

#### **Mapping Intersections in Water Inequities**

**Advisor:** Dan Bain, Geology and Environmental Science

**Student:** Maggie Lincoln, Geology and Environmental Science (*John C. Mascaro Scholar*)

#### **Pitt Regional Campus Greenhouse Gas Inventor(ies)**

**Advisors:** Melissa Bilec, Civil and Environmental Engineering  
Aurora Sharrard, Sustainability

**Student:** Ryan Krug, Civil and Environmental Engineering (*John C. Mascaro Scholar*)

#### **Sustainable Forestry within the Eastern Deciduous Forest Biome: Is salvage logging compatible with healthy forest regeneration following a major windstorm?**

**Advisors:** Dr. Walter Carson, Biological Sciences  
Hannah Assour, Biological Sciences

**Student:** Molly Draper, General Studies (*John C. Mascaro Scholar*)

#### **Additive Manufacturing of Magnetocaloric Materials for High Efficiency Cooling**

**Advisor:** Markus Chmielus, Mechanical Engineering and Materials Science

**Student:** Rebecca Hotton, Chemistry (*John C. Mascaro Scholar*)

#### **Microswimmers in the Ocean**

**Advisor:** Lei Fang, Civil and Environmental Engineering

**Student:** Brandon Chai, School of Computing and Information (*John C. Mascaro Scholar*)

#### **Save It, Don't Spray It: Do water saving showerheads impact the microbes we breathe in during showering?**

**Advisor:** Sarah Haig, Civil and Environmental Engineering

**Student:** Evan Trump, Civil and Environmental Engineering (*Charles and Linda Sorber Scholar*)

#### **Structural Design with Bamboo**

**Advisor:** Kent Harries, Civil and Environmental Engineering

**Student:** Matthew Brancaccio, Civil and Environmental Engineering (*John C. Mascaro Scholar*)

#### **Statistical Models for U.S. Electricity Grid Renewable Production**

**Advisor:** Oliver Hinder, Industrial Engineering

**Student:** Yuchen Zhong, Industrial Engineering (*John C. Mascaro Scholar*)

#### **Alchemical Screening for Hetero-Bimetallic Catalysts**

**Advisor:** John Keith, Chemical and Petroleum Engineering

**Student:** Margarita Prifti, Chemical and Petroleum Engineering (*John C. Mascaro Scholar*)

#### **Distributed Energy Resource Control**

**Advisor:** Bob Kerestes, Electrical and Computer Engineering

**Student:** Daniel Braunstein, Electrical and Computer Engineering (*Douglas Condon Scholar*)

#### **Using Machine Learning Models to Identify Wildlife Species in Field Recordings**

**Advisor:** Justin Kitzes, Biological Sciences

**Student:** Junshang Jia, School of Computing and Information (*John C. Mascaro Scholar*)

#### **Powering Miniature Embedded Systems using a Supercapacitor**

**Advisor:** In Hee Lee, Electrical and Computer Engineering

**Student:** Dhinar Gayatri, Electrical and Computer Engineering (*John C. Mascaro Scholar*)

#### **CyberWater**

**Advisor:** Xu Liang, Civil and Environmental Engineering

**Student:** Ryan Young, Physics and Astronomy (*Frank and Daphna Lederman Scholar*)



#### **Low Voltage Electrospinning of Nanofibers**

**Advisor:** Qihan Liu, Mechanical Engineering and Materials Science

**Student:** Hao Du, Mechanical Engineering and Materials Science (*John C. Mascaro Scholar*)

#### **Teeny Tiny Testers for Big Bad Batteries**

**Advisor:** James McKone, Chemical and Petroleum Engineering

**Student:** Noah Lawrence French, Engineering Physics (*John C. Mascaro Scholar*)

#### **Testing Biobased Sorbents for Contaminant Removal**

**Advisor:** Carla Ng, Civil and Environmental Engineering

**Student:** Sneha Kc, Civil and Environmental Engineering (*John C. Mascaro Scholar*)

#### **Electromagnetic Field Processing of Soft Magnetic Alloys for Electric Vehicle Applications**

**Advisor:** Paul Ohodnicki, Mechanical Engineering and Materials Science

**Student:** Alexander Pierce, Mechanical Engineering and Materials Science (*John C. Mascaro Scholar*)

#### **Social Network and Media Contexts of Substance Use**

**Advisor:** Amin Rahimian, Industrial Engineering

**Student:** Zitao Zeng, Industrial Engineering (*John C. Mascaro Scholar*)

#### **Human-Machine Teaming**

**Advisor:** Amin Rahimian, Industrial Engineering

**Student:** Rishika Dhanda, Psychology (*John C. Mascaro Scholar*)

#### **Using Microbial Fuel Cells to Degrade Contaminants of Emerging Concern**

**Advisor:** David Sanchez, Civil and Environmental Engineering

**Student:** Natan Herzog, Engineering Mechanics (*John C. Mascaro Scholar*)

#### **Best Practices in Climate Change Leadership**

**Advisor:** Julia Santucci, GSPIA – Johnson Institute for Responsible Leadership

**Student:** Allyson Frantz, Environmental Studies (*John C. Mascaro Scholar*)

#### **Building Food Access, Community, and Sustainability**

**Advisor:** Kay Shimizu, Political Science

**Student:** Ana Rowley, Geology and Environmental Science (*John C. Mascaro Scholar*)

#### **Practical Optimization of Traffic Signals to Reduce Fuel Consumption and Vehicular Emissions**

**Advisor:** Aleksandar Stevanovic, Civil and Environmental Engineering

**Student:** Nolan Pernia, Mechanical Engineering and Materials Science (*John C. Mascaro Scholar*)

#### **Towards Circular Use of Polyurethanes**

**Advisor:** Goetz Vesper, Chemical and Petroleum Engineering

**Student:** Jessica Gondak, Chemistry (*John C. Mascaro Scholar*)

#### **Carbon Dioxide Capture through Carbonic Anhydrase-Catalyzed Carbon Mineralization in Saline Water**

**Advisor:** Meng Wang, Civil and Environmental Engineering

**Student:** Sarah McGoldrick, Civil and Environmental Engineering

#### **Additive Manufacturing Design for High-Entropy Alloys for Energy Components with Enhanced Efficiency**

**Advisor:** Wei Xiong, Mechanical Engineering and Materials Science

**Student:** Daozheng Li, Mechanical Engineering and Materials Science (*John C. Mascaro Scholar*)