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
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 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 Changepoint 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: Quasisisometries 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
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