

PURDUE POLYTECHNIC RESEARCH IMPACT FOCUS AREA

HEALTHY & SUSTAINABLE COMMUNITIES

polytechnic.purdue.edu/research

We work together to develop and apply technologies that support and enable healthy and sustainable communities. Our faculty and students develop solutions within or between transportation systems, the built environment, applied engineering, materials science, Internet of Things (IoT), environmental quality, and healthy living through both detailed and systems-level thinking.

Foci include: global connections, holistic well-being, and health innovations.



FACULTY CHAMPION



Mary Johnson

associate professor of aviation and transportation technology

"Our collaborations will produce socio-technical solutions that increase the health and sustainability of our communities across many aspects and levels of society."

GET INVOLVED: contact Mary at mejohanson@purdue.edu

PURDUE
UNIVERSITY
Polytechnic Institute

EA/EOU

INVOLVED FACULTY EXPERTISE:

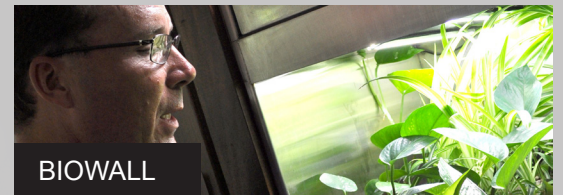
- » Advanced Materials
- » Autonomous Systems
- » Building Systems
- » Energy & Power
- » Health Applications
- » Infrastructure Applications
- » Manufacturing & Processes
- » Sustainability
- » Transportation

CURRENT PROJECTS



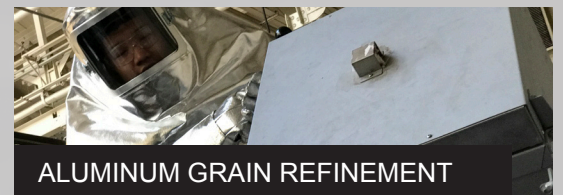
SMART TUPPERWARE

To improve food safety and quality, Sangjun Eom, graduate research assistant in engineering technology, and Richard Voyles, professor of robotics engineering technology, are looking to add leftover containers in the fridge to the list of smart technologies available in smart homes of the near future.



BIOWALL

The Biowall is a plant-based filter that removes contaminants from indoor air via a building's HVAC system. It is a product of ongoing multidisciplinary research by Bill Hutzel, professor of mechanical engineering technology, and has the potential for commercialization in modern net zero energy homes as a sustainable solution for maintaining healthy/sustainable lifestyles.



ALUMINUM GRAIN REFINEMENT

Xingtao Liu, graduate teaching assistant in engineering technology, conducts research with Xiaoming Wang, assistant professor of engineering technology, on how grain refinement occurs in aluminum. With this information, the aluminum casting industry may create fewer defects, improve product quality and reduce energy usage during manufacturing.