



LEARN FROM OUR EXPERT **GRADUATE ENGINEERING FACULTY**



WESTERN NEW ENGLAND
UNIVERSITY | **WNE**

Center for Graduate and Advanced Studies

Springfield, Massachusetts

wne.edu/graduate-center

WESTERN NEW ENGLAND
UNIVERSITY | **WNE**

Graduate students at Western New England University receive an unparalleled graduate education leading to a host of career opportunities. At the College of Engineering, we prepare our students to be innovative, entrepreneurial, and equipped to apply their education to solve the numerous challenges facing our global society.

Our University welcomes and values the unique experiences and perspectives that all of our students—international and domestic—bring to our campus. Small class sizes provide individual attention from our outstanding, nationally recognized faculty. Many of our professors have international backgrounds. Our professors also bring a wide range of perspectives, experiences, and expertise to our graduate programs and make themselves available to assist students with coursework or research.



FACULTY RESEARCH

Our professors pursue a wide range of research interests through study, published scholarship, conference presentations, and patents. Some examples of recent publications and presentations are:

- **“A Fabrication Method for Annular/Shielded Copper Interconnects,”** Professors Stephen Adamshick and John Burke
- **“Characterization of Embrittlement Temperature of Asphalt Materials through Implementation of Acoustic Emission Technique,”** Professor Behnia Behzad, et al.
- **“The Role of the Laboratory in a Green Engineering Course,”** Professor and Chair Said Dini
- **“An Intensive Experiential Entrepreneurship Program (3 Day Startup),”** Professors Robert Gettens, Harlan Spotts, and Mary Schoonmaker, et al.
- **“Maintenance Scheduling Optimization Based on Reliability and Prognostics Information,”** Professors Zhaojun Li and Ruolin Zhou, et al.
- **“Techniques of Trend Analysis in Degradation-based Prognostics,”** Professor Seyed Niknam, et al.
- **“An Observational Evaluation of Safety and Operations Resulting from Driver Distraction,”** Professor Matthew Romoser, et al.



GRADUATE FACULTY AND THEIR RESEARCH INTERESTS

Civil and Environmental Engineering

Kenneth Lee, Ph.D.



Professor and Founding Chair of Civil and Environmental Engineering

Registered Professional Engineer

Ph.D., M.S., B.S., University of California at Irvine

Research interests: subsurface contamination and remediation, renewable and sustainable fuels, water resources and treatment, and providing safe drinking water to developing countries.

Behzad Behnia, Ph.D.



Assistant Professor of Civil and Environmental Engineering

Ph.D., University of Illinois at Urbana-Champaign

M.S., Iran University of Science and Technology

B.S., University of Tehran

Research interests: experimental characterization of infrastructure materials, nondestructive testing and evaluation of infrastructures, railroad engineering, and numerical modeling.

Ijung Kim, Ph.D.



Assistant Professor of Civil and Environmental Engineering

Ph.D., The University of Texas at Austin

M.S., M.S., Korea Advanced Institute of Science and Technology

Research interests: CO₂ sequestration and desalination via CO₂ hydrate, nanoparticle-stabilized foams and emulsions, nanoparticle transport in porous media, and rapid diagnostic test for developing countries.

Chang Hoon Lee, Ph.D.



Assistant Professor of Civil and Environmental Engineering

Ph.D., Cornell University

M.S., B.S., Korea University

Research interests: modeling of property transition for cement-based materials, probabilistic assessment of material and structural performances, characterization of multi-scale properties of cement-based materials, temperature and moisture effects on sustainability of cement-based materials, and non-destructive testing.

Moochul Shin, Ph.D.



Assistant Professor of Civil and Environmental Engineering

Ph.D., M.S., University of Illinois at Urbana-Champaign

B.S., Hanyang University, South Korea

Research interests: retrofitting and repair of infrastructure using smart materials, railroad track structures, multi-hazard analysis, hybrid simulations, and advanced modeling and nonlinear finite element analysis.

Electrical Engineering

Neeraj Magotra, Ph.D.

 **Chair and Associate Professor of Electrical and Computer Engineering**

Ph.D., The University of New Mexico

M.S., Kansas State University

B.Tech., Indian Institute of Technology, Bombay

Research interests: digital signal and image processing (DSIP); applied DSIP—speech and audio, seismic, radar; energy efficient embedded systems; and biomedical device solutions.

Stephen Adamshick, Ph.D.



Assistant Professor of Electrical and Computer Engineering

Ph.D., M.S., University at Albany, SUNY

B.S., Western New England University

Research interests: nanotechnology, integrated circuit design, and high-speed communication systems.

John J. Burke, Ph.D.



Associate Professor of Electrical and Computer Engineering

Registered Professional Engineer

Ph.D., University of Massachusetts, Amherst

M.S., University of California, Los Angeles

B.S., Northeastern University

Research interests: RF/microwave circuits analysis and design, phased array antenna analysis and design, electromagnetic theory, and computational electromagnetics.

Amer Qouneh, Ph.D.



Assistant Professor of Electrical and Computer Engineering

Ph.D., M.S., University of Florida

M.S., University of Wisconsin-Milwaukee

M.S., B.S., Fairleigh Dickinson University

Research interests: computer architecture, high-performance computing, data centers, and digital systems.

Ruolin Zhou, Ph.D.



Assistant Professor of Electrical and Computer Engineering

Ph.D., M.S., Wright State University

B.S., Dalian Jiaotong University, China

Research interests: FPGA and software defined radio based cognitive radio and wireless communication networking, wireless sensor network, signal processing, digital system design, and embedded systems.

Industrial Engineering and Engineering Management

Thomas Keyser, Ph.D.



Chair and Professor of Industrial Engineering and Engineering Management

Ph.D., Clemson University
M.S., University of Southern Colorado
B.S., New Mexico State University

Research interests: discrete event system simulation, software integration, optimization, scheduling and sequencing, and computer-aided process planning.

Behzad Esmaeilian, Ph.D.



Visiting Assistant Professor of Industrial Engineering and Engineering Management

Ph.D., University of Central Florida
M.S., University of Florida
B.S., University of Science and Culture, Tehran, Iran

Research interests: complex systems simulation, remanufacturing and e-waste recovery, big data analysis techniques, business process improvement, advanced manufacturing, systems engineering, healthcare systems, cost modeling, and quality management.

Zhaojun (Steven) Li, Ph.D.



Assistant Professor of Industrial Engineering and Engineering Management

Ph.D., M.S., University of Washington
M.S., Tianjin University, China
B.S., Dalian Jiaotong University, China

Research interests: reliability, quality, and safety engineering in product design; applied statistics and operations research in manufacturing; service system modeling prognostics; health management for complex engineered systems; systems engineering and its application in new product development; and engineering/operations management.

Seyed Ahmed Niknam, Ph.D.



Assistant Professor of Industrial Engineering and Engineering Management

Ph.D., M.Sc., University of Tennessee, Knoxville
M.Sc., Brunel University

Research interests: prognostics and health management, reliability and maintainability engineering, applied statistics and operations research, and quality engineering and manufacturing measurement.

Matthew Romoser, Ph.D.



Assistant Professor of Industrial Engineering and Engineering Management

Ph.D., University of Massachusetts, Amherst
M.S., B.S., Purdue University

Research interests: human factors engineering, advanced training systems, intelligent tutoring systems, eye tracking, driver behavior and training, and virtual environments for training and assessment.

Christian Salmon, Ph.D.



Assistant Professor of Industrial Engineering and Engineering Management

Ph.D., M.S., George Washington University
B.S., University of Alaska, Fairbanks

Research interests: risk management and providing health care management solutions in developing countries.

Mechanical Engineering

Said Dini, Ph.D.



Professor and Chair, Department of Mechanical Engineering

Ph.D., Illinois Institute of Technology
M.S., B.S., University of Missouri

Research interests: heat transfer, thermodynamics, fluid mechanics, solar energy, and HVAC systems.

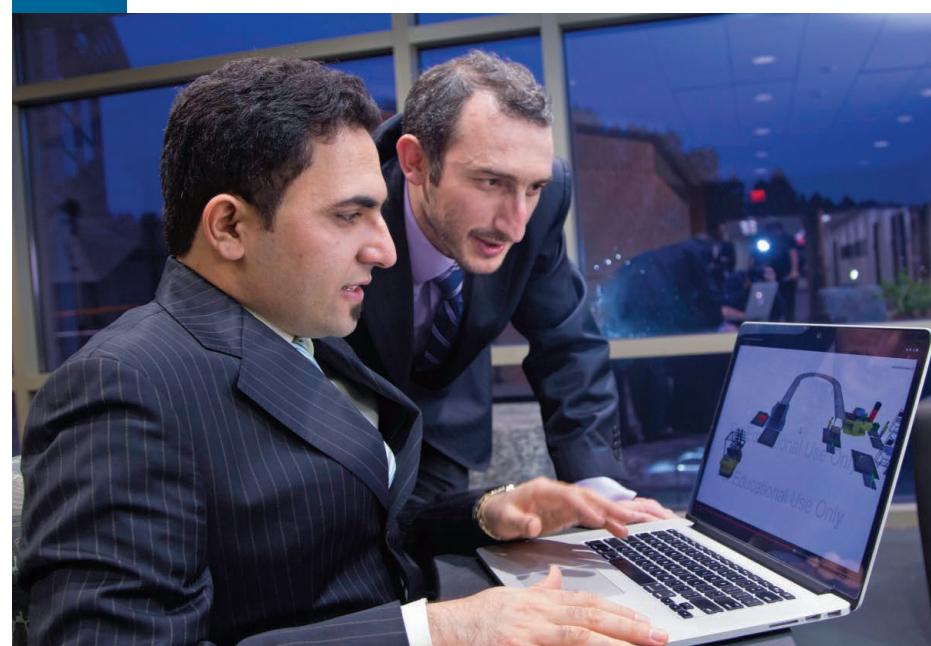
Feruza Amirkulova, Ph.D.



Assistant Professor of Mechanical Engineering

Ph.D., M.Sc., Rutgers University
Ph.D., M.Sc., B.Sc. Samarkand State University, Uzbekistan

Research interests: metamaterials, phononic crystals, "invisibility" cloak, acoustic scattering and structural vibration, computational solid mechanics and acoustics, high performance computing, acoustic diffusers, waveguides, and superlenses.



Mohammad Khosrowjerdi, Ph.D.



Professor of Mechanical Engineering

Registered Professional Engineer

Ph.D., University of Maryland

M.S., George Washington University

B.S., Abadan Institute of Technology, Iran

Research interests: finite element analysis (flow, stress, and heat); measurement and mechanical testing; sensor design, data acquisition and SPC; and software development for factory automation.

Bart Lipkens, Ph.D.



Professor of Mechanical Engineering

Ph.D., University of Texas at Austin

M.S., Pennsylvania State University

B.S., Catholic University of Louvain, Belgium

Research interests: physical acoustics, ultrasonics, acoustic filtration and separation, acoustic particle manipulation, fluid dynamics, and biotechnology.

Richard B. Mindek Jr., Ph.D.



Associate Professor of Mechanical Engineering

Ph.D., M.S., B.S., University of Connecticut

Research interests: CAD/CAM, fundamentals of flight, turbine design and analysis, manufacturing processes research, metrology, materials characterization, and alternative energy.

Mehdi Mortazavi, Ph.D.



Assistant Professor of Mechanical Engineering

Ph.D., M.S., Michigan Technological University

B.S., K.N. Toosi University of Technology, Iran

Research interests: transport phenomena in multi-phase systems, energy-thermo-fluid systems, fuel cells, microfluidics, renewable and sustainable energy systems, and building energy systems.

Charles H. Roche, Ph.D.



Visiting Assistant Professor of Mechanical Engineering

Ph.D., University of Connecticut

M.S., Rensselaer Polytechnic Institute

B.S., University of Massachusetts, Lowell

Research interests: applied mechanics, composites design and analysis, and finite element analysis.

Anthony D. Santamaria, Ph.D.



Assistant Professor of Mechanical Engineering

Ph.D., University of California, Davis

B.S., University of Massachusetts, Amherst

Research interests: energy conversion and storage systems, fuel cells, flow batteries, multi-phase flow, porous flow, neutron and x-ray imaging, wetting phenomena, droplet dynamics, and microfluidics.

Sevak Tahmasian, Ph.D.



Assistant Professor of Mechanical Engineering

Ph.D., Virginia Tech

M.Sc., B.Sc., Isfahan University of Technology, Iran

Research interests: dynamics and control of nonlinear systems, vibrational control, geometric control theory, robotics, and biolocomotion and biomimetic systems.

Glenn E. Vallee, Ph.D.



Associate Professor of Mechanical Engineering

Registered Professional Engineer

Ph.D., M.S., B.S., University of Rhode Island

Research interests: numerical simulation of dynamic nonlinear material behavior, mechanical design and failure analysis, new product development, and product liability litigation.

Jingru Zhang, Ph.D.



Assistant Professor of Mechanical Engineering

Ph.D., Rutgers University

M.S., B.S., Harbin Institute of Technology, China

Research interests: numerical heat transfer, electronic cooling, radiative heat transfer, thermal management in energy systems, computational fluid dynamics, multiphase flow, and product and process design and optimization.



GRADUATE PROGRAMS

- **Master of Science in Civil Engineering**
- **Master of Science in Electrical Engineering**
(Mechatronics Concentration)
- **Master of Science in Engineering Management**
- **Master of Science in Industrial Engineering**
- **Master of Science in Mechanical Engineering**
(Mechatronics Concentration)
- **Master of Science in Engineering Management/MBA**
- **PhD in Engineering Management**

AWARD-WINNING STUDENT RESEARCH

Our graduate students are recognized for their academic commitment and achievement in the industry.



Engineering Management Ph.D. graduate Mohammad Dehghani mohammadabadi recently won first place for best Ph.D. student paper at the Winter Simulation Contest for his work on a new simulation-optimization framework, which allows a model to continue to run optimally during its standard level of operation. He also won second place with his dissertation at the Industrial Engineering and Operations Management (IEOM) Research conference and is currently a visiting instructor at Northeastern University.

OUTSTANDING FACILITIES

Our facilities are equipped with industry-grade technology suitable for graduate level research and experimentation. Sleith Hall, home to the College of Engineering, recently underwent a \$12.8 million expansion and renovation, resulting in an environment that promotes innovation and entrepreneurship. New labs, classrooms, and opportunities to expand green technology both for systems operations and research are part of the forward-leaning design.

Numerous patents have been awarded to our faculty and students. The most recent was for a Biopsy Spacer Device and Method of Operation.

THE CAREER DEVELOPMENT CENTER—WORKING FOR YOU

Career Counseling

- Individual and group career planning
- Assistance with career objectives, résumés, cover letters, job search strategies, and interviewing

Career Development Center Online wne.edu/career

- Register with the Career Center Online and create a profile.
- Post résumés and cover letters.
- Search database for internships and jobs.

