

PURDUE POLYTECHNIC RESEARCH IMPACT FOCUS AREA

HOLISTIC SAFETY & SECURITY

polytechnic.purdue.edu/research

We work with stakeholders across public and private sectors to solve challenges in cybersecurity and critical infrastructure that affect global economies, security and health. We aim to enable law enforcement agencies to provide faster, more efficient incident response, to lower the number of cyberattacks and lessen their impact to victims, and to enact evidence-based policies that contribute to safety and security.



Foci include:
digital forensics,
law enforcement training,
policy.

FACULTY CHAMPION



Baijian "Justin" Yang

associate professor of computer and information technology

"Safety and security concerns develop from many actors and through many different technologies in our advancing society. By applying interdisciplinary, holistic community approaches to these problems, we will build safer and more secure systems, and in turn, build stronger communities."

GET INVOLVED: contact Justin at byang@purdue.edu

PURDUE
UNIVERSITY

Polytechnic Institute

EA/EOU

CURRENT PROJECTS



COST-EFFECTIVE DIGITAL FORENSICS

Law enforcement agencies have been relying on forensics tools not well suited to today's digital world. To provide a modern, cost-effective solution, a research team led by Kathryn Seigfried-Spellar, assistant professor of computer and information technology, is building File Toolkit for Selective Analysis & Reconstruction (File TSAR) for Large Scale Computer Networks.



REMOTE SENSORS ON RUNWAYS

Airport runways become unpredictable with winter precipitation. Mary Johnson, associate professor of aviation and transportation technology, worked with a student team to propose the adaptation of remote sensing technologies used for glaciers and ski resorts to measure snow and ice. Over 10 years, this technology could save \$500,000 at Purdue's airport.



INVESTIGATIVE DRONES

Eric Matson, associate professor of computer and information technology, collaborates with a research team to develop drones that are capable of gauging the threat of an unknown gaseous plume. This technology will be able to measure densities, detect the plume gases, and map the shape and location of the plume, then send information to first responders.

INVOLVED FACULTY EXPERTISE:

- » Autonomous Systems
- » Cybersecurity
- » Human Factors
- » Physical Safety
- » STEM Education Research
- » Sustainability
- » Systems & Networks
- » Transportation