REALIZING THE DIGITAL ENTERPRISE

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We seek to leverage the cross-cutting power of computing broadly, increasing efficiency and intelligence in activities which were traditionally physical. Using computers, process control, automation, sensors, data analytics and other technologies and processes, isolated efficiency improvements have been realized in areas including infrastructure, manufacturing, food services, logistics, energy, transportation and entertainment. We aim to bring more intelligence to our processes, systems and decisions, creating a wholly connected enterprise in which newly discovered efficiencies converge.

Foci include: data analytics, cyber infrastructure, control & automation.

School of Aviation and Transportation Technology

Department of Technology Leadership & Innovation

Department of Computer and Information Technology

Realizing the Digital Enterprise

School of Engineering Technology

Department of Computer Graphics Technology

School of Construction Management Technology

FACULTY CHAMPION

Thomas Hacker
professor of computer and information technology

"Humanity increasingly relies on digital technology and data analytics. We focus on the converging physical and digital realms to leverage the diverse strengths of Polytechnic researchers to devise new solutions to real-world global problems."

GET INVOLVED: contact Thomas at tjhacker@purdue.edu

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INVOLVED FACULTY EXPERTISE:
» Advanced Materials
» Data Visualization & Analytics
» Design
» Health Applications
» Manufacturing & Processes
» Robotics & Mechatronics
» Sensors
» Systems & Networks

CURRENT PROJECTS

REACTIVE SENSORS

By characterizing and enhancing the material properties of dielectric electroactive polymers, Brittany Newell, assistant professor of engineering technology, develops sensors that can send information and react to specfic conditions. These sensors can be used to notify technicians and postpone failure in industrial and medical applications.

SELF-POWERED CAMERAS

Daniel Leon-Salas, associate professor of engineering technology, wants his camera's light sensor to do more. His research focuses on using the light sensor as a type of solar cell that can harvest energy when it isn't capturing images. With this advance, cameras could produce their own energy, making it easier to deploy these sensors with less infrastructure.
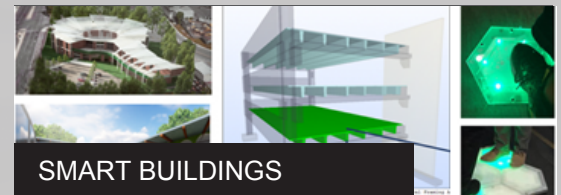
SMART BUILDINGS

Buildings are ripe for developments to improve functionality and comfort by collecting and analyzing data. Kereshmeh Afsari, assistant professor in construction management technology and computer graphics technology, applies computational science to develop new solutions for the Architecture, Engineering, Construction, and Operations industry.