

Electrical & Systems Engineering

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

Faculty

Chair

Bruno Sinopoli (<https://engineering.wustl.edu/Profiles/Pages/Bruno-Sinopoli.aspx>)

Das Family Distinguished Professor
PhD, University of California, Berkeley
Cyberphysical systems, analysis and design of networked embedded control systems, with applications to sensor actuators networks

Endowed Professors

Shantanu Chakrabartty (<https://engineering.wustl.edu/faculty/Shantanu-Chakrabartty.html>)

Clifford W. Murphy Professor
PhD, Johns Hopkins University
New frontiers in unconventional analog computing techniques using silicon and hybrid substrates, fundamental limits of energy efficiency, sensing and resolution by exploiting computational and adaptation primitives inherent in the physics of devices

Arye Nehorai (<https://engineering.wustl.edu/faculty/Arye-Nehorai.html>)

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

Joseph A. O'Sullivan (<https://engineering.wustl.edu/faculty/Joseph-O'Sullivan.html>)

Samuel C. Sachs Professor of Electrical Engineering
Dean, UMSL/WashU Joint Undergraduate Engineering Program
PhD, Notre Dame University
Information theory, statistical signal processing, imaging science with applications in medicine and security, and recognition theory and systems

Lan Yang (<https://engineering.wustl.edu/faculty/Lan-Yang.html>)

Edward H. & Florence G. Skinner Professor of Engineering
PhD, California Institute of Technology
Nano/micro photonics, ultra high-quality optical microcavities, ultra-low-threshold microlasers, nano/micro fabrication, optical sensing, single nanoparticle detection, photonic molecules, photonic materials

Professors

Jr-Shin Li (<https://engineering.wustl.edu/faculty/Jr-Shin-Li.html>)

Professor
PhD, Harvard University
Mathematical control theory, optimization, quantum control, biomedical applications

Neal Patwari (<https://engineering.wustl.edu/faculty/Neal-Patwari.html>)

Professor
PhD, University of Michigan
Intersection of statistical signal processing and wireless networking for improving wireless sensor networking and radiofrequency sensing

Associate Professors

ShiNung Ching (<https://engineering.wustl.edu/faculty/ShiNung-Ching.html>)

PhD, University of Michigan
Systems and control in neural medicine, nonlinear and constrained control, physiologic network dynamics, stochastic control

Andrew Clark (<https://engineering.wustl.edu/faculty/Andrew-Clark.html>)

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

Matthew D. Lew (<https://engineering.wustl.edu/faculty/Matthew-Lew.html>)

PhD, Stanford University
Microscopy, biophotonics, computational imaging, nano-optics

Jung-Tsung Shen (<https://engineering.wustl.edu/faculty/Jung-Tsung-Shen.html>)

PhD, Massachusetts Institute of Technology
Theoretical and numerical investigations on nanophotonics, optoelectronics, plasmonics, metamaterials

Yong Wang (<https://engineering.wustl.edu/faculty/Yong-Wang.html>)

PhD, Washington University in St. Louis
Biomedical engineering, life science, human physiology, magnetic resonance imaging, electrocardiographic imaging

Xuan "Silvia" Zhang (<https://engineering.wustl.edu/faculty/Xuan-Silvia-Zhang.html>)

PhD, Cornell University
Robotics, cyber-physical systems, hardware security, ubiquitous computing, embedded systems, computer architecture, VLSI, electronic design automation, control optimization, biomedical devices and instrumentation

Assistant Professors

Ulugbek Kamilov (<https://engineering.wustl.edu/faculty/Ulugbek-Kamilov.html>)

PhD, École Polytechnique Fédérale de Lausanne, Switzerland
Computational imaging, signal processing, biomedical imaging

Ioannis (Yiannis) Kantaros (<https://engineering.wustl.edu/faculty/Yiannis-Kantaros.html>)

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

Mark Lawrence (<https://engineering.wustl.edu/faculty/Mark-Lawrence.html>)

PhD, University of Birmingham
Nanophotonics, nonlinear optics, metasurfaces

Aravind Nagulu (<https://engineering.wustl.edu/faculty/Aravind-Nagulu.html>)

PhD, Columbia University
Pioneering the area of novel wave propagation based on time-variance

Chuan Wang (<https://engineering.wustl.edu/faculty/Chuan-Wang.html>)

PhD, University of Southern California
Flexible electronics, stretchable electronics, printed electronics, nanomaterials, nanoelectronics, optoelectronics

Shen Zeng (<https://engineering.wustl.edu/faculty/Shen-Zeng.html>)

PhD, University of Stuttgart
Systems and control theory, data-based analysis and control of complex dynamical systems, inverse problems, biomedical applications

Senior Professors

Paul S. Min (<https://engineering.wustl.edu/faculty/Paul-Min.html>)

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

Robert E. Morley Jr. (<https://engineering.wustl.edu/faculty/Robert-Morley.html>)

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

Hiro Mukai (<https://engineering.wustl.edu/faculty/Hiro-Mukai.html>)

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

William F. Pickard (<https://engineering.wustl.edu/faculty/William-Pickard.html>)

PhD, Harvard University
Biological transport, electrobiology, energy engineering

Daniel L. Rode (<https://engineering.wustl.edu/faculty/Daniel-Rode.html>)

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

Ervin Y. Rodin (<https://engineering.wustl.edu/faculty/Ervin-Rodin.html>)

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

Heinz Schaettler (<https://engineering.wustl.edu/faculty/Heinz-Schaettler.html>)

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

Barbara A. Shrauner (<https://engineering.wustl.edu/faculty/Barbara-Shrauner.html>)

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

Barry E. Spielman (<https://engineering.wustl.edu/faculty/Barry-Spielman.html>)

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

Tzyh Jong Tarn (<https://engineering.wustl.edu/faculty/TJ-Tarn.html>)

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

Professors of Practice

Dedric Carter (<https://engineering.wustl.edu/faculty/Dedric-Carter.html>)

PhD, Nova Southeastern University
MBA, MIT Sloan School of Management

Dennis Mell (<https://engineering.wustl.edu/faculty/Dennis-Mell.html>)

MS, University of Missouri–Rolla
Industrial automation, robotics and mechatronics, product design and development with design-for-manufacturability emphasis, prototyping, manufacturing

Ed Richter (<https://engineering.wustl.edu/faculty/Ed-Richter.html>)

MS, Washington University
Signal processing applications implemented on a variety of platforms, including ASIC, FPGA, DSP, microcontroller and desktop computers

Jason Trobaugh (<https://engineering.wustl.edu/faculty/Jason-Trobaugh.html>)

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

Teaching Professor

James Feher (<https://engineering.wustl.edu/faculty/James-Feher.html>)

PhD, Missouri University of Science and Technology
Electrical engineering, computer science, mathematics and physics

Senior Lecturers

Martha Hasting (<https://engineering.wustl.edu/faculty/Martha-Hasting.html>)

PhD, Saint Louis University
Mathematics education

Vladimir Kurenok (<https://engineering.wustl.edu/faculty/Vladimir-Kurenok.html>)

PhD, Belarus State University (Minsk, Belarus)
Probability and stochastic processes, stochastic ordinary and partial differential equations, financial mathematics

Jinsong Zhang (<https://engineering.wustl.edu/faculty/Jinsong-Zhang.html>)

PhD, University of Miami
Modeling and performance analysis of wireless sensor networks, multi-source information fusion, ambiguous and incomplete information processing

Lecturers

Tsitsi Madziwa-Nussinov (<https://engineering.wustl.edu/faculty/Tsitsi-Nussinov.html>)

PhD, University of California, Los Angeles

Dorothy Wang (<https://engineering.wustl.edu/faculty/Yunjing-Dorothy-Wang.html>)

PhD, Virginia Tech
Fiber optic sensing and practical experience in sensor implementation and field test

Professors Emeriti

R. Martin Arthur (<https://engineering.wustl.edu/faculty/Martin-Arthur.html>)

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

David L. Elliott

PhD, University of California, Los Angeles
Mathematical theory of systems, nonlinear difference, differential equations