



# ANNUAL PI GRANTEE RECEPTION

*Celebrating Faculty and Staff Principal Investigators and Project Directors*

B

May 11, 2023



**Bucknell**  
UNIVERSITY

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# **JAMES ARTHUR**

Assistant Professor of Mechanical Engineering

**Project:**

“Reduce Energy Waste from Geothermal System (senior design)”

**Sponsor:** Penn Dairy



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# **NINA BANKS**

Associate Professor of Economics  
Affiliated Faculty in Critical Black Studies

**Project:**

“Sadie T. M. Alexander Biography”

**Sponsor:** The New School



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# SHAUNNA BARNHART

Program Director, Place Studies Program

**Project:**

“Environmental Resiliency VISTA, Years 1 and 2”

**Sponsor:** AmeriCorps: Partners for Campus Community Engagement



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# M. LAURA BENINATI

Associate Professor of Mechanical Engineering

**Project:**

“Hydrokinetic Turbines Consulting Project (senior design)”

**Sponsor:** Adaptide



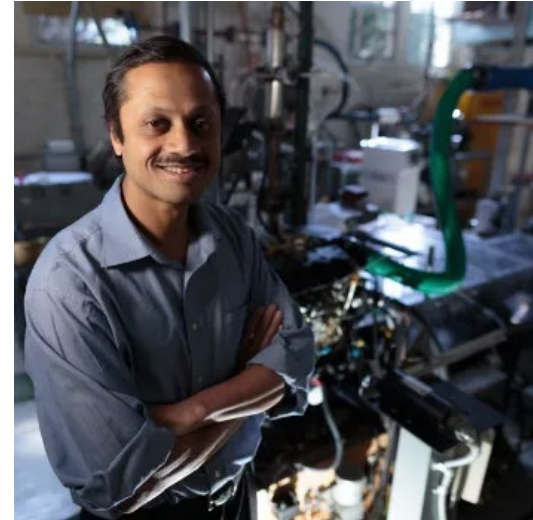
# INDRANIL BRAHMA

Associate Professor of Mechanical Engineering

**Project:**

“Pump Cavitation (senior design)”

**Sponsor:** TE Connectivity



# KEITH BUFFINTON

Professor of Mechanical Engineering

## Projects:

- “Box Folding (senior design)”
- “Beverage Distribution 4.0 (senior design)”

## Sponsors:

- MakiMaki Sushi
- Versabev



# ELLEN CHAMBERLIN

## Assistant Professor of Geology & Environmental Geosciences

### Project:

“Reducing Bias and Variability in Lateral Spreading Predictions: Incorporation of Geomorphic Factors, and Improved Ground Motion Characterization: Collaborative Research with North Carolina State University and Bucknell University”

**Sponsor:** U.S. Geological Survey





# **DONNA EBENSTEIN**

William C. & Gertrude B. Emmitt Memorial  
Chair in Biomedical Engineering, and  
Professor of Biomedical Engineering

**Project:**

“Infusing Sustainability into the Curriculum: Sustainability  
in Medical Device Design Exercise”

**Sponsor:** Engineering Unleashed, The Kern Family Foundation



# CLAIRE CAMPBELL

Professor of History, History Department Chair,  
Affiliated Faculty in Environmental Studies & Sciences

## Projects:

- "Cities by the Sea: Urban Coastlines in Atlantic Canada"
- "Enders/ACSUS 50 Research Award"
- "Dunnigan Fellowship in the History of Cartography"
- "Distinguished Scholar in Residence"

## Sponsors:

- Ocean Frontier Institute
- Association for Canadian Studies in the United States
- Clements Library, University of Michigan
- Center for the Study of Canada, SUNY-Plattsburgh



# ALAN CHEVILLE

## Professor of Electrical Engineering

### Projects:

- "Aerial Detection (senior design)"
- "Wide Area Location Delivery Objective (WALDO) (senior design)"
- "Edge Networking (senior design)"

### Sponsors:

- Booz-Allen Hamilton
- Kyndryl
- Pi Variables



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## **ANDREW CIOTOLA**

Program Manager, Stadler Center for Poetry  
and Literary Arts

## **CHET'LA SEBREE**

Assistant Professor of English, Director of the  
Stadler Center for Poetry and Literary Arts



### **Project:**

"Arts Organizations & Arts Programs 2022-2023  
Funding"

**Sponsor:** Pennsylvania Council on the Arts



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## **RICHARD CRAGO**

Professor of Civil & Environmental Engineering

## **JANINE GLATHAR**

Digital Pedagogy & Scholarship Specialist, GIS & Spatial Thinking

**Project:**

“America View through PA View 2022-2023 funding”

**Sponsor:** U.S Geological Survey

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# CHRIS ELLIS

Professor of Political Science

Co-director, Bucknell Institute for Public Policy

**Project:**

“The Politics of Higher Education: A Proposal for Research and Curricular Development”

**Sponsor:** Open Discourse Coalition



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# JENNIFER FIGUEROA

Director, International Student and Scholar Services

**Project:**

“Community-led Toilet Sanitation Project”

**Sponsor:** Davis Projects for Peace



# **DOUG GABAUER**

Associate Professor of Civil & Environmental Engineering

**Project:**

“Enhancement of Roadside Design Safety Prediction Models  
for the Highway Safety Manual”

**Sponsor:** National Academy of Science National Cooperative  
Highway Research Program





# ANDREA HALPERN

Professor of Psychology  
Department Co-Chair of Psychology

**Project:**

“Basic cognitive functions underlying singing accuracy:  
Causal flow or reciprocal interactions?”

**Sponsor:** The GRAMMY Museum and Recording Academy:  
The GRAMMY Museum Grant Program



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## **SAMANTHA HART**

Director, Institutional Equity & Title IX Coordinator

**Project:**

“It's On Us to Speak UP Bucknell”

**Sponsor:** Pennsylvania Department of Education



# **MATTHEW HIGGINS**

Claire W. Carlson Chair in Environmental Engineering,  
Professor of Civil & Environmental Engineering  
Faculty Director, BCSE

## **Projects:**

- “Characterization and Co-digestion of the Organic Fraction of MSW to Facilitate Organic Diversion from Landfills and Enhance Biogas Production”
- “Evaluation of Conventional Mesophilic and Temperature Phased Anaerobic Digestion and Dewatering Performance of Recycled Cardboard Fiber Laden Waste Stream”

## **Sponsors:**

- Environmental Research and Education Foundation
- Lynchburg, VA Brown & Caldwell



# ERIN JABLONSKI

## Associate Dean of Engineering

### Projects:

- “Annual Support Package for KEEN Partners”
- “Sustainable Packaging Summer Internship In Residence”

### Sponsors:

- Kern Family Foundation
- Versabev



# DIANE JAKACKI

## Digital Scholarship Coordinator

### Project:

“Canada Research Chair in Digital Humanities  
at the University of Guelph in Ontario”

**Sponsor:** Fulbright U.S. Scholars Award



# PETER JANSSON

Associate Professor of Electrical Engineering

**Project:**

“Detection of the Mach Effect”

**Sponsor:** Open Discourse Coalition



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# ERIC KENNEDY

Associate Professor of Biomedical Engineering

**Project:**

“Playground Safety Certification Training 2”

**Sponsor:** Department of Defense



# CHARLES KIM

## Professor of Mechanical Engineering

### Projects:

- “Biomechanical characterization of Ponseti Bracing treatment of clubfoot”
- “Sonic Operations (senior design)”

### Sponsors:

- Bucknell Geisinger Research Initiative
- Fabtex





## **KATHRYN MAGUET**

Executive Director of the Weis Center

## **JOHANNA KODLICK**

Director of Operations, Weis Center

### **Projects:**

- "Lemon Bucket Orkestra"
- "Trick of the Light"
- "Paul Taylor Dance"
- "Soweto Gospel Choir"
- "Arts Organizations & Arts Programs 2022-2023"

### **Sponsors:**

- Mid Atlantic Arts Foundation PAGE
- Mid Atlantic Arts Foundation ArtsConnect
- Pennsylvania Council on the Arts



# KARLO MALAGA

Assistant Professor of Biomedical Engineering

## Projects:

- “Thalamic modulation of cortical sensorimotor oscillations in patients with deep brain stimulation for essential tremor”
- Modeling Volume of Tissue Activated in Deep Brain Stimulation with Clinical Correlation

**Sponsor:** Bucknell Geisinger Research Initiative



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# **EMILY MARTIN**

Ellen P. Williams Associate Professor in Music

**Project:**

“Royal Conservatoire of The Hague in the Netherlands”

**Sponsor:** Fulbright U.S. Scholars Award



## **CHRIS MARTINE**

David Burpee Professor in Plant Genetics & Research,  
Biology Department Chair

## **TANISHA WILLIAMS**

Richard E. and Yvonne Smith  
Post-Doctoral Fellow in Botany

### **Project:**

“Population Genomics and Climate Change  
Vulnerability of an Appalachian Endemic Plant at  
its Southern Range Edge in Pennsylvania”

**Sponsor:** Wild Resource Conservation Program,  
Pennsylvania Department of Conservation and Natural  
Resources



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# ALEXANDER RILEY

## Professor of Sociology

**Project:**

“Chateaubriand and Maistre in the History of Social and Political Theory”

**Sponsor:** Open Discourse Coalition



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# **RICHARD RINEHART**

Director, Samek Art Museum

**Project:**

“Arts Organizations & Arts Programs 2022-2023 Funding”

**Sponsor:** Pennsylvania Council on the Arts



# NATHAN RYAN

Professor of Mathematics

Affiliated Faculty in Latin American Studies

**Project:**

“National Research Experience for Undergraduates (NREU)  
in Experimental Number Theory”

**Sponsor:** National Science Foundation via the Mathematical  
Association of America



# **SHRAY SAXENA**

Visiting Assistant Professor, Civil & Environmental Engineering

## **Projects:**

- “Reinventing Pit Latrines using Breathable Laminate Liners to Mitigate Groundwater Contamination”
- SENCER Water Fellow in recognition of your expertise in water access, wastewater testing, sanitation and microbiology and your experience in tying curriculum to social justice issues as they relate to water, access to clean water and sanitation.

## **Sponsors:**

- Grand Challenges Canada
- Science Education for New Civic Engagements and Responsibilities



# **THIAGO SERRA**

Assistant Professor of Analytics & Operations  
Management

**Project:**

“Student Support and Mentorship Program for the  
International Conference on the Integration of Constraint  
Programming, Artificial Intelligence, and Operations  
Research (CPAIOR) 2022”

**Sponsor:** National Science Foundation



# SEZI SESKIR

Associate Professor of Music

**Project:**

“Chamber Music Collective”

**Sponsor:** Pennsylvania Council on the Arts via Community Partnerships Resource Conservation and Development, Inc.



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# ANDREW SLOBODA

Assistant Professor of Mechanical Engineering

## Projects:

- “Biomechanical characterization of Ponseti Bracing treatment of clubfoot”
- “Condiment Automation (senior design)”

## Sponsors:

- Bucknell Geisinger Research Initiative
- MakiMaki Sushi



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# TRISTAN STAYTON

## Professor of Biology

### **Project:**

“Collaborative Research: Research at Undergraduate Institutions: The challenges of living small: functional tradeoffs in the vertebral bone structure of diminutive mammals”

**Sponsor:** National Science Foundation



# STEVEN STUMBRIS

## Director of the Small Business Development Center

### Projects:

- "Bucknell University Incubators: Startup Lewisburg & Danville 2022"
- "PA ENGAGE Funding"
- "PA Partnerships for Regional Economic Performance 22-23 Funding"
- "Small Business Administration 2023 Funding"
- "Neighborhood Assistance Program: Special Program Priorities: FY 2022-2023: Post-Pandemic Progress and Growth for Rural Small Businesses"
- "Small Business Digital Services Regional Initiative"
- "Design, Development, and Construction of a Sports Mat Joining Machine with Resilite Sports Products"

### Sponsors:

- Ben Franklin Technology Partners Northeast Pennsylvania
- SEDA-Council of Governments
- Pennsylvania Department of Community & Economic Development
- U.S. Small Business Administration



# JOSHUA STOUGH

Assistant Professor of Computer Science

## Projects:

- "Double Secret Probation (senior design)"
- "Functional Barcode Tracking System Project (senior design)"
- "Tory Story Project (senior design)"
- "Back Plan Vision System (senior design)"

## Sponsors:

- Jeffrey Dorst
- Custom Container Solutions
- DeNovo Innovations
- TE Connectivity



# IBRAHIM SULAI

Associate Professor of Physics & Astronomy

**Project:**

“Major Research Instrumentation Program: Acquisition of a Frequency Quadrupled Titanium Sapphire laser for Ion, Atom and Molecule Spectroscopy”

**Sponsor:** National Science Foundation



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# MIZUKI TAKAHASHI

## Associate Professor of Biology

**Project:**

“Women’s Leadership in Japan: Promoting gender awareness and diversity in wildlife conservation”

**Sponsor:** ASIANetwork





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# JONATHAN TORRES

Assistant Professor of Mechanical Engineering

**Project:**

“Summer Faculty Research and Sabbatical Leave Program”

**Sponsor:** Office of Naval Research, Naval Surface Warfare Center



# RIVKA ULMER

Professor of Jewish Studies

**Project:**

“Alan Cornell U.S. Faculty Seminar”

**Sponsor:** International Institute for Holocaust Studies, Yad  
Va-Shem



# JANET VANLONE

Assistant Professor of Education

**Project:**

“Developing Culturally Responsive Aspiring Teachers Program”

**Sponsor:** Pennsylvania Department of Education



## **MARGOT VIGEANT**

Robert L. Rooke Professor in Engineering and Professor of Chemical Engineering

## **VAJI FARHADI**

Assistant Professor of Electrical & Computer Engineering

### **Projects:**

- “Fluff Reduction (senior design)”
- “Cornwashing Optimization (senior design)”

### **Sponsors:**

- GAF
- PepsiCo



# **JACKIE VILLADSEN**

Assistant Professor of Physics & Astronomy

**Project:**

“Collaborative Research: Research at Undergraduate  
Institutions: Star-Planet Interactions Around Low-mass  
Stars”

**Sponsor:** National Science Foundation



# BRANDON VOGEL

## Associate Professor of Chemical Engineering

### Projects:

- “Carbon Black Feedstock Purification - Scale Up (senior design)”
- “Alkalinity Control Optimization in Anaerobic Digestion (senior design)”
- “Managing Additional Production and Scaling Boiler and HLT Strategies (senior design)”
- “Sustainable Alternative Cold Shipping Method (senior design)”

### Sponsors:

- Cabot Corporation
- Furmanos
- Rusty Rail Brewing Company
- Vistar



# KAT WAKABAYASHI

Associate Professor of Chemical Engineering

**Project:**

“Solid-State Shear Pulverization of Novel Petroleum-Based Composites, Phase I”

**Sponsor:** ExxonMobil



# **BENJAMIN WHEATLEY**

## Assistant Professor of Mechanical Engineering

### **Projects:**

- “Biomechanical characterization of Ponseti Bracing treatment of clubfoot”
- “Next Gen Furnace Furniture Design (senior design)”
- “Aromatic Brewer (senior design)”

### **Sponsors:**

- Bucknell Geisinger Research Initiative
- Corning
- Keurig

