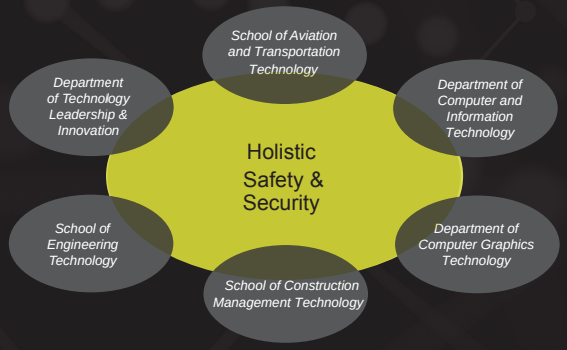
HOLISTIC SAFETY & SECURITY

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, safety and health. We aim to enable law enforcement agencies to provide faster, more efficient incident response; lower the number of cyberattacks and lessen their impact to victims; develop safety strategies for hazardous fields such as aviation and construction; and enact evidence-based policies that contribute to safety and security.



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 coomunity 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

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INVOLVED FACULTY EXPERTISE:

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

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.

REDUCING WILDLIFE AVIATION STRIKES

Wildlife strikes are an increasing safety and economic concern for U.S. aviation operations. Flavio Mendonca, assistant professor of aviation and transportation technology, aims to mitigate the risk of wildlife strikes by educating pilots through adequate flight planning and the use of appropriate aircraft operating techniques.

BRINGING INTELLIGENCE TO DISASTER RECOVERY

Randy Rapp, associate professor of construction management technology, works with an interdisciplinary Polytechnic research team to apply drones, machine learning, and data visualization to improving disaster recovery. These technologies will more quickly and accurately assess the location, quantity, type, and dimensions of debris to better clear routes and investigate accidents.