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 Veser, 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)