

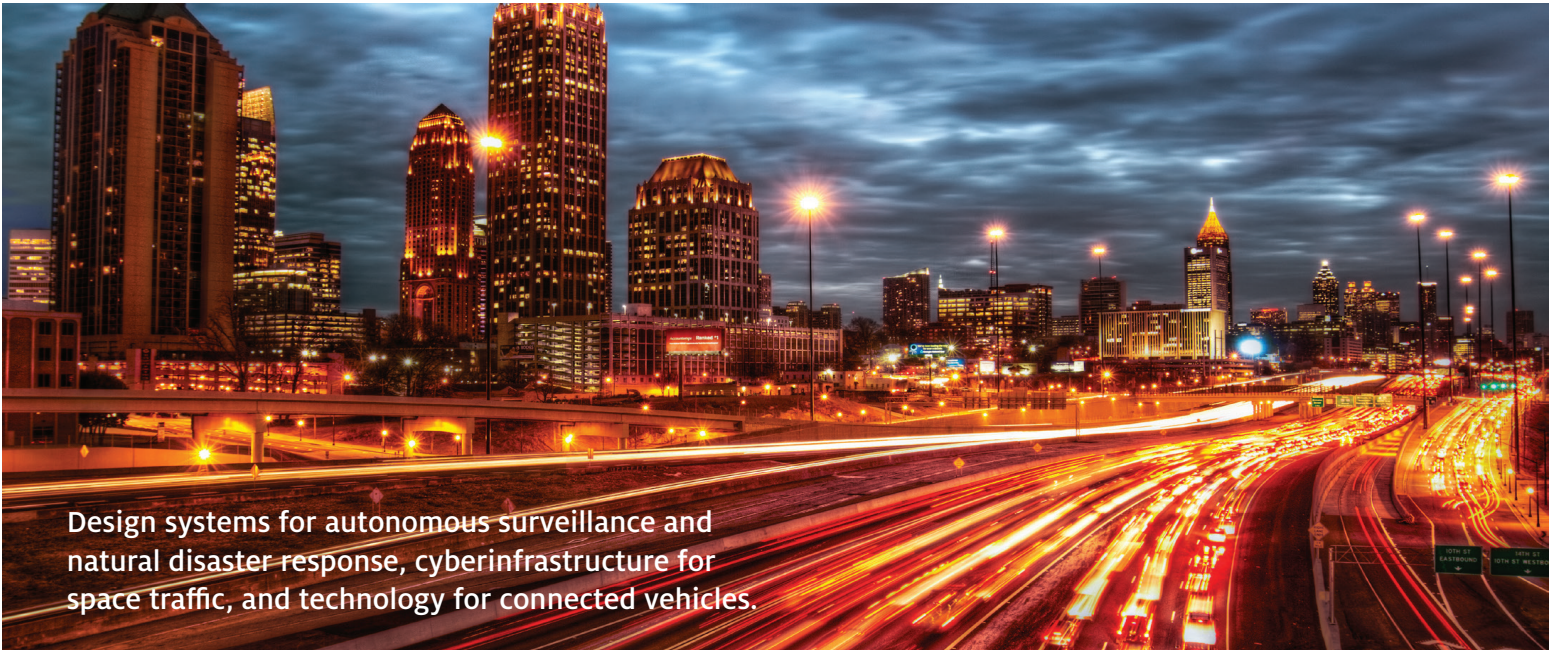


COLLEGE OF ENGINEERING

Systems & Industrial Engineering

GRADUATE STUDIES

Getting parts and people to work well together



Design systems for autonomous surveillance and natural disaster response, cyberinfrastructure for space traffic, and technology for connected vehicles.

### RESEARCH FOCUS AREAS

- Data analytics, informatics & machine learning
- Energy, water, environment & sustainability
- Health care systems
- Human factors & sociotechnical systems
- Optimization
- Smart transportation & manufacturing logistics
- Software Engineering
- Space, defense & security

### PROGRAM HIGHLIGHTS

- Highly ranked programs
- 10 distinct graduate tracks
- Online MS, graduate certificates and PhD
- Flexible interdisciplinary curriculum
- High-profile research and valuable internships
- Hispanic-serving Institution

### DEGREES

- PhD Systems & Industrial Engineering
- PhD Software Engineering
- MS Engineering Management *(online options)*
- MS Industrial Engineering *(online options)*
- MS Systems Engineering *(online options)*
- MS Software Engineering *(online options)*
- PhD Software Engineering *(online options)*

### CERTIFICATES *(online options)*

- Engineering Management
- Systems Engineering

# TOP 25

Industrial/systems/manufacturing grad programs  
*(U.S. News & World Report 2025)*

## NATION'S FIRST

Academic systems engineering program



“ The opportunity to work on a NASA-funded mission while obtaining a graduate degree seemed too good to be true. I am part of a mission that will directly enhance our knowledge of the solar system – all while still being in school. ”

- Kristofer Drozd, PhD graduate



### FUNDING OPTIONS THROUGHOUT DEGREE LIFECYCLE, INCLUDING:

- Four-year SIE scholarship
- Research/teaching assistantships
- Fellowship awards

### APPLICATION DEADLINES

MS & Graduate Certificate  
SIE: Fall: January 15 | Spring: June 1  
SFWE: Rolling admissions  
Doctoral Program  
SIE: January 5 | SFWE: Rolling

### CONTACTS

**Systems & Industrial Engineering and Engineering Management Graduate Programs**  
Cindy Nguyen, SIE Graduate Coordinator, Sr.  
graduateadvisor@sie.arizona.edu

**Software Engineering Graduate Programs**  
Liza Soto, Software Engineering Graduate Coordinator  
sfwe-grad@engr.arizona.edu



COLLEGE OF ENGINEERING

Systems & Industrial  
Engineering



“ With industrial engineering, the beauty is that you can expand to almost all engineering areas, and it encourages collaboration. It can be applied to a variety of other disciplines. ”

- Hongyue Jin, associate professor

## Faculty Expertise

**Hannah Budinoff** – hdb@arizona.edu

design for manufacturing, additive manufacturing, engineering design and design methodology, engineering education, sustainable manufacturing

**Tomas Cerny** – tcerny@arizona.edu

software architecture, cloud native systems, code analysis, software design, technical debt, system evolution

**Jianqiang Cheng** – jqcheng@arizona.edu

stochastic programming • robust and distributionally robust optimization • semidefinite and copositive optimization • network design and energy management

**Fabio Curti** – fcurti@arizona.edu

autonomous space systems, space avionics systems • robotic systems • space domain awareness

**Neng Fan** – nfan@arizona.edu

integer programming and combinatorial optimization • stochastic programming and robust optimization • energy and water systems modeling and optimization • data mining and health care management

**Roberto Furfaro** – robertof@arizona.edu

intelligent systems for space exploration • space systems engineering • guidance navigation and control of space systems • radiative transfer numerical modeling  
• inverse problems in remote sensing

**Erfan Yazdandoost Hamedani** – erfany@arizona.edu

Large-scale optimization, distributed optimization, bilevel optimization, saddle point problems, machine learning, dynamical systems

**Sen He** – senhe@arizona.edu

cloud computing, Edge, software and performance engineering, applied artificial intelligence, computer vision

**Larry Head** – klhead@arizona.edu

traffic signal systems • urban traffic operations • transportation modeling • connected vehicles • autonomous vehicles • intelligent transportation systems

**Afroz Jalilzadeh** – afroz@arizona.edu

stochastic optimization, variational inequalities and Nash games, risk averse optimization, machine learning, healthcare optimization

**Hongyue Jin** – hjin@arizona.edu

techno-economic analysis • life cycle assessment • optimization for sustainability

**Sherilyn Keaton** – keatons@arizona.edu

software engineering • object-oriented modeling

**Pavlo Krokhmal** – krokhmal@arizona.edu

stochastic optimization • decision making under uncertainty • risk analysis • financial engineering • optimal trading strategies • multidisciplinary optimization • cooperative control and decision making

**Michael Kwinn** – kwinnm@arizona.edu

systems thinking, systems decision making, decision analysis, systems design, resource management, planning

**Wei Hua Lin** – whlin@arizona.edu

traffic flow modeling • information technologies in transportation • transportation data analysis • transportation network, analysis and modeling • freeway incident management

**Jian Liu** – jianliu@arizona.edu

multivariate statistics • statistical process control • quality and reliability engineering • statistical pattern recognition and feature extraction for process monitoring, diagnosis and control

**Alejandro Salado** – alejandrosalado@arizona.edu

problem definition, model-based systems engineering, art of systems engineering, theory of systems engineering, design of verification strategies, systems engineering education, decision analysis

**Pratik Satam** – pratiksatam@arizona.edu

internet of things, smart manufacturing, and software security

**Mohammed Shafae** – shafae1@arizona.edu

cyberphysical systems security • smart manufacturing systems • statistical process monitoring • manufacturing process data analytics • advanced metrology systems • data-driven quality control

**Diana Saldana Jimenez** – dianasaldana@arizona.edu

software engineering, engineering education

**Vignesh Subbian** – vsubbian@arizona.edu

medical informatics • health care systems engineering • computing applications for critical care medicine • traumatic brain injury • STEM integration • engineering ethics

**Ricardo Valerdi** – rvalerdi@arizona.edu

cost modeling • software cost estimation • harmonization of systems and software engineering • acquisition policy • process improvement methods • human systems integration • professionalization of systems engineering

**Yue Wang** – ywang23@arizona.edu

inventory management, transportation and logistics, supply chain optimization