

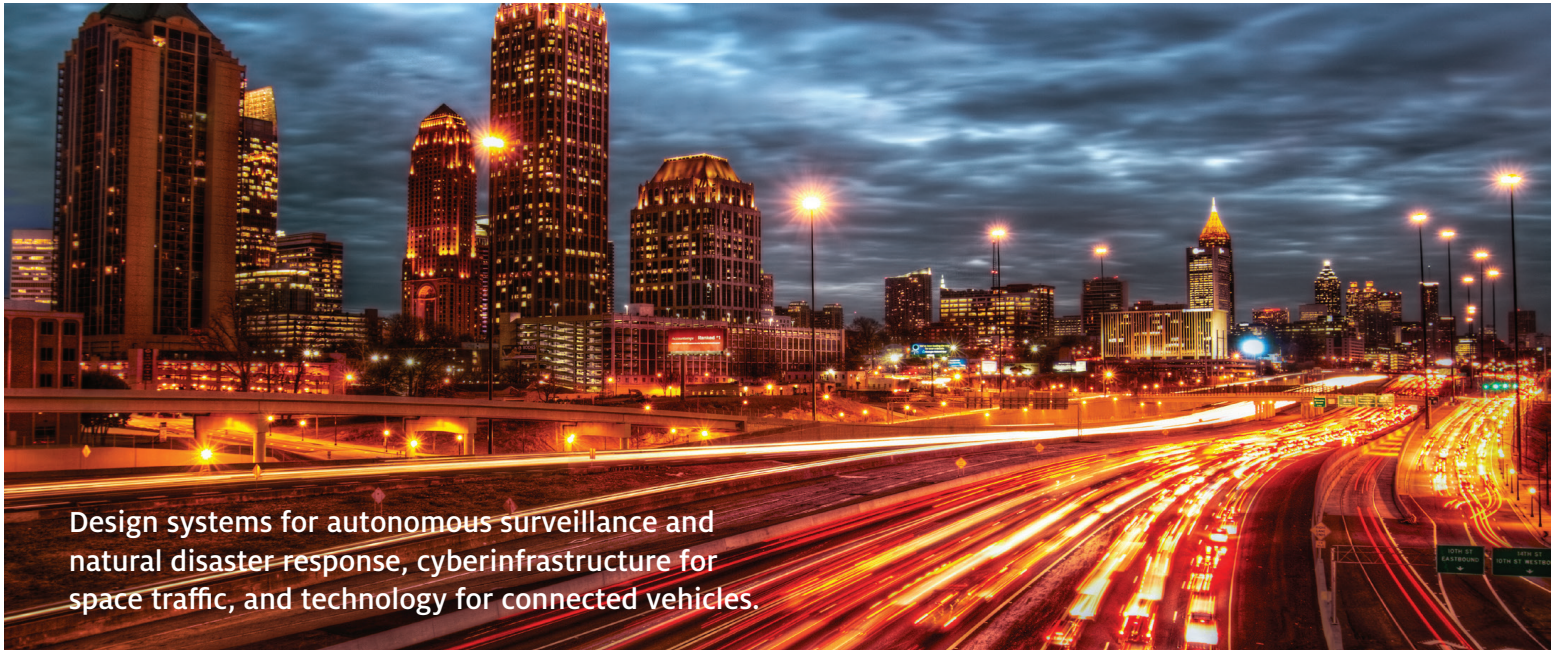


COLLEGE OF ENGINEERING

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
- Space, defense & security

PROGRAM HIGHLIGHTS

- Highly ranked programs
- 10 distinct graduate tracks
- Online MS and graduate certificates
- 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)*

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 student



FUNDING OPTIONS THROUGHOUT DEGREE LIFECYCLE, INCLUDING:

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

APPLICATION DEADLINES

MS & Graduate Certificate
Fall: January 15 | Spring: June 1
Doctoral Program
Fall: December 1

CONTACTS

**Systems & Industrial Engineering and
Engineering Management Graduate Programs**
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Software Engineering Graduate Programs
Liza Soto, Software Engineering Graduate Coordinator, Sr.
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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

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

Afrooz Jalilzadeh – afrooz@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

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