

## 2021 Faculty Research Incentive Recipients

In accordance with Article 23, Section 8.3 of the Collective Bargaining Agreement, a percentage of the Facilities and Administrative costs generated by an external grant is returned to its Bargaining Unit Faculty Members Principal Investigator in the form of professional development funds.

### Arts & Sciences **Biological Sciences**

#### **Dr. George S. Bullerjahn**

Grant: Lake Erie Center for the Great Lakes and Human Health

Sponsor: US Department of Health and Human Services

Grant: Lake Erie Center for Fresh Waters and Human Health

Sponsor: National Science Foundation

Grant: Sandusky Bay Monitoring and Data Phase 4

Sponsor: Ohio State University Research Foundation

Grant: H2Ohio Sandusky Bay Restoration Initiative Nutrient Reduction Wetlands Project

Sponsor: Baird

Grant: USACE BAA: Rapid, Portable and Multiplexed Detection of Freshwater Harmful Algal Bloom-Forming Genera

Sponsor: Department of Defense Army Corps of Engineers

#### **Dr. Julia Vera Halo**

Grant: Determinants of SINE Mobilization in the Domestic Dog

Sponsor: US Department of Health and Human Services

Grant: Properties of Endogenous Retroviral Elements in Canines

Sponsor: US Department of Health and Human Services

#### **Dr. Kevin E. McCluney**

Grant: Collaborative Proposal: MRA: Teleconnections Among Great Plains NEON Sites by Wind and Wing

Sponsor: National Science Foundation

Grant: Variation in Contaminant Concentrations in Wastewater and in Biota of Streams of NW Ohio

Sponsor: Ohio State University Research Foundation

Grant: Where is Pollination in Peril? Evaluating Climate Risks to Wild and Managed Bees and Pollination Services across the US

Sponsor: United States Department of Agriculture  
Grant: H2Ohio Wetland Monitoring Program - McCluney-BGSU  
Sponsor: Ohio State University Research Foundation

**Dr. Jeffrey Gibson Miner**

Grant: Reconnected Wetlands: Northern Pike Use of Grated Systems  
Sponsor: Ohio Department of Natural Resources

Grant: Identification of Optimal Sites for Maumee AOC Restoration Actions in the Lower Maumee River  
Sponsor: University of Toledo

**Dr. Kevin John Neves**

Grant: Assessing Nitrogen Dynamics in a Closed, Integrated Aquaponics Systems  
Sponsor: Wright State University

Grant: Aquaponics on the Edge: Coupling Aquaponics to Tile Drainage Systems for Nutrient Recapture and Revenue Generation  
Sponsor: United States Department of Agriculture

**Dr. Vipaporn Phuntumart**

Grant: Development of an Efficient Approach to Quantify and Control a Fish Disease Caused by Saprolegnia  
Sponsor: Ohio State University Research Foundation

**Dr. Karen V. Root**

Grant: Ash Monitoring to Inform Resistance Breeding for Resistance to EAB  
Sponsor: United States Department of Agriculture Forest Service

**Dr. Moira J. van Staaden**

Grant: Project SEA Change: Using Social Connectivity to Improve Quantitative Literacy and Transform Undergraduate Science Teaching  
Sponsor: National Science Foundation

**Dr. Christopher Ward**

Grant: Chytrid Control Advancing Algal Targets (ChytCAAT)  
Sponsor: Lawrence Livermore National Security LLC

**Dr. Daniel D. Wiegmann**

Grant: Collaborative Research: Expression and Dynamics of Reproductive Tactics in a Wild Population of Smallmouth Bass  
Sponsor: National Science Foundation

**Dr. Hans Karl Wildschutte**

Grant: Genetic Basis of Metabolite Production Against Clinically-Derived Pathogens  
Sponsor: US Department of Health and Human Services

Grant: Evolving Antibiotic Susceptibility from Multi-Drug Resistant Pathogens  
Sponsor: Cystic Fibrosis Foundation

Grant: ISRP: Project Bacillus-20: Isolate and Identify  
Sponsor: EnviroZyme (Betco)

**Dr. Zhaohui Xu**

Grant: Profiling Microbial Diversity in Fish Production Ponds at Fin Farm  
Sponsor: Ohio State University Research Foundation

Grant: Microbial Dynamics in Agricultural Soil Amended with Dredged Material  
Sponsor: Ohio State University Research Foundation

**Chemistry**

**Dr. Malcolm D. E. Forbes**

Grant: Photochemistry, Spin, and Molecular Motion: Connections Through Magnetic Resonance  
Sponsor: National Science Foundation

Grant: Probes, Labels, Traps, and Reporters: Exploring the Modern Spin Chemistry Landscape  
Sponsor: National Science Foundation

**Dr. Joseph Coy Furgal**

Grant: Tri-Cure Hybrid Organo-Silicon Coatings for Monument Preservation  
Sponsor: US Department of Interior National Park Service

**Dr. Robert W. Midden**

Grant: Evaluation of Wastewater Treatments to Reduce Nutrient Transport from Dairy  
Manure Land Use: Data Collection - Phase 2  
Sponsor: Ohio Water Development Authority

Grant: H2Ohio Wetland Monitoring Program - Midden-BGSU  
Sponsor: Ohio State University Research Foundation

**Dr. Massimo Olivucci**

Grant: Deciphering and Reprogramming Light Induced Double Bond Isomerization in Proteins  
Sponsor: National Science Foundation

Grant: Computational Design of Highly Fluorescent Rhodopsins  
Sponsor: US Department of Health and Human Services

**Dr. Alexis Dee Ostrowski**

Grant: CAREER: Controlling Mechanical Properties of Materials Using Photoactive Metal-  
Coordination Bonds  
Sponsor: National Science Foundation

**Dr. Jayaraman Sivaguru**

Grant: Enforcing Excited State Reactivity by Altering Chromophore Characteristics

Sponsor: National Science Foundation

Grant: Electronically Dimmable Eyewear Protection Devices Phase II

Sponsor: AlphaMicron Inc.

**Dr. Xiaohong Tan**

Grant: RAPID: Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)-Prevention: Multiple-Site Binding with Fusing Aptamers

Sponsor: National Science Foundation

**Computer Science**

**Dr. Sankardas Roy**

Grant: SaTC: Core: Small: Collaborative: Data-Driven Approaches for Large-Scale Security Analysis of Mobile Applications

Sponsor: National Science Foundation

**Dr. Yan Wu**

Grant: Software Error Analysis Methodology

Sponsor: Spectare Systems, Inc

Grant: Software Vulnerability Management Project

Sponsor: Spectare Systems, Inc

**English**

**Chad Iwertz Duffy**

Grant: COVID: Toward a Pedagogy from Crisis: Adaptive Teaching and Learning at Bowling Green State University During COVID-19

Sponsor: National Endowment for the Humanities

**Mathematics**

**Alexander John Izzo**

Grant: Uniform Algebras and Analytic Structure

Sponsor: Simons Foundation

Grant: New Developments at the Interface of Banach Algebras and Complex Analysis

Sponsor: National Science Foundation

**Dr. Wei Ning**

Grant: Empirical-Likelihood-Based Sequential Change-point Detection Methods for High Dimensional Data

Sponsor: Simons Foundation

**Dr. Kimberly Cervello Rogers**

Grant: Collaborative Research: Mathematics Graduate Student Peer-Mentorship Program:  
Impact and Adaptability

Sponsor: National Science Foundation

**Dr. Xiangdong Xie**

Grant: Quasiisometries of Nilpotent and Solvable Lie Groups

Sponsor: Simons Foundation

**Dr. Craig Lee Zirbel**

Grant: Integrated Resource for Nucleic Acid Structures

Sponsor: US Department of Health and Human Services

**Physics & Astronomy**

**Dr. Marco Nardone**

Grant: Interdigitated Back Contact Polycrystalline Device

Sponsor: National Renewable Energy Laboratory

Grant: PV Device and Measurement Modeling to Support Photovoltaics Characterization Project

Sponsor: National Renewable Energy Laboratory

Grant: Perovskite Solar Cell Modeling for Imaging Characterization

Sponsor: National Renewable Energy Laboratory

**Dr. Farida A. Selim**

Grant: Fundamental Understanding of Transport Under Reactor Extremes (FUTURE)

Sponsor: Triad National Security, LLC

Grant: Collaborative Research: Bridging the Atomic Scale and the Mesoscale in the  
Characterization of Defect Production and Evolution in High Entropy Alloys

Sponsor: National Science Foundation

**Dr. Liangfeng Sun**

Grant: Exciton Dynamics in Colloidal PbS Nanosheets

Sponsor: National Science Foundation

**Dr. Mikhail A. Zamkov**

Grant: Solution-Processed Photovoltaic Devices Utilizing Semiconductor Excitonic Nanoshells  
(SENS)

Sponsor: Department of Energy Office of Science

Grant: Reaction Limited Synthesis of Atomically-Defined Semiconductor Nanocrystals

Sponsor: National Science Foundation

## **Political Science**

### **Dr. Shannon Kathryn Orr**

Grant: OWC NERR Management Plan Development

Sponsor: Ohio Department of Natural Resources

### **Dr. Justin M. Rex**

Grant: Creating Stronger Pathways to Infant Vitality through Participant Research

Sponsor: Ohio Department of Education

## **Psychology**

### **Dr. Clare Louise Barratt**

Grant: Education and Research Center (ERC - Cincinnati)

Sponsor: University of Cincinnati

### **Dr. Verner Peter Bingman**

Grant: Collaborative Research: Navigation and the Neural Integration of Multimodal Sensory Information in the Brain of an Arthropod

Sponsor: National Science Foundation

### **Dr. Eric F. Dubow**

Grant: Exposure to Violence and Subsequent Weapons Use: Mediating and Moderating Processes

Sponsor: University of Michigan

Grant: Internship Agreement 2019-2020

Sponsor: YWCA of Greater Toledo

Grant: Exposure to Violence and Subsequent Weapons Use: Integrative Data Analysis across Two Urban High-Risk Communities

Sponsor: University of Michigan

### **Dr. Carolyn Joyce Tompsett**

Grant: External Clinical Placement (Cullen Center)

Sponsor: ProMedica Children's Medical Center

Grant: External Clinical Placement (Blanchard Valley NW Ohio Psych)

Sponsor: Blanchard Valley Health Association

Grant: External Clinical Placement (Sandusky County BDD)

Sponsor: Sandusky County Board of Developmental Disabilities

Grant: Evaluation Services for Competitive RECLAIM FY2020 & FY2021: Expansion of Existing Community-Based Assessment Centers

Sponsor: Lucas County Juvenile Court

Grant: FY19 Second Chance Act Youth Offender Reentry Program  
Sponsor: Lucas County Juvenile Court

Grant: External Clinical Placement (Harbor Connections Ctr)  
Sponsor: Harbor

Grant: External Clinical Placement (Cullen Center)  
Sponsor: ProMedica

Grant: External Clinical Placement (Harbor 22nd St)  
Sponsor: Harbor

Grant: External Clinical Placement (Mercy Health)  
Sponsor: Mercy Health

Grant: External Clinical Placement (Harbor Secor/Woodley)  
Sponsor: Harbor

Grant: External Clinical Placement (Harbor Commerce/N Prospect)  
Sponsor: Harbor

Grant: External Clinical Placement (Sandusky County BDD)  
Sponsor: Sandusky County Board of Developmental Disabilities

Grant: External Clinical Placement (Drescher - Oregon Schools)  
Sponsor: Drescher & Associates Clinical Services

Grant: External Clinical Placement (Zepf Ctr)  
Sponsor: Zepf Center

### **School of Earth, Environmental, & Society**

#### **Dr. John Richard Farver**

Grant: Developing Best Practices for Disposal of Boat Wash Waters at Ohio Marinas  
Sponsor: Ohio Lake Erie Commission

Grant: GP-EXTRA: Geoscience Education Through Authentic Research  
Sponsor: National Science Foundation

#### **Dr. Yuning Fu**

Grant: Space-Geodetic Exploration of Linkages Between Time-Dependent Surface Loads, Slow Slip Events and Seismicity in South Central Alaska  
Sponsor: University of California, Berkeley

Grant: Constraining Earth Structure Around the Great Lakes Using Loading Deformation

Sponsor: NASA Office of Earth Science

**Dr. Ganming Liu**

Grant: H2Ohio Wetland Monitoring Program - Liu BGSU

Sponsor: Ohio State University Research Foundation

**Dr. Anita Simic**

Grant: StateView Program Development and Operations for the State of Ohio

Sponsor: AmericaView

**Dr. Angelica Vazquez-Ortega**

Grant: Dredged Material Benefits for Crop Production and Environmental Implications

Sponsor: Ohio Lake Erie Commission

Grant: Dredged Material Blended with Organic Rich Sources to Amend Farm Soils

Sponsor: Ohio State University Research Foundation

**Dr. Margaret Mary Yacobucci**

Grant: BGSU ALLIES: Building Inclusive Leadership Practices and Policies to Transform the Institution

Sponsor: National Science Foundation

**Sociology**

**Dr. Kelly Stamper Balistreri**

Grant: Senior Hunger and the Food Security Infrastructure

Sponsor: University of Kentucky

Grant: 2021 Ohio Medicaid Assessment Survey (OMAS)

Sponsor: Ohio State University Research Foundation

**Dr. John H. Boman**

Grant: TASC of Northwest Ohio Reentry Program for Opioid Use Disorders

Sponsor: TASC of Northwest Ohio, Inc

**Dr. Susan Louise Brown**

Grant: Health and Well-Being Effects on Later-Life Divorce and Subsequent Repartnering

Sponsor: United States Department of Health and Human Services

**Dr. Karen Benjamin Guzzo**

Grant: Center for Family and Demographic Research

Sponsor: United States Department of Health and Human Services

**Dr. Wendy Diane Manning**

Grant: Archiving County and State Nuptiality Data

Sponsor: United States Department of Health and Human Services

Grant: Marriage Strengthening Research & Dissemination Center  
Sponsor: Child Trends, Inc

Grant: Mechanisms Underlying Sexual Minority Health Disparities in the United States  
Sponsor: University of Minnesota

**Health & Human Services**  
**Human Services**

**Dr. Laura Jane Fullenkamp**

Grant: Evaluation for Wood County Alcohol, Drug Addiction and Mental Health Services (ADAMHS)  
Sponsor: Wood County ADAMH Services Board

**Dr. Philip Matthew Stinson**

Grant: Police Integrity Lost: A Longitudinal Study of Police Crime - CY2021  
Sponsor: BGSU Foundation

**Dr. Adam Michael Watkins**

Grant: RECLAIM - Opportunity Based Probation  
Sponsor: Lucas County Juvenile Court

**Public & Allied Health**

**Dr. Jonathan Carl Kershaw**

Grant: Strategies to Increase Consumer Perceptions and Attitudes Towards Integrated Multi-Trophic Aquaponics  
Sponsor: United States Department of Commerce National Oceanic and Atmospheric Administration

**Dr. Jinha Lee**

Grant: Data-Driven Predictive Models for Identifying Risk Factors Leading to Opiate Abuse  
Sponsor: Ohio Department of Higher Education

**Musical Arts**

**Music Performance Studies**

**Dr. Robert Scott Satterlee**

Grant: Music Internship AY 2020/2021  
Sponsor: All Saints Catholic School

Grant: Music Internship AY 2020/2021  
Sponsor: St. Aloysius School

Grant: Music Internship AY 2020/2021

Sponsor: St. Patrick of Heatherdowns Church

**Education & Human Development**  
**Counseling & Special Education**

**Dr. Brooks R. Vostel**

Grant: IMPerative: Designing an Inclusive Middle-level Program

Sponsor: University of Cincinnati

**Educational Foundations, Leadership, & Policy**

**Dr. Kristina Nell LaVenia**

Grant: LEAD WELL: Leadership for School Safety and Well-being

Sponsor: Department of Justice

**Dr. Rachel Ann Vannatta**

Grant: Evaluation of Youth Treatment-Implementation (YT-I) Yr 2

Sponsor: Ohio Department of Mental Health & Addiction Services

**Family & Consumer Sciences**

**Dr. Laura Anne Landry-Meyer**

Grant: Opioid-Impacted Family Support Program

Sponsor: Mercy College of Ohio

**Human Movement, Sport & Leisure Studies**

**Dr. Vikki Krane**

Grant: Social Justice Activism: Experiences of Sport Psychology Consultants Doing Social Justice Activism

Sponsor: Association for the Advancement of Applied Sport Psychology

Grant: 2020-2021 Internship Agreement

Sponsor: Elmwood Local Schools

**Teaching & Learning**

**Dr. Jonathan D. Bostic**

Grant: Collaborative Research: Developing & Evaluating Assessments of Problem Solving (DEAP)

Sponsor: National Science Foundation

Grant: Collaborative Research: Validity Evidence and Measurement in Mathematics Education (V-M2ED)

Sponsor: National Science Foundation

**Dr. Emilio Duran**

Grant: AEOP Junior Science and Humanities Symposium

Sponsor: Battelle Memorial Institute

**Dr. Tracy L. Huziak-Clark**

Grant: Project IMPACT: Improving Motivation, Pedagogy, Assessment and Collaboration for Teachers

Sponsor: United States Department of Education's Teacher Quality Partnerships

**Dr. Gabriel Todd Matney**

Grant: Understanding the Role of Lesson Study in K-12 Mathematics and Science Teacher Education

Sponsor: Syracuse University

**Dr. Cynthia Ann Ross**

Grant: FY 2020-2021 CTE Teacher Education Program

Sponsor: Ohio Department of Education

**Firelands**

**Dr. Subhalakshmi Nagarajan**

Grant: Role of Wetlands in Controlling Nutrient Loading to Lake Erie

Sponsor: Ohio State University Research Foundation

**Technology, Agriculture, & Applied Engineering**

**Dr. Qi Guo**

Grant: LEAN Buildings Collaboration

Sponsor: University of Dayton

**Research & Economic Engagement**

**Center for the Future of Forensic Science**

**Dr. Jon Eric Sprague**

Grant: National Priority Safety Programs (Y2)

Sponsor: Ohio Department of Public Safety

**Dr. Travis James Worst**

Grant: Decomposition of Fentanyl Patches

Sponsor: MIDAS Healthcare Solutions, Inc

Grant: Evaluation of the Stability of Oral Fluid Samples Stored in a Variety of Temperatures

Sponsor: Ohio Department of Public Safety