

Electrical & Systems Engineering

Phone: 314-935-5565
 Website: <https://ese.wustl.edu/academics/undergraduate-programs/index.html>

Faculty

Chair

Bruno Sinopoli

Das Family Distinguished Professor
 PhD, University of California, Berkley
 Designs safe and secure networked embedded control systems

Endowed Professors

Shantanu Chakrabartty

Clifford W. Murphy Professor
 Vice Dean for Research and Graduate Education
 PhD, Johns Hopkins University
 Explores frontiers in analog and neuromorphic integrated circuits

Jr-Shin Li

Newton R. and Sarah Louisa Glasgow Wilson Professor of Engineering
 PhD, Harvard University
 Studies complex large-scale systems arising from emerging physical, biological and medical applications

Joseph A. O'Sullivan

Samuel C. Sachs Professor of Electrical Engineering
 Dean, UMSL/WashU Joint Undergraduate Engineering Program
 PhD, Notre Dame University
 Discovers ways to improve CT imaging & optical imaging

Lan Yang

Edward H. & Florence G. Skinner Professor of Engineering
 PhD, California Institute of Technology
 Focuses on advanced nano/micro photonic devices with outstanding optical properties

Professor

ShiNung Ching

Associate Chair for Research
 PhD, University of Michigan
 Engineering Neuroscience, Dynamics, Control

Associate Professors

Xudong Chen

PhD, Harvard University
 Develops revolutionary methods for analysis and control of large-scale multi-agent systems

Andrew Clark

PhD, University of Washington
 Focused on control and security of networked and cyber-physical systems

Ulugbek Kamilov

PhD, École Polytechnique Fédérale de Lausanne, Switzerland
 Advances imaging technology through research on computational imaging, computer vision, machine learning and optimization

Matthew Lew

Associate Chair for Academic Programs
 PhD, Stanford University
 Builds new nanoscale imaging technologies

Jung-Tsung Shen

PhD, Massachusetts Institute of Technology
 Exploits the unique properties of quantum nano-photonics for applications in quantum communication, computation and biomedical imaging

Chuan Wang

Director of Graduate Programs
 PhD, University of Southern California
 Develops large-scale and cost-effective materials for flexible and stretchable electronic systems

Assistant Professors

Hong Hu

PhD, Harvard University
 Developing theoretical foundations for high-dimensional information processing

Ioannis (Yiannis) Kantaros

PhD, Duke University
 Designs safe and distributed autonomy algorithms for large-scale multi-robot systems

Mark Lawrence

PhD, University of Birmingham
 Builds novel systems and devices for applications in telecommunications, computing and quantum information

Janet Sorrells

PhD, University of Illinois at Urbana-Champaign
 Developing new technologies in label-free nonlinear optical microscopy to enable new applications in biology and medicine

Shen Zeng

PhD, University of Stuttgart
 Develops data-integrated computational approaches for controlling complex dynamic systems

Senior Professors

Paul S. Min

PhD, University of Michigan
Routing and control of telecommunication networks, fault tolerance and reliability, software systems, network management

Robert E. Morley Jr.

DSc, Washington University in St. Louis
Computer engineering, lower-power VLSI design, computer architecture, signal processing, microprocessors systems design

Hiro Mukai

PhD, University of California, Berkeley
Theory and computational methods for optimization, optimal control, systems theory, electric power system operations, differential games

Daniel L. Rode

PhD, Case Western Reserve University
Optoelectronics and fiber optics, semiconductor materials, light-emitting diodes and lasers, semiconductor processing, electronics

Ervin Y. Rodin

PhD, University of Texas at Austin
Optimization, differential games, artificial intelligence, mathematical modeling

Heinz Schaettler

PhD, Rutgers University
Optimal control, nonlinear systems, mathematical models in biomedicine

Barbara A. Shrauner

PhD, Harvard University (Radcliffe)
Plasma processing, semiconductor transport, symmetries of nonlinear differential equations

Barry E. Spielman

PhD, Syracuse University
High-frequency/high-speed devices, radiofrequency and microwave integrated circuits, computational electromagnetics

Tzyh Jong Tarn

DSc, Washington University
Quantum mechanical systems, bilinear and nonlinear systems, robotics and automation, life science automation

Professors of Practice

Dennis Mell

MS, University of Missouri–Rolla
Focuses on cross-disciplinary applications of robotics and automation systems

Ed Richter

MS, Washington University
Designs and develops biomedical signal processing systems including analog instrumentation, digital circuits with microcontrollers and FPGAs, and application programming; teaches electrical and computer engineering lab courses in FPGA design and development and signal processing and communications

Jason Trobaugh

DSc, Washington University
Ultrasound imaging, diffuse optical tomography, image-guided therapy, ultrasonic temperature imaging

Teaching Professor

James Feher

PhD, Missouri University of Science and Technology
Interested in the use and implementation of open source hardware and software as it is applied to engineering education

Vladimir Kurenok

PhD, Belarus State University (Minsk, Belarus)
Focuses on studying and applications of random models under low regularity assumptions

Senior Lecturers

Martha Hasting

PhD, Saint Louis University
Mathematics education

Tsitsi Madziwa-Nussinov

PhD, University of California, Los Angeles
Teaches Introduction to Electrical and Electronic Circuits

Dorothy Wang

PhD, Virginia Tech
Fiber optic sensing, electro-optical sensors

Jinsong Zhang

PhD, University of Miami
Focused on signal, data and information processing with applications to engineering systems

Lecturers

Michael Hall

PhD, Washington University in St. Louis
Teaches computer engineering, preparing students with essential skills and knowledge to achieve their professional goals and contribute to technological advancements that benefit society

Ben Wormleighton

PhD, University of California, Berkeley
Seeks to cultivate formative learning spaces and practices that develop creative and communal thinkers

Professors Emeriti

R. Martin Arthur

Newton R. and Sarah Louisa Glasgow Wilson Professor of Engineering
PhD, University of Pennsylvania
Ultrasonic imaging, electrocardiography

Arye Nehorai

The Eugene & Martha Lohman Emeritus Professor of Electrical
Engineering
PhD, Stanford University
Statistical signal processing, machine learning, imaging, biomedicine