, “Li, Tiantian.”

Riley, Donna M; engineering education, from Purdue Doctoral Program, \$31,904, “Lin, Athena.”

Riley, Donna M; engineering education, from Purdue University F N Andrews Fellowship, \$31,904, “Haney, Casey L.”

Riley, Donna M; engineering education, from Purdue Doctoral Program, \$31,904, “Johnson, Beata N.”

Rispoli, Joseph V and **Lelievre, Sophie A**; biomedical engineering, basic medicine science, from Showalter Trust, \$75,000, “High B-Value Diffusion Magnetic Resonance Imaging and Spectroscopy to Probe Tumor Morphometry in Different Breast Cancer Subtypes.”

Robicheaux, Francis J; physics & astronomy, from National Science Foundation, \$81,667, “Many Facets of Laser-Atom and Dipole-Dipole Interactions.”

Rocheford to Staiger

Rocheford, Torbert R; agronomy, from HarvestPlus, \$60,000, “Genetic Research to Enhance Breeding for Higher Levels of Pro-Vitamin a and Zinc in Maize Grain.”

Rogers, Timothy G; electrical & computer engineering, from National Science Foundation, \$495,380, “Software and Hardware Foundations (SHF): Small: Scaling without Moore: Addressing Challenges for the Next Decade of Massively Parallel NUMA Accelerators.”

Rollock, David; psychological sciences, from Purdue Doctoral Program, \$16,869, “Halligan, Taylor Anne.”

Rollock, David; psychological sciences, from Purdue University F N Andrews Fellowship, \$19,701, “Li, Sharon.”

Ruan, Xiulin; mechanical engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, “Han, Zherui.”

Ruan, Xiulin; mechanical engineering, from George Washington Carver Fellowship, \$36,954, “Delgado, Luis R.”

Ruan, Xiulin; mechanical engineering, from Purdue Doctoral Program, \$31,904, “Felicelli, Andrea Lorena.”

Sadeghi, Farshid; mechanical engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, “Aamer, Saeed.”

Sahley, Christie L; biological sciences, from Purdue University F N Andrews Fellowship, \$30,428, “Ciubotariu, Ilinca Ioana.”

Samarapungavan, Ala; Clase, Kari L; Gardner, Stephanie M; Pelaez, Nancy and Rogat, Aaron D; educational studies, agricultural & biological engineering program, biological sciences, from National Science Foundation, \$484,065, “Exploring Biological Evidence (EBE): Helping Students Understand the Richness and Complexity of Evidentiary Constructs in Biology.”

Sangid, Michael D; aeronautics & astronautics, from Argonne National Laboratory, \$20,435, “Incorporating Artificial Intelligence to Bypass the Need for Reconstructions of High Energy X-Ray Diffraction Microscopy Datasets.”

Saraswat, Dharmendra; agricultural & biological engineering program, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, “Jamshidi, Sajad.”

Schoenlein, William E; biomedical engineering, from Cook Research Incorporated, \$42,482, “Pre-Clinical Evaluation Testing Agreement Studies: CMH-VTMD, CE-HEF2, POC AND Sentinels.”

Schoenlein, William E; biomedical engineering, from Cook Research Incorporated, \$114,914, “Pre-Clinical Evaluation Testing Agreement Studies: CMH-SZPK, CMH-TST2, CMH-TPOC, CMH-REGT, CMH-ELP, CMH-VTMD, AND POC.”

Scott-Moncrieff, Joanna C R; veterinary clinical sciences, from Fitness Studio Avi Zipori, \$22,508, “Multi Sponsor – Voluntary Support.”

Sen, Shreyas; electrical & computer engineering, from National Science Foundation, \$150,000, “EAGER: Collaborative Research: Machine-Learning Based Side-Channel Attack and Hardware Countermeasures.”

Shakouri, Ali; electrical & computer engineering, from Monsanto Company, \$35,000, “Consortium on Printing and Scalable Manufacturing of Aware and Responsive Thin Films (SMART).” (a Discovery Park award – Birck Nanotechnology Center)

Shalae, Vladimir M; electrical & computer engineering, from University of Michigan, \$42,483, “Near-Field Radiative Heat Transfer and Energy Conversion in Nanogaps of Nano- and Meta-Structured Materials.” (a Discovery Park award – Birck Nanotechnology Center)

Sheehan, Amy Heck; pharmaceutical practice, from Eli Lilly and Company, \$138,642, “FDA/Purdue/Eli Lilly and Company Medication Safety Pharmaceutical Fellowship.”

Sivasankar, Preeti Mahalakshmi; speech, language & hearing sciences, from Purdue University F N Andrews Fellowship, \$19,701, “Arkenberg, Rachel Elizabeth Hahn.”

Sjogren, Jenny B; medicinal chemistry & molecular pharmacy, from PHS-NIH National Institute on Aging, \$238,574, “Assay Development and Screening for Small Molecule Rgs10 Regulators to Target Neuroinflammation.”

Slabaugh, Carson D; aeronautics & astronautics, from Air Products and Chemicals Inc., \$55,000, “High-Pressure Testing of Oxygen-Enhanced Combustion Devices for Gas Turbines.”

Slabaugh, Carson D; aeronautics & astronautics, from National Aeronautics and Space Administration, \$95,000, “Propulsion Design, Build, Test: Hydrocarbon Propellant Delivery System.”

Slabaugh, Carson D; aeronautics & astronautics, from Purdue University F N Andrews Fellowship, \$31,904, “Plaehn, Ethan William.”

Slipchenko, Lyudmila V; chemistry, from National Science Foundation, \$300,000, “Rydberg States in Molecular Aggregates as a Route to New Optoelectronic Materials.”

Slipchenko, Mikhail N and Meyer, Terrence R; mechanical engineering, from Spectral Energies, LLC, \$24,827, “High-Speed, Two-Dimensional Sensor Suite for Fuel-Air Ratio and Heat-Release Rate for Combustor/Augmentor Stability.”

Solomon, Kevin V; agricultural & biological engineering program, from Showalter Trust, \$75,000, “Sequence Specific Contributions to NgAgo Stability and Function for Gene-Editing Applications.”

Spafford, Eugene H; computer science, from International Institute of Education, \$22,461, “Fulbright Scholarships for Nesar Noori.” (a Discovery Park award – Center for Education and Research in Information Assurance and Security [CERIAS])

Spafford, Eugene H; computer science, from International Institute of Education, \$22,461, “Fulbright Scholarships for Nesar Noori.” (a Discovery Park award – Center for Education and Research in Information Assurance and Security [CERIAS])

Stacy, Trevor R; botany & plant pathology, from BASF Corporation, \$4,500, “BAS673F/ Brown Patch/ Efficacy.”

Stahelin, Robert V; medicinal chemistry & molecular pharmacy, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$226,408, “A New Targeting Approach to Inhibit Budding of the Ebola Virus.”

Staiger, Christopher J; botany & plant pathology, from U.S. Department of Energy, \$150,000, “Regulation of Cell Wall Assembly: Myosin and Exocyst Involvement in Cellulose Synthase Delivery to the Plasma Membrane.”

Stevenson to Varala

Stevenson, Steven A; chemistry, from National Science Foundation, \$295,622, "RUI: Selective Synthesis, Chemical Purification, and Characterization of a New Family of Nanotubular Fullerenes."

Strimel, Greg J; technology leadership & organization, from Region 4 Workforce Development Board, \$152,458, "Advancing the Next Generation for Manufacturing Competitiveness: Establishing the Regional Talent Pipeline Ecosystem."

Su, Jianxi; Beckley, Jeffrey A; Ward, Mark Daniel and Zhang, Lingsong; statistics, mathematics, from Society of Actuaries, \$40,000, "Inspiring Actuarial Education through Learning Communities and Research Experiences."

Subbarayan-Shastri, Ganesh; mechanical engineering, from Texas Instruments, Inc., \$65,000, "Texas Instruments, Inc."

Sundaram, Neera J; mechanical engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, "Khan, Hamzah."

Sutherland, John W; environmental & ecological engineering, from Fort Wayne Metals, \$15,000, "Indianas Next Generation Manufacturing Competitiveness Center Focus Area Consortium."

Sutherland, John W; environmental & ecological engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, "Maani, Thomas."

Tan, Lin and Zhang, Xiangyu; computer science, from National Science Foundation, \$218,367, "Software and Hardware Foundations (SHF): Medium: Principled Co-Reasoning of Software and Natural-Language Artifacts."

Telenko, Darcy EP; botany & plant pathology, from BASF Corporation, \$9,000, "Extension Voluntary Support."

Thompson, Michelle S; earth, atmospheric & planetary sciences, from National Aeronautics and Space Administration, \$107,000, "Combining Novel Experimental Techniques with Returned Sample Analyses to Better Understand the Space Weathering of Planetary Surfaces."

Thompson, Michelle S; earth, atmospheric & planetary sciences, from Purdue University F N Andrews Fellowship, \$29,971, "Laczniak, Dara L."

Thompson, Michelle S; earth, atmospheric & planetary sciences, from National Aeronautics and Space Administration, \$86,473, "An Experimental Investigation of Space Weathering Processes of Regoliths on Primitive Carbonaceous Asteroids."

Tobias, Justin L; economics, from Purdue University F N Andrews Fellowship, \$20,065, "Zhang, Wei."

Tomar, Vikas; aeronautics & astronautics, from Lynn Interdisciplinary Graduate Fellowship, \$30,428, "Rai, Ayush."

Tomar, Vikas; aeronautics & astronautics, from University of Missouri-Columbia, \$186,250, "Integrating Multiscale Modeling and Experiments to Develop a Meso-Informed Predictive Capability for Explosives Safety and Performance."

Topp, Elizabeth M; industrial & physical pharmacy, from Monon Bioventures LLC, \$82,384, "Soluble, Solution-Stable Phospho-Glucagon for Hypoglycemic Rescue."

Torres Bravo, Ariana P; horticulture & landscape architecture, from Rainbow Tree Company, \$10,000, "Voluntary Support – Multi."

Trader, Darci J; medicinal chemistry & molecular pharmacy, from Showalter Trust, \$75,000, "Targeting Cancer Cells with an Immunoproteasome-Selective Prodrug Strategy."

Trice, Rodney W; materials engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, "Brown, Liam Eugene."

Trice, Rodney W; materials engineering, from Purdue University F N Andrews Fellowship, \$31,904, "Mann, Thomas R."

Trice, Rodney W; materials engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, "Stirrup, Kerry-Ann Megan."

Trice, Rodney W; materials engineering, from Purdue Doctoral Program, \$31,904, "Brandt, Olivia N."

Tung, Wen-Wen; earth, atmospheric & planetary sciences, from Columbia University, \$63,997, "Faculty Early Career Development (CAREER): Monsoon and the Upper Troposphere Lower Stratosphere; Amendment 4 for Grant #10001285."

Turco, Ronald F; agronomy, from IndianaState Poultry Association, \$1,250, "St Mary Watershed Voluntary Support (Cost Share for 20000224 / 209968)."

Turco, Ronald F; agronomy, from The Agribusiness Council of Indiana, \$1,000, "St Mary Watershed Voluntary Support (Cost Share for 20000224 / 209968)."

Turco, Ronald F; agronomy, from Indiana Soybean Alliance, \$15,000, "St Mary Watershed Voluntary Support (Cost Share for 20000224 / 209968)."

Turco, Ronald F; agronomy, from Indiana Pork Producers Association Inc., \$3,500, "St Mary Watershed Voluntary Support (Cost Share for 20000224 / 209968)."

Turco, Ronald F; agronomy, from Nature Conservancy, the, \$5,000, "St Mary Watershed Voluntary Support (Cost Share for 20000224 / 209968)."

Turco, Ronald F; agronomy, from IndianaFarm Bureau Cooperative Association Inc., \$10,000, "St Mary Watershed Voluntary Support (Cost Share for 20000224 / 209968)."

Turco, Ronald F; agronomy, from Indiana Corn Marketing Council, \$15,000, "St Mary Watershed Voluntary Support (Cost Share for 20000224 / 209968)."

Ukkusuri, Satish V; civil engineering, from Purdue University F N Andrews Fellowship, \$31,904, "Xue, Jiawei."

Useem, Bert; sociology, from Charles Koch Foundation, \$5,000, "Restrictive Housing in California Prisons in the Aftermath of Ashker V. Governor of California: A Longitudinal Mixed Methods Study."

Uyeda, Christopher H; chemistry, from PHS-NIH National Institute of General Medical Science, \$370,571, "Transition Metal Catalyzed Reductive Carbene Transfer Reactions."

Van Rijn, Richard M; medicinal chemistry & molecular pharmacy, from PHS-NIH National Institute on Alcohol Abuse, \$221,951, "Opioidergic Alkaloids from *Mitragynia Speciosa* (Kratom) as Novel Treatment for Alcohol Use Disorder."

Varala, Kranthi K; horticulture & landscape architecture, from New York University, \$76,064, "Evonet: a Phylogenomic and Systems Biology Approach to Identify Genes Underlying Plant Survival in Marginal, Low-Nitrogen Soils."

Ventresca to Williams

Ventresca, Mario; industrial engineering, from Purdue University F N Andrews Fellowship, \$31,904, “Jung,Dawoon.”

Verma, Mohit S; agricultural & biological engineering program, from Ross Graduate Fellowship-Assistantship, \$31,959, “Davidson, Josiah Levi.”

Voyles, Richard M; engineering technology, from Alltech, Inc, \$20,000, “Rose-Hub Membership (Members Cost Shared on 107355).”

Wachs, Juan P; Duerstock, Bradley S; Suresh, Shruthi and Zhang, Ting; industrial engineering, Engineering Projects in Community Service (EPICS), from National Science Foundation, \$250,000, “PFI-TT: a Portable and Real-Time System for Individuals with Visual Impairments to Explore Digital Images Using Alternate Feedback.”

Wang, Haiyan; materials engineering, from National Science Foundation, \$61,559, “From Atomic Scale Strain Probing to Smart 3-D Interface Design.”

Wang, Haiyan and El-Azab, Anter A; materials engineering, from U.S. Department of Energy, \$233,888, “Achieving Long Range Ordering in Oxide-Metal Hybrid Materials – A Combined Experimental and Modeling Approach.”

Wang, Jing; mathematics, from National Science Foundation, \$76,189, “Degenerate Diffusions and Related Heat Kernel Estimates.”

Wang, Nien-Hwa L; chemical engineering, from Hemocleanse, Inc., \$25,000, “Wang Research Armn Voluntary Support.”

Ward, Matthew Peter; biomedical engineering, from PHS-NIH Office of the Director, \$620,660, “High Resolution, Noninvasive Measurement and Functional Classification of Vagal Nerve Response Patterns in Relation to Gastroparesis Symptom Management Using Gastric Electrical Stimulation Therapy.”

Warsinger, David E M; mechanical engineering, from George Washington Carver Fellowship, \$36,954, “Isaac Aragones, Debraliz.”

Warsinger, David E M; mechanical engineering, from Laspau, \$4,000, “Fulbright for Cordoba Renteria.”

Weake, Vikki Marie; biochemistry, from National Science Foundation, \$690,000, “Developmental Functions of Insect Dbf4 Link Replication and Transcription.”

Webb, Kevin J and Xuan, Yi; electrical & computer engineering, from National Science Foundation, \$415,798, “Multifunctional Optomechanics with Structured Material.”

Webb, Kevin J; electrical & computer engineering, from Air Force Office of Scientific Research, \$142,580, “Nanostructured Material for Optomechanics.”

Webb, Kevin J and Rochet, Jean-Christophe; electrical & computer engineering, medicinal chemistry & molecular pharmacy, from National Science Foundation, \$496,819, “CIF: Small: Super-Resolution Imaging in a Heavily Scattering Environment Enabled by Spatiotemporal Data.”

Wei, Alexander; chemistry, from Sartorius Stedim North America, \$148,000, “Design of Non-Enzymatic Lactate Sensor on Flexible Substrates for Single-Use Systems.”

Weibel, Justin A; mechanical engineering, from Eaton, \$30,000, “Cooling Technologies Research Center (CTRC) (40001184).”

Weibel, Justin A; mechanical engineering, from Purdue University F N Andrews Fellowship, \$31,904, “Pai, Saeel Shrivalla.”

Weibel, Justin A; mechanical engineering, from Ford Motor Company, \$45,000, “Ford URP – Voluntary Support.”

Weinberg, Lindsay and Parry, Jason R; Purdue Polytechnic Institute administration, Purdue Convocations, from National Science Foundation, \$28,290, “Digital Forensics as Open Source Pedagogy.”

Weiner, Andrew M; electrical & computer engineering, from Purdue University F N Andrews Fellowship, \$21,527, “Annur Myils-wamy, Karthik Vijay.”

Weiner, Andrew M; Kais, Sabre and Qi, Minghao; electrical & computer engineering, chemistry, from National Science Foundation, \$9,500, “RAISE:TAQS: High Dimensional Frequency Bin Entanglement -- Photonic Integration and Algorithms.”

Whelton, Andrew J; civil engineering, from Purdue University F N Andrews Fellowship, \$31,904, “Montagnino, Elizabeth.”

Whelton, Andrew J; Howarter, John A and Proctor, Caitlin R; civil engineering, materials engineering, environmental & ecological engineering, from Roosevelt Warm Springs Foundation, \$22,272, “Plastics in Water Supplies: Impact of Newly Installed Epoxy Linings on Drinking Water Quality.”

Widmar, Nicole J Olynk; agricultural economics, from Lynn Interdisciplinary Graduate Fellowship, \$30,483, “Hua, Yizhou.”

Widmar, Nicole J Olynk; agricultural economics, from Ross Graduate Fellowship-Assistantship, \$31,959, “Neuhofer, Zachary T.”

Widmar, Nicole J Olynk; agricultural economics, from Purdue University F N Andrews Fellowship, \$31,959, “Yim, Hyejin.”

Widmar, Nicole J Olynk; agricultural economics, from Ross Graduate Fellowship-Assistantship, \$31,959, “Ortez, Mario A.”

Williams, Rod N; forestry & natural resources, from Hernandez-Gomez, Dr. Obed, \$40, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from Timothy D and Noelle L Metcalf, \$20, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from Amy McMillan, \$20, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from Benjamin G Prater, \$20, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from William A Hopkins III, \$80, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from Jenny Sutherland, \$200, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from Shem D Unger, \$40, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from Shem D Unger, \$40, “Voluntary Support.”

Williams, Rod N; forestry & natural resources, from Bethany or Lewis Single, \$20, “Voluntary Support.”

Williams to Zhao

Williams, Rod N; forestry & natural resources, from Dr. Obed Hernandez-Gomez, \$20, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Matthew David Kaunert, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Ruth Elaine Freemon, \$20, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Peter B Johantgen, \$20, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Peter J or Susan Petokas, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Lori A Williams, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Mizuki Takahashi, \$80, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Hagen, Katherine Laura, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Ruth Elaine Freemon, \$20, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Bradley D Nissen, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Sherri or Eric Reinsch, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Nicole Hime, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Amy McMillan, \$40, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Joel and Rebekka Canine, \$50, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Robin Foster, \$60, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Thomas M Floyd, \$20, "Voluntary Support."

Williams, Rod N; forestry & natural resources, from Steven J or Jordan M Price, \$40, "Voluntary Support."

Wlodarczyk, Jaroslaw; mathematics, from US – Israel Binational Science Foundation, \$73,100, "Topics in Resolution of Singularities."

Wodicka, George R and McCormick, Carolyn E B; biomedical engineering, human development & family studies, from Indiana University Purdue University at Indianapolis, \$120,618, "Institutional Career Development Core." (a Discovery Park award – Bindley Bioscience Center)

Won, You-Yeon; chemical engineering, from American Chemical Society, \$110,000, "Studies of Glassy Domains in Block Copolymer Micelles and Langmuir Monolayers Using Nuclear Magnetic Resonance (NMR) and Particle Tracking Techniques."

Woodcox, Stephanie G; engagement, from Substance Abuse, Mental Health Services Administration, \$242,584, "Multi-State Oud Training and Education Outreach."

Xu, Dongyan; computer science, from The National GEM Consortium, \$20,000, "GEM Consortium – Cody Butler."

Xu, Jin-Rong; botany & plant pathology, from Agricultural Research Service, \$63,183, "Distinct Regulatory Functions of the TRI6 and TRI10 Genes in DON Biosynthesis. Epigenetic Regulation of DON Biosynthesis in *Fusarium Graminearum*."

Yang, Fenggang and White, Christopher M; sociology, from John Templeton Foundation, \$234,800, "Measuring Religious Change in the Global East."

Yang, Xiaoli; Niyaz, Quamar and Trekles, Anastasia M; electrical & computer engineering, education & counseling, from National Science Foundation, \$231,422, "SaTC: EDU: Collaborative: Interactive Visualization and PractTice basEd Cybersecurity Curriculum and Training (InviteCyber) Framework for Developing Next-Gen Cyber-Aware Workforce."

Young, Bryan G; botany & plant pathology, from Lamberti USA, Inc, \$2,400, "Multi Sponsored Gift Account."

Young, Bryan G; botany & plant pathology, from Land O'Lakes Inc., \$11,200, "Multi Sponsored Gift Account."

Young, Bryan G and Johnson, William G; botany & plant pathology, from BASF Corporation, \$7,200, "Evaluation of BASF Herbicide."

Youngblood, Jeffrey P; materials engineering, from U.S. Forest Service, \$15,000, "Fiber Reinforcement of Mechanically Fibrillated Cellulose Nanofibril (mCNF) Laminates with Increased Mechanical Strength and Toughness."

Yu, Jae Hoon David; civil engineering, from National Science Foundation, \$154,523, "Collaborative Research: Cross-Scale Interactions & the Design of Adaptive Reservoir Operations."

Zavattieri, Pablo D; civil engineering, from Indiana Technology & Manufacturing Co, \$49,500, "PXCM Solutions for Lightweight Runway Matting."

Zavattieri, Pablo D; civil engineering, from University of California-Riverside, \$76,504, "Investigation of Force Transduction and Actuation in Integrated Multifunctional Biological Structures."

Zhang, Cankui and Zhou, Yun; agronomy, botany & plant pathology, from National Science Foundation, \$452,915, "EDGE TT: Genetic Transformation of Broadleaf Plantain (*Plantago Major*) and Narrowleaf Plantain (*Plantago Lanceolata*)."

Zhang, Guangjun; comparative pathobiology, from PHS-NIH National Institute of General Medical Science, \$0, "Roles of Bioelectricity of Ion Channels in Developmental Patterning and Oncogenesis."

Zhang, Hao; statistics, from Purdue University F N Andrews Fellowship, \$20,065, "Shih, Chih-Han."

Zhang, Hao; statistics, from Purdue University F N Andrews Fellowship, \$20,065, "Keralapura Nagaraju, Ksheera Sagar."

Zhao, Fan; Director of Dining, from Ross Graduate Fellowship-Assistantship, \$31,904, "Han, Jiaxiu."

Zhao, Fu; mechanical engineering, from Ross Graduate Fellowship-Assistantship, \$31,904, "Kulkarni, Sameer."

Zheng to Zhou

Zheng, Wei and **Nie, Linda H**; health sciences, from PHS-NIH National Institute of Environment Health Science, \$380,612, “Lead Exposure and Beta-Amyloid Transport by Brain Barriers.”

Zhou, Chenn Qian; mechanical & civil engineering, from Gerdau Special Steel, \$50,000, “Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership.”

Zhou, Chenn Qian; Chen, Bin; Moreland, John R and Silaen, Armin K; Center for Innovation through Visualization and Simulation, engineering administration, from Arcelormittal USA, \$0, “Production of Zero-Defect (ZD) Slabs through the Implementation of Smart Manufacturing Technologies in Steel Continuous Casting.”

Zhou, Chenn Qian; mechanical & civil engineering, from Cliffs Natural Resources, \$25,000, “Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership.”

Zhou, Qi; industrial & physical pharmacy, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$565,399, “Combating Deadly Gram-Negative Lung Infections: An Inhalation and Systems Approach.”

Zhou, Qi; physics & astronomy, from National Science Foundation, \$83,237, “Exploring Contacts in New Era: Spin-Orbit Coupling and Dimension Crossover.”

Zhou, Yun and **Banks, Jo Ann**; botany & plant pathology, from National Science Foundation, \$611,726, “The Regulation of Meristem Development in Ceratopteris Gametophytes and Sporophytes.” ■

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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. ■