

Adeola to Bolin

Adeola, Olayiwola and **Johnson, Timothy**; animal sciences, from Genencor International, \$56,899, "Investigating the Efficacy of a Multi Enzyme Feed Additive on Performance of Weaned Piglets Fed a Wheat-Barley Based Diet."

Alexeenko, Alina; aeronautics & astronautics, from Millrock Technology Inc, \$10,000, "Lyohub Consortium (Millrock Technology)."

Asencio, Raquel; organizational behavior and human resource management, from Army Research Office, \$60,000, "10.2 Social and Cognitive Networks: Exploring Effective Coordination Structures and Functioning in Multiteam Systems (Grant 13000601, Modification 4)"

Beaulieu, Lionel J; Office of Engagement administration, from Indiana Economic Development Corporation, \$153,227, "HH Small Business Development Center (SBDC) – Federal."

Beaulieu, Lionel J; Office of Engagement administration, from Indiana Economic Development Corporation, \$49,182, "HH Small Business Development Center (SBDC) – State."

Beaulieu, Lionel J; Purdue Center for Regional Development, from Greater Lafayette Community Foundation, \$5,000, "Wabash Heartland Innovation Network (WHIN) Grant for Hoosier Heartland Indiana Small Business Development Center."

Berry, Frederick C; engineering technology, from Lawrence Livermore National Lab, \$7,500, "Proposal for Capstone Project Support to the Lawrence Livermore National Laboratory 2020."

Bhargava, Bharat and **Aggarwal, Vaneet**; computer science, industrial engineering, from University of Southern California, \$298,190, "Generating Novelty in Open-World Multi-Agent Environments (GNOME); Amendment 2, Grant 13000841."

Bhave, Sunil A; electrical & computer engineering, from Semiconductor Research Corporation, \$88,000, "Strain Assisted Magneto-Electric Write and Read Operations; Amendment 2, Grant 40002246."

Bhave, Sunil A; electrical & computer engineering, from Google Inc, \$40,672, "2020 Faculty Research Award." (a Discovery Park award – Birk Nanotechnology Center)

Bhave, Sunil A and **Weinstein, Dana**; electrical & computer engineering, from Department of the Army, \$99,000, "PMN-PT for PNT: Precision Micromachining of Novel Piezoelectric Transducers for Precise Navigation and Timing (Grant 13000689 Modification 3)" (a Discovery Park award – Birk Nanotechnology Center)

Bigelow, Cale A; horticulture & landscape architecture, from Aquatrols Corporation of America, \$14,128, "Putting Greens Research."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$41,600, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

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Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$10,400, "FY20-21 Purdue Research Foundation (PRF) Grants."

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Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$373,428, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$272,000, "FY20-21 Purdue Research Foundation (PRF) Grants."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$8,000, "FY20-21 Purdue Research Foundation (PRF) Grants."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$1,514,494, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$10,400, "FY20-21 Purdue Research Foundation (PRF) Grants."

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Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$10,400, "FY20-21 Purdue Research Foundation (PRF) Grants."

Bolin, Jeffrey T; Executive Vice President for Research & Partnerships administration, from Purdue Research Foundation, \$31,119, "FY20-21 Purdue Research Foundation (PRF) Grants (60000029)."

Boltasseva, Alexandra and **Shalaev, Vladimir M**; electrical & computer engineering, from Air Force Office of Scientific Research, \$200,000, "Trans-Dimensional Photonics: from Evolution of Material Properties to Exploring Extreme Regimes of Light-Matter Interactions." (a Discovery Park award – Birck Nanotechnology Center)

Boudouris, Bryan W and **Mei, Jianguo**; chemical engineering, chemistry, from Naval Surface Warfare Center Crane Div, \$60,000, "Solution-Processable Polymer Conductors with High Transparency and Low Sheet Resistance for Electromagnetic Interference (EMI) Protection."

Bowman, Aaron B; health sciences, from Albert Einstein College of Medicine, \$287,525, "Mechanisms of Manganese Neurotoxicity."

Braun, James E; mechanical engineering, from Whirlpool Corporation, \$25,000, "Center for High Performance Building Consortium (Whirlpool Corp)."

Buckmaster, Dennis; agricultural & biological engineering program, from Winfield Solutions LLC, \$50,000, "Open Ag Technology and Systems Center (OATS) Consortium."

Buckmaster, Dennis; agricultural & biological engineering program, from Infosys Technologies Ltd, \$50,000, "Open Ag Technology and Systems Center (OATS) Consortium."

Buckmaster, Dennis; agricultural & biological engineering program, from The Climate Corporation, \$50,000, "Open Ag Technology and Systems Center (OATS) Consortium."

Bullock, Darcy M; civil engineering, from IN Department of Transportation, \$449,100, "Joint Transportation Research Program (JTRP) Administration Budget FY 2021."

Burgess, Wilella Daniels; education administration, from University of Illinois at Chicago, \$22,721, "Professional Development for K-12 Science Teachers in Linguistically Diverse Classrooms."

Caldwell, Barrett S; **Johnson, Mary E** and **Pitts, Brandon J**; industrial engineering, aviation & transportation technology, from Federal Aviation Administration, \$147,748, "Partnership to Enhance General Aviation Safety, Accessibility and Sustainability (PEGASAS): Augmented Weather Information Project – Project 33 (Grant 16100100)."

Caldwell, Barrett S and **Whitaker, Dawn R**; industrial engineering, from National Aeronautics and Space Administration, \$760,000, "Indiana Space Grant Consortium Programs and Opportunities 2020-2024."

Cannon, Jason R and **Rochet, Jean-Christophe**; health sciences, medicinal chemistry & molecular pharmacology, from PHS-NIH National Institute of Environment Health Science, \$335,532, "Mechanisms of PhIP-Induced Dopaminergic Neurotoxicity (Grant 11000509 Amendment #5)."

Cappelleri, David J and **Sutherland, John W**; mechanical engineering, environmental & ecological engineering, from Ford Motor Company, \$99,358, "Feasibility Analysis of Autonomous Robots Used in Additive Manufacturing of Electrical Circuits."

Cappelleri, David J and **Zhang, Song**; mechanical engineering, from National Science Foundation, \$8,000, "RI: Medium: Light Responsive Polymer Magnetic Microrobots with Dual Mode Sensing for Biomedical and Advanced Manufacturing Applications."

Carlson, Erica; physics & astronomy, from National Science Foundation, \$230,000, "Electronic Fractals in Strongly Correlated Quantum Materials."

Casteel, Shaun N; agronomy, from Fluid Fertilizer Foundation, \$10,000, "Soybean Extension Research."

Casteel, Shaun N; agronomy, from Helena Agri-Enterprises, LLC, \$9,000, "Soybean Extension Research."

Chan, Stanley H; electrical & computer engineering, from Army Research Office, \$100,000, "Adversarial Robustness in Real Environments."

Chen, Weinong W; aeronautics & astronautics, from Office of Naval Research, \$80,000, "Visualization of Composite Damage by Direct Energy (Grant 13000570 Modification 5)."

Chen, Weinong W and **Meyer, Terrence R**; aeronautics & astronautics, mechanical engineering, from Army Research Office, \$62,500, "Damage and Temperature Around a Propagating Dynamic Crack (Grant 13000558 Modification 6)."

Chen, Yingjie; **Jiang, Wen**; **Sors, Thomas G** and **Watson, William R**; computer graphics technology, biological sciences, curriculum & instruction, from PHS-NIH National Eye Institute, \$122,549, "Virtual Reality Augmented Hands-on Cryogenic Electron Microscopy (Cryo-EM) Training; Year 3; Grant 11000708."

Chopra, Gaurav; chemistry, from Indiana Clinical & Translational Science Institute, \$40,756, "Identifying the Molecular Modulators of Microglial Phagocytosis of Amyloid Beta."

Couetil, Laurent L and **Ivester, Kathleen M**; veterinary clinical sciences, from Nortev Ltd, \$53,151, "Efficacy and Safety of Nebulized Dexamethasone in Mild Asthmatic Horses."

DeBoer, Jennifer J; **Nies, Loring F** and **Harbison, Diana**; engineering education, civil engineering, Global Engineering Programs, from World Learning, \$58,225, "Investing in the Liberated University of Anbar."

DeLaurentis, Daniel A; aeronautics & astronautics, from National Aeronautics and Space Administration, \$150,000, "Extending Traffic Information Exchange Network (TIEN)."

Doudareva, Natalia; biochemistry, from National Institute of Food & Agriculture, \$500,000, "Deciphering Regulatory Restrictions on Flux Towards Shikimate Pathway-Derived High Value Natural Products."

Douglas, Kerrie A; engineering education, from National Science Foundation, \$124,239, "Collaborative Research: Rapid Response Research (RAPID): Approaches to Online Implementation and Social Support in Undergraduate Engineering Courses."

Dydak, Ulrike; health sciences, from Indiana University, \$5,150, "Student Support for Emily Diller (Amendment 3 for Grant 40001919)."

Edwards to Hook

Edwards, Nancy E; nursing, from PHS-National Center for Health Services, \$76,336, "Advanced Nursing Workforce Education."

Edwards, Nancy E; Foli, Karen J; Ross, Karla Cheesman and McComb, Sara A; nursing, from PHS-National Center for Health Services, \$679,296, "Advanced Nursing Workforce Education (Grant 11000617)."

Edwards, Nancy E; North Central Nursing Clinic administration, from Health Resources & Services Administration, \$664,205, "HRSA Coronavirus Aid, Relief, and Economic Security (CARES) Award."

Edwards, Nancy E; North Central Nursing Clinic administration, from Health Resources & Services Administration, \$1,097,480, "Health Center Cluster (Grant 11000493)."

Edwards, Nancy E; nursing, from Health Resources & Services Administration, \$58,373, "FY 2020 Coronavirus Supplemental Funding for Health Centers."

Ejeta, Gebisa and Rich, Patrick J; agronomy, from Kansas State University, \$97,984, "Genetic Enhancement of Sorghum to Promote Commercial Seed Supply and Grain Market Development (Phase II)."

Elliott, Julie L; earth, atmospheric & planetary sciences, from U.S. Geological Survey, \$71,144, "Intergovernmental Personnel Act (IPA) Assignment Agreement – Julie Elliot (Geodetic Contributions to the Usgs Alaska Hazard Map)."

Engel, Bernard A; agricultural & biological engineering program, from Agricultural Research Service, \$47,000, "Watershed Erosion Prediction Project (WEPP) Model Development, Testing and Support."

Ersoy, Okan K; electrical & computer engineering, from Henry Miller Opticians, \$186,896, "Computational Methods for Diffractive Imaging and Financial Forecasting."

Freeman, Jennifer L and Wasel, Ola; health sciences, from University of Cincinnati – Education and Research Center, \$1,500, "Neurotoxicity of Polyfluoroalkyl Substance (PFAS) Mixtures in Firefighting Materials."

Frueh, Carolin E; aeronautics & astronautics, from Air Force Office of Scientific Research, \$88,333, "IRONCASTLE – Interpretation and Recognition of Objects Using Novel Coupled Attitude and Shape Techniques for Lightcurve Evaluation (Grant 13000804, Modification 1)."

Garcia Bravo, Jose M; Newell, Brittany A and Tallman, Tyler N; engineering technology, aeronautics & astronautics, from Naval Surface Warfare Center Indian HD Div, \$120,000, "Embedded Sensors and Actuators for Structural Health Monitoring Using Enhanced Materials in Additive Manufacturing (Grant 13000764, Modification 1)."

Garner, Allen L; nuclear engineering, from Boise State University, \$100,000, "Crossed-Field Device Physics in Perturbed Systems; Amendment 1, Grant 13000763."

Gelvin, Stanton B; Lee, Lan-Ying and Ma, Jianxin; biological sciences, agronomy, from National Science Foundation, \$267,449, "Tools, Resources and Technology – Plant Genome Research (TRTech-PGR): Ensifer-Mediated Transformation as an Alternative to Agrobacterium-Mediated Transformation of Model Plants and Crops."

Ginzel, Matthew D; forestry & natural resources, from Indiana Department of Natural Resources, \$4,000, "Thousand Cankers Disease of Black Walnut in the US."

Gomez Diaz, Hector; mechanical engineering, from National Science Foundation, \$267,502, "Collective Migration of Loosely Connected Cell Clusters."

Gomez Diaz, Hector; mechanical engineering, from National Science Foundation, \$299,994, "Interaction of Multiphase Fluids and Solids at the Microscale."

Govindaraju, Rao S; civil engineering, from American Society of Civil Engineers, \$6,125, "Support for the ASCE Journal of Hydrologic Engineering."

Habib, Ayman F and Bullock, Darcy M; civil engineering, from Indiana Criminal Justice Institute, \$179,000, "Unmanned Aircraft Systems (UAS)-Based Data Processing Center for Crash Scene Documentation."

Hamer, Lawrence Olin; business administration, from Indiana Economic Development Corporation, \$238,387, "Northwest Indiana Small Business Development Center 2020 (Federal Funds & PNW Match)."

Hamer, Lawrence Olin; business administration, from Indiana Economic Development Corporation, \$58,360, "Northwest Indiana Small Business Development Center 2020 (State Funds)."

Handwerker, Carol A; materials engineering, from Alpha Assembly Solutions, \$98,129, "Voluntary Support for Low Temperature Assembly Research."

Handwerker, Carol A; materials engineering, from Intel Corporation, \$100,000, "Low Temperature Solder System – Development and Fundamental Understanding (40002150)."

Harpur, Brock Alexander; entomology, from Project Apis M., \$74,076, "Using Genomics to Predict Drone Quality: Why Are There So Many 'Dud' Male Honey Bees?."

Harris, Jason T and Nie, Linda H; health & human sciences administration, health sciences, from Nitto and Company, \$7,723, "Nitto X-Ray Shield Project."

Hartman, Nathan W; computer graphics technology, from Project Process LLC, \$10,000, "2020 INTAP Project – Hand Washing Station."

Heister, Stephen D; aeronautics & astronautics, from Center for Advancement of Science in Space, \$20,000, "Multi Sponsor – Voluntary Support."

Hertel, Thomas W; agricultural economics, from United Nations Conference on Trade and Development, \$20,435, "Global Trade Analysis Project (GTAP) Consortium (UNCTAD)."

Hertel, Thomas W; agricultural economics, from United Nations Conference on Trade and Development, \$20,435, "Global Trade Analysis Project (GTAP) Consortium (UNCTAD)."

Hess, Douglas E; financial aid, from Indiana Commission for Higher Education, \$2,300, "2019-2020 ScholarCorps AmeriCorps Program."

Hillberry, Russell H; agricultural economics, from National Institute of Food & Agriculture, \$243,078, "Trade Costs and Mark-Ups in Maritime Shipping."

Holford, Kenneth C; engineering & science, from U.S. Forest Service, \$20,000, "Support for the Northwest Indiana Urban Waters Ambassador Position."

Hook, Tomas O and Quagraine, Kwamena K; forestry & natural resources, agricultural economics, from Illinois Cooperative Extension Service, \$112,397, "2018-2022 Agreement Between Purdue and Illinois Cooperative Extension Service, University of Illinois."

Hountz to Lin

Hountz, Randall A; Purdue Health Advisors, from Altarum Institute, \$273,282, "Center for Medicare (CMS) Medicare Access and CHIP Reauthorization Act (MACRA) Support for Small Practices; Amendment 3, Grant 11000828." (a Discovery Park award – Regenstrief Center for Healthcare Engineering)

Hu, Changdeng; medicinal chemistry & molecular pharmacology, from PHS-NIH National Cancer Institute, \$508,108, "Role and Targeting of Protein Arginine Methyltransferase 5 (PRMT5) in Prostate Cancer (Grant 11000609, Amendment 4)."

Huang, Libai and Li, Christina W; chemistry, from National Science Foundation, \$541,521, "Enhance Exciton Transport in Perovskite Quantum Dot Solids through Coherent Interactions."

Irfanoglu, Ayhan and Prakash, Arun; civil engineering, from Battelle Energy Alliance LLC, \$17,481, "Specialized Technical Support to INL for Seismic Isolation Strategies and Soil-Structure Interaction Analysis."

Jacob, Zubin and Li, Tongcang; electrical & computer engineering, from Defense Advanced Research Projects Agency, \$199,850, "Engineering Giant Momentum Asymmetry of the Quantum Vacuum."

Jacobs, Douglass F; forestry & natural resources, from Jawmin LLC, \$12,500, "Hardwood Tree Improvement & Regeneration Center/Center for Advanced Forestry Systems (HTIRC/CAFS) Voluntary Support."

Jacobs, Douglass F; forestry & natural resources, from Hawaii Sandalwood, LLC, \$12,500, "Hardwood Tree Improvement & Regeneration Center/Center for Advanced Forestry Systems (HTIRC/CAFS) Voluntary Support."

Jayant, Krishna and Pluta, Scott R; biomedical engineering, biological sciences, from PHS-NIH National Institute of Biomedical Imaging and Bioengineering, \$226,824, "The Nanoneedle Net: a Flexible and Transparent 3-D Nanoelectrode Array for Mapping Intracellular Dendritic Dynamics at the Cortical Surface."

Johnson, Brandon Charles; earth, atmospheric & planetary sciences, from National Aeronautics and Space Administration, \$52,466, "Dynamics of the Early Solar System and Implications for the Possible Impact Origin of Chondrules (Grant 12000329, Modification 2)."

Johnson, Brandon Charles; earth, atmospheric & planetary sciences, from National Aeronautics and Space Administration, \$52,467, "Dynamics of the Early Solar System and Implications for the Possible Impact Origin of Chondrules; Supplement 1, Grant 12000329."

Johnson, William G and Young, Bryan G; botany & plant pathology, from BASF Corporation, \$7,500, "BASF Herbicide Options in XtendFlex Soybeans."

Jordan, Mark A; biology, from Indiana Academy of Science, \$2,688, "Spatial Analysis and Habitat Use of Snapping Turtles in an Urban Wetland."

Jung, Changhee; computer science, from Virginia Polytechnic Institute & State University, \$293,922, "Cyber-Physical Systems (CPS): Medium: Computation-Aware Autonomy for Timely and Resilient Multi-Agent Systems."

Kak, Avinash C; electrical & computer engineering, from Applied Research Associates, Inc, \$30,000, "Creation of Operationally Realistic 3-D Environment (CORE3D); Modification 8, Grant 13000603."

Karcher, Darrin M; animal sciences, from Biomin America Inc, \$10,000, "Poultry Research."

Kasting, Monica L; public health, from Indiana University, \$49,065, "Hepatitis C Virus Survey of Providers' Attitudes, Recommendation, and Knowledge (HCV SPARK)."

Kentamaa, Hilka I; chemistry, from Neste Oyj, \$45,000, "Gate 1 Approval: Development of the Methods for the Analysis of Chlorine-Containing Compounds in Waste Cooking Fats and Residues (40003012)."

Kim, Yuan H; animal sciences, from National Institute of Food & Agriculture, \$470,000, "Unlocking Value from Beef Exudate: Metabolomics Profiling of Beef Exudate to Delineate Muscle-Specific Oxidative Mechanisms."

Knopik, Valerie S; human development & family studies, from Emory University, \$32,841, "Integrative Prioritization of Alcohol and Drug-Addiction Related Genetic Loci; Amendment 2, Grant 11000794."

Kong, Nan; Ott, Carol A and Yu, Denny; biomedical engineering, pharmaceutical practice, industrial engineering, from Indiana Clinical & Translational Science Institute, \$2,400, "Smartphone-Based Socio-Behavioral Monitoring Tool Development for Early Detection and Prevention of Major Depression."

Kuang, Shihuan; Elzey, Bennett D and Konieczny, Stephen F; animal sciences, comparative pathobiology, biological sciences, from PHS-NIH National Cancer Institute, \$354,563, "Notch Signaling in Liposarcoma."

Kulkarni, Milind; Blocki, Jeremiah M; Delaware, Benjamin J; Garman, Christina L; Kate, Aniket Pundlik; Maji, Hemanta K; Rompf, Tiark and Samanta, Roopsha; electrical & computer engineering, computer science, from Intelligence Advancement Research Projects Activity, \$312,788, "HACCLE: High-Assurance Compositional Cryptography: Languages and Environments (Grant 13000767, Modification 4)."

Labi, Samuel; Bullock, Darcy M; Miralinaghi, Seyedmohammad; Chen, Sikai and Sinha, Kumares C; civil engineering, from University of Michigan, \$619,270, "Development of AI-Based and Control-Based Systems for Safe and Efficient Operations of Connected and Autonomous Vehicles."

Lee, Kyoungsoo; physics & astronomy, from Korea Institute for Advanced Study, \$360,000, "A Purdue-KIAS Narrow-Band Dark Energy Camera (DECAM) Survey."

Lemenager, Ronald P; animal sciences, from Indiana Beef Cattle Association, \$4,000, "Bovine Reproduction."

Li, Tongcang and Robicheaux, Francis J; electrical & computer engineering, physics & astronomy, from Office of Naval Research, \$50,000, "Investigating Surface Interactions with Levitated Optomechanics at the Quantum Limit (Grant 13000647, Modification 3)."

Li, Tongcang; electrical & computer engineering, from National Science Foundation, \$94,371, "Faculty Early Career Development (CAREER): Quantum Spin-Optomechanics of Optically Levitated Nanodiamonds (Grant 10000990, Amendment #4)."

Liceaga, Andrea M; food science, from Mint Industry Research Council, \$5,000, "Multi Sponsored Gift- Sensory."

Lin, Guang; mechanical engineering, from Brookhaven National Laboratory, \$100,000, "A Deep Learning-Based Online Platform for Critical Anomaly Detection and Emergency Control to Enhance Grid Reliability and Resiliency."

Lindemann to Pijanowski

Lindemann, Stephen R and **Hamaker, Bruce R**; food science, from Army Research Office, \$50,000, "Complex Substrates and Microbial Interactions: Does Substrate Chemical Structure Dictate Microbial Diversity and Function? (Grant 13000655, Modification 3)."

Linnes, Jacqueline C; biomedical engineering, from National Science Foundation, \$50,000, "Rapid Response Research (RAPID): Collaborative Research: Enabling the Development of COVID-19 Vaccines, Therapeutics and Diagnostics through Innovations in Measurement Science."

Lister, Matthew L; physics & astronomy, from Space Telescope Science Institute, \$21,654, "The Nature of Jets in Hybrid Monitoring Of Jets in Active Galactic Nuclei with VLBA Experiments (MOJAVE) Blazars - Hubble Space Telescope (HST)."

Long, Elizabeth Yim; **Beckerman, Janna L**; **Bolt, Marguerite**; **Meyers, Stephen Lawrence** and **Torres Bravo, Ariana P**; entomology, botany & plant pathology, agronomy, horticulture & landscape architecture, agricultural economics, from Michigan State University, \$18,908, "North Central Integrated Pest Management Center (NCIPMC): A Regional Approach to Pest Management Implementation FY18-FY22."

Longuski, James M; aeronautics & astronautics, from Lockheed Martin Corp., \$45,000, "Project Artemis Mission Design."

Low, Philip S; chemistry, from Umoja Biopharma, \$2,000,000, "Universal CAR T Cell Therapy."

Low, Philip S; chemistry, from Trask Trust Fund, \$83,333, "Trask Support."

Lu, Yung-Hsiang; electrical & computer engineering, from Elan Microelectronics Corp, \$2,500, "2020 Low-Power Computer Vision Workshop."

Lu, Yung-Hsiang; **Barbarash, David Michael**; **Ebert, David S** and **Zakharov, Wei**; electrical & computer engineering, horticulture & landscape architecture, libraries administration, from National Science Foundation, \$49,999, "Collaborative:Rapid Response Research (RAPID):Leveraging New Data Sources to Analyze the Risk of COVID-19 in Crowded Locations."

Malis, Oana and **Manfra, Michael James**; physics & astronomy, electrical & computer engineering, from National Science Foundation, \$141,564, "Infrared Quantum Materials Based on Scandium-Containing III-Nitrides."

Malshe, Ajay P and **Bapat, Salil**; mechanical engineering, from National Science Foundation, \$151,093, "Rapid Response Research (RAPID): Ionic Modulation of COVID through Ceramic Surfaces for Deactivation."

Mathew, Alan G; animal sciences, from Indiana State Fair Board, \$5,000, "Research on Meat Quality."

Mattes, Richard D; public health, from Gelesis SRL, \$192,192, "Randomized, Controlled, 2 X 2, Cross-Over Metabolic Trial."

Mattes, Richard D; nutrition science, from ILSI North America, \$8,000, "Sweet Taste Measurement: Narrative Review for Nutrition Practitioners."

McKinley, Steven K and **Sands, Danielle L**; County Extension Services - 4H, from National 4-H Council, \$5,000, "Toyota USA Foundation 4-H National Youth Science Day - Indiana Response."

Mengiste, Tesfaye D; botany & plant pathology, from Kansas State University, \$236,440, "Phase II-Genetic Improvement of Sorghum for Resistance to Fungal Pathogens."

Meyer, Terrence R; mechanical engineering, from Spectral Energies, LLC, \$40,000, "Advanced Laser Based Diagnostic Techniques for Combustion and Propulsion Research(Grant 13000484)."

Miles, Richard D; WBAA administration, from Corporation for Public Broadcasting, \$75,000, "CPB - FY20 Coronavirus Aid, Relief and Economic Security (CARES) Stabilization Grant."

Miller, Jeffrey T; chemical engineering, from Argonne National Laboratory, \$25,000, "Catalyst Characterization to Support Catalyst Development for Converting Biomass, Amendment 8; (Grant 14000242)."

Mohammadi, Mohsen; agronomy, from Salk Institute for Biological Studies, \$479,652, "Re-Designing Climate Change Resilient Wheat for Carbon Sequestration."

Mudawar, Issam; mechanical engineering, from National Aeronautics and Space Administration, \$28,894, "Flow Boiling and Condensation in Microgravity-NASA Space Technology Research Fellowships (NSTRF) Fellowship for Lucas O'Neill; Supplement 7 for Grant #12000151."

Neumeister, Norbert; **Jones, Timothy Matthew** and **Jung, Andreas**; physics & astronomy, from Princeton University, \$69,529, "US Compact Muon Solenoid (CMS) Group at Purdue University for Activities Related to US Compact Muon Solenoid (CMS) Software and Computing Subsystem, AM 10;100001473."

Nie, Linda H and **Dydak, Ulrike**; health sciences, from University of California - San Diego, \$68,039, "Sodium Regulation in Individuals on Known Dietary Sodium Intake."

Nielsen, Robert L; agronomy, from Plant Response Inc, \$15,000, "Corn & Soybean Production."

Noinaj, Nicholas; biological sciences, from PHS-NIH National Institute of General Medical Science, \$300,852, "Unraveling the Mechanism by Which the β -barrel Assembly Machinery (BAM) Complex Mediates Outer Membrane Protein (OMP) Biogenesis (Grant 11000888, Amendment #1)."

Owada, Takashi; statistics, from National Science Foundation, \$58,337, "Random Algebraic Topology (Grant 10001324, Amendment #2)."

Park, Shin Ae; veterinary clinical sciences, from PHS-NIH National Eye Institute, \$164,602, "Biomechanical and Genetic Effects on Glaucoma Progression."

Patton, Aaron J; horticulture & landscape architecture, from Pioneer Hi-Bred International, Inc., \$9,995, "Management Practices that Improve Rinskor Activity on Sedge."

Patton, Aaron J and **Bigelow, Cale A**; horticulture & landscape architecture, from Midwest Regional Turf Foundation, \$30,000, "Midwest Regional Turf Foundation."

Patton, Aaron J; horticulture & landscape architecture, from Pioneer Hi-Bred International, Inc., \$6,000, "Rinskor + Dimension Enhanced Crabgrass Control."

Patton, Aaron J; horticulture & landscape architecture, from Pioneer Hi-Bred International, Inc., \$5,000, "The Efficacy of Rinskor Premix Formulations of Yellow and Purple Nutsedge in Turfgrass."

Peng, Chunyi; computer science, from National Science Foundation, \$100,000, "Rapid Response Research (RAPID): Assessing and Exploiting Operational Mobile Networks in Face of Public Health Crisis."

Pijanowski, Bryan C and **Bellisario, Kristen M**; forestry & natural resources, from U.S. Fish and Wildlife Service, \$78,975, "Bioacoustic and Soundscape Ecology Support for the USFWS Avian Acoustic Monitoring Project."

Pinal to Sintim

Pinal, Rodolfo; industrial & physical pharmacy, from Astrazeneca Product Development, \$45,000, "Center for Pharmaceutical Processing Research Consortium (Astrazeneca)."

Pipes, R Byron; aeronautics & astronautics, from Woodward-Hexcel, \$75,000, "Hexcel – Digital Twin."

Pitts, Brandon J; industrial engineering, from Link Foundation, \$30,000, "Link Foundation Fellowship in Modeling, Simulation, and Training – Gaojian Huang."

Pol, Vilas G; chemical engineering, from Valgotech LLC, \$90,000, "Multifunctional Trilayer Membrane for a Stable, Scalable and Economical High Energy Capacity Li-S Battery with Long Cycle Life."

Pourpoint, Timothee L and **Kenttamaa, Hilikka I**; aeronautics & astronautics, chemistry, from Analytical Mechanics Association, Inc, \$21,366, "Support to Commercial Crew Program for Draco Design Modifications."

Prokopy, Linda S; forestry & natural resources, from the Nature Conservancy, \$15,000, "Understanding Persistence of Cover Crop Use: Upper White River Watershed."

Pushkar, Yulia N; physics & astronomy, from Higher Education Commission Pakistan, \$2,960, "Bench Fees – Effat Sitara."

Qu, Ming; civil engineering, from Oak Ridge National Laboratory, \$75,000, "The Geothermal Heat Pump and Thermal Storage (Grant 14000455)."

Rahimi, Rahim; materials engineering, from Ford Motor Company, \$100,000, "Feasibility Study for an Advanced Additive Manufacturing Equipment for Use on Autonomous Robots." (a Discovery Park award – Birk Nanotechnology Center)

Rainey, Katherine Martin; agronomy, from Agricultural Research Service, \$6,050, "Acquisition of Goods and Services."

Raman, Arvind; **Sinfield, Joseph V** and **Yih, Yuehwern**; education administration, civil engineering, industrial engineering, from Agency for International Development, \$4,244,994, "Laser Partners for University-LED Solutions Engine (PULSE)."

Rhoads, Jeffrey Frederick; **Bolton, J Stuart**; **Davies, Patricia**; **Gonzalez, Marcial** and **Son, Steven F**; mechanical engineering, from Air Force Research Laboratory, \$50,000, "Exploring the Thermomechanics of Energetic and Mock Energetic Composite Materials Under Quasi-Static and Near-Resonant Excitations (Grant 13000634; Modification 8)."

Ribeiro, Fabio H; chemical engineering, from Total Research & Technology, \$60,000, "Center for Innovative and Strategic Transformation of Alkane Resources (CISTAR) Industrial Consortium, 40001938."

Rochet, Jean-Christophe and **Cannon, Jason R**; medicinal chemistry & molecular pharmacology, health sciences, from PHS-NIH National Institute Neurological Disorders and Stroke, \$146,481, "Role of Endosulfine-Alpha Expression and Phosphorylation in Parkinson's Disease."

Rokhinson, Leonid P; physics & astronomy, from National Science Foundation, \$149,845, "Topological Superconductivity and High Order Non-Abelian Excitations."

Rompf, Tiark; computer science, from Sambanova Systems LLC, \$25,000, "Multi Sponsor – Purdue Center for Programming Principles and Software Systems (PurPL) Center."

Sadeghi, Farshid; mechanical engineering, from Honeywell Inc., \$359,642, "Fundamental Investigation at the Piston/Cylinder-Rotor Interface Operating in the Presence of Jet Fuel."

San Martin-Gonzalez, Maria Fernanda; food science, from Nephew Pharmacy Pc, LLC, \$150, "Multi-Sponsor Gift Funds."

Sanson, Jeffrey J; agricultural economics, from Indiana Secretary of State Securities Div, \$68,732, "Smart Indiana Financial Literacy Project."

Saunders, Michael R; **Swihart, Robert K**; **Aime, Mary Catherine** and **Holland, Jeffrey D**; forestry & natural resources, botany & plant pathology, entomology, from Indiana Department of Natural Resources, \$629,790, "Hardwood Ecosystem Experiment (2020-2022)."

Scalo, Carlo; mechanical engineering, from Army Research Office, \$60,000, "ARO-YIP: Coherent-Vorticity-Preserving (CvP) Large-Eddy Simulations (LES) of Very-High-Reynolds-Number Vortex Dynamics (Grant 13000616, Modification 5)."

Scharf, Michael E; entomology, from Virginia Technology, \$181,016, "Development of an Assessment-Based Pest Management (APM) Protocol(s) for German Cockroach Elimination and Bed Bug Heat Treatment in US Department of Housing and Urban Development (HUD) Housing."

Scott, David E; Indiana State Chemist, from Environmental Protection Agency, \$470,827, "FY 2020 Pesticide Cooperative Agreement."

Scott-Moncrieff, Joanna C R; veterinary clinical sciences, from Compassion First Pet Hospitals, \$20,601, "SAS Resident."

Scutari, Gesualdo; industrial engineering, from Army Research Office, \$80,000, "Distributed Robust Nonconvex Optimization Over Time-Varying Networks: Tradeoffs and Guarantees (Grant 13000661, Modification 3)."

Seleem, Mohamed; comparative pathobiology, from PHS-NIH National Institute of Allergy and Infectious Diseases, \$447,489, "Repurposing Auranofin and Ebselen for Treatment of Multidrug Resistant Pathogens (Grant 11000605, Amendment 4)."

Sepulveda, Maria Soledad; **Hoverman, Jason T** and **Lee, Linda S**; forestry & natural resources, agronomy, from Department of the Army, \$200,000, "Development of Amphibian Poly- and Perfluoroalkyl Substances Toxicity Reference Values for Use in Ecological Risk Assessment at Aqueous Film Forming Foam Sites (Grant 13000468, Modification 9)."

Sheehan, Amy Heck; pharmaceutical practice, from Takeda Pharmaceutical International Inc US Region, \$162,714, "Purdue/Takeda Pharmaceuticals Medical Affairs Fellowship."

Sheehan, Amy Heck; pharmaceutical practice, from Takeda Pharmaceutical International Inc US Region, \$167,714, "Purdue/Takeda Pharmaceuticals Global Regulatory Affairs Fellowship -2."

Sheffield, John W; engineering technology, from International Association for Hydrogen Energy, \$10,000, "IAHE Expenses (Orig. 30001562)."

Simpson, Garth J; chemistry, from Merck & Company Inc., \$55,000, "Micro-Retarder Array Application in Aid of Increasing the Throughput of Sonicc Imaging."

Sintim, Herman O and **Aryal, Uma K**; chemistry, comparative pathobiology, from National Science Foundation, \$444,000, "Signaling Axes Modulated by Cyclic Dinucleotides."

Son to Yih

Son, Steven F; Rhoads, Jeffrey Frederick and Scalo, Carlo; mechanical engineering, from Los Alamos National Laboratory, \$244,000, "Additively Manufactured Energetic Sensors (AMES)."

Straw, Mark L; animal sciences, from Indiana State Department of Health, \$1,036, "Developing a Rapid Response Research (RAPID) Response Team (RRT)."

Strimel, Greg J.; technology, leadership & innovation, from Region 4 Workforce Development Board, \$153,576, "Advancing the Next Generation for Manufacturing Competitiveness: Establishing the Regional Talent Pipeline Ecosystem (Grant 40002762 - Inc Yr 2 Funding)."

Subbarayan-Shastri, Ganesh; mechanical engineering, from Semiconductor Research Corporation, \$61,111, "Nonlinear Multiscale Modeling for Back End of Line (BEOL) Structures; Amendment 3 for Grant #40002579."

Tan, Hong Z; electrical & computer engineering, from Google Inc, \$40,672, "Google."

Telenko, Darcy E P; botany & plant pathology, from BASF Corporation, \$11,040, "BASF Sponsored Evaluation of Seed Treatment for Nematodes in Corn."

Tesmer, John; biological sciences, from PHS-NIH National Cancer Institute, \$657,332, "Regulation of the Metastasis Promoting Chemokine Receptor ACKR3 by GPCR Kinases, Gbg and Arrestins."

Thompson, David H; chemistry, from Cornell University, \$111,940, "Modulation of Lipid Bisretinoids Clearance with Beta-Cyclodextrins; Amendment 4, Grant 11000697."

Trice, Rodney W and Youngblood, Jeffrey P; materials engineering, from Army Research Office, \$44,500, "Forming Transparent Ceramics via Alignment of Alpha-Al2O3 Platelets: a Fundamental Investigation and Forming Study (Grant 13000550, Modification 7)."

Trice, Rodney W and Youngblood, Jeffrey P; materials engineering, from Army Research Office, \$7,500, "Phase 2: Using Additive Manufacturing to Align Al2O3 Platelets for Transparency."

Trice, Rodney W and Youngblood, Jeffrey P; materials engineering, from Army Research Office, \$7,500, "Additive Manufacturing of Transparent Alumina Using Shear Flow through a Capillary."

Vacca, Andrea; agricultural & biological engineering program, from CNH - Hydraulic Competency Center, \$109,511, "A Study of the Sources of Energy Loss in the Hydraulic Circuit of Agricultural Tractors and Formulation of Solutions for Improved Efficiency."

Varma, Amit H and Seo, Jungil; civil engineering, from Charles Pankow Foundation, \$85,500, "Seismic and Wind Behavior and Design of Coupled Concrete-Filled Composite Plate Shear Walls (CF-CPSW) Core Walls for Steel Buildings."

Wang, Changyou; mathematics, from National Science Foundation, \$80,000, "Mathematical Analysis of Nematic Liquid Crystals and L-Infinity Variational Problems (Grant 10001314, Amendment #2)."

Wang, Haiyan; materials engineering, from Office of Naval Research, \$270,000, "2D Layered Multiferroic Oxide Systems with Tunable Electromagnetic Properties."

Webb, Kevin J; electrical & computer engineering, from Air Force Office of Scientific Research, \$110,096, "Nanostructured Material for Optomechanics (Grant 13000784, Modification 2)."

Weibel, Justin A; mechanical engineering, from IBM, \$30,000, "Cooling Technologies Research Center (CTRC), 40002838 IBM \$30,000."

Weibel, Justin A; mechanical engineering, from Multi-Sponsored Industrials, \$7,500, "Cooling Technologies Research Center (CTRC), Increase 40001184 - Laird."

Weibel, Justin A; mechanical engineering, from Multi-Sponsored Industrials, \$30,000, "Cooling Technologies Research Center (CTRC), 40002838."

Weiner, Andrew M; electrical & computer engineering, from Oak Ridge National Laboratory, \$5,158, "A Quantum Interconnect for Matter Qubits Based on Frequency Encoded Photonic Qubits."

Wendt, Michael K; Lim, Seung-Oe and Zhang, Zhong-Yin; medicinal chemistry & molecular pharmacology, from Metavivor Research and Support Inc, \$100,000, "Enhancing Anti-Metastatic Immunity through Targeted Inhibition of SHP2 Phosphatase."

Widhalm, Joshua R; horticulture & landscape architecture, from EnP Investments, \$1,500, "EnP Investments."

Wilcox, Michael D; Country Extension Services, from Blackford County, \$14,922, "Assessing Housing Conditions and Needs in Blackford County."

Williams, Samantha M; field extension, from Pulaski Alliance for Community Education, \$6,000, "2020 Pace Grant."

Wisecaver, Jennifer H; biochemistry, from Johns Hopkins University Applied Physics, \$79,781, "Development of Advanced Plant Technologies for the Detection of Environmental Threats (Grant #13000710, Modification 4)."

Yazawa, Kazuaki; electrical & computer engineering, from Raytheon, \$100,000, "Integrated Thermal Management of Aerospace Vehicles Consortium Membership." (a Discovery Park award - Birck Nanotechnology Center)

Yazawa, Kazuaki; mechanical engineering, from Raytheon, \$100,000, "Integrated Thermal Management of Aerospace Vehicles Consortium Membership (Raytheon Company)." (a Discovery Park award - Birck Nanotechnology Center)

Ye, Peide; electrical & computer engineering, from Air Force Office of Scientific Research, \$65,000, "Performance Enhancement of Robust Gan Mosfets by Ferroelectric Dielectric and Negative Capacitance Effect (PERFECT)." (a Discovery Park award - Birck Nanotechnology Center)

Ye, Peide; electrical & computer engineering, from Army Research Office, \$30,000, "Ballistic Phosphorene Transistor (Grant 13000410 Modification 10)." (a Discovery Park award - Birck Nanotechnology Center)

Yeung, Sai Kee; mathematics, from National Science Foundation, \$72,237, "Moduli and Surfaces in Complex Geometry (Grant 10001319, Amendment #2)."

Yih, Yuehwern; industrial engineering, from Agency for International Development, \$300,000, "Laser Buy-In Multi-Country Study on Inclusive Education (MCSIE) for Learners with Disabilities in Cambodia, Malawi, and Nepal."

Yu to Zi

Yu, Wenbin; aeronautics & astronautics, from Coretech Systems, Inc, \$50,000, "Composites Design and Manufacturing HUB (cdmHUB) (Consortium)."

Zhao, Kejie; mechanical engineering, from National Science Foundation, \$65,000, "Bridging Mechanics and Electrochemistry: Theories and Experiments on Battery Materials."

Zhou, Chenn Qian; mechanical & civil engineering, from EVRAZ North America, \$50,000, "Steel Manufacturing Visualization and Simulation Consortium (SMVSC) Membership."

Zhou, Chenn Qian and **Moreland, John R**; Center for Innovation through Visualization and Simulation, from Florida Keys Community College, \$104,879, "Developing Reliable Education Avenues to Manifest (DREAM) Science, Technology, Engineering & Mathematics (STEM) Careers."

Zhou, Chenn Qian; **Lee, Seokcheon** and **Moreland, John R**; Center for Innovation through Visualization and Simulation, industrial engineering, from Naval Sea Systems Command Naval Surface Warfare Center (NAVSEA/NSWC) Crane, \$69,911, "Visualization of Repair Operations Management for Networked Systems Resilience; Modification 1, Grant 13000757."

Zhu, Fengqing; electrical & computer engineering, from East Metropolitan Health Service, \$30,700, "Training Western Australian (WA) Obesity Management Clinical and Allied Health Professional Workforce."

Ziviani, Davide and **Groll, Eckhard A**; mechanical engineering, from Tri-State Generation & Transmission, \$93,629, "Development and Optimization of a Packaged R-290 Cold-Climate Heat Pump." ■

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