COLLEGE OF ENGINEERING

NEW FACULTY

2021-22 | 2020-21 | 2019-20

UNIVERSITY OF NEBRASKA - LINCOLN
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- Grace Panther
- Benjamin Riggan
- Tirthankar Roy
- Hyun-Seob Song
- Marilyn Wolf
Muhammad Naveed Aman
Assistant Professor
Computer Science and Engineering/School of Computing
City Campus

B.Sc., Computer Systems Engineering, NWFP University of Engineering and Technology
Peshawar, Pakistan
M.Sc., Computer Engineering, Center for Advanced Studies in Engineering, Pakistan
M.Engg., Industrial Management Engineering, Rensselaer Polytechnic Institute
Ph.D., Electrical Engineering, Rensselaer Polytechnic Institute

Previous Experience
Senior research fellow, cybersecurity, NUS-Singtel Cyber Security Research & Development Lab, Department of Computer Science, National University of Singapore; research fellow, cybersecurity, Communications and Networks Lab, Department of Electrical and Computer Engineering, National University of Singapore; assistant professor, Department of Electrical Engineering, FAST-National University of Computer and Emerging Sciences, Peshawar, Pakistan

Research
Internet of Things security, cyber physical systems security, blockchain, machine learning, hardware security, wireless and mobile networks.

Sasitharan Balasubramaniam
Associate Professor
Computer Science and Engineering/School of Computing
City Campus

B.Eng., School of Information and Technology and Electrical Engineering, University of Queensland, Australia
M.Sc., School of Electrical Engineering and Computer Science, Queensland University of Technology, Australia
Ph.D., School of Information Technology and Electrical Engineering, University of Queensland, Australia

Previous Experience
Director of research, Telecommunications Software and Systems Group, Waterford Institute of Technology, Ireland; academy research fellow, Nano Communications Centre, Department of Electronics and Communications Engineering, Tampere University of Technology, Finland

Research
Molecular and nanoscale communication (including bacterial and neural molecular communication systems), brain-machine interface, terahertz communication, bio-inspired networks.
Andrew Hamann
Research Assistant Professor
Biological Systems Engineering
East Campus

Wei-zehn Liang
Research Assistant Professor
Panhandle Research and Extension Center
(Scottsbluff, Nebraska)
Biological Systems Engineering

B.S., Biology, Doane University
M.S., Agricultural and Biological Systems Engineering, University of Nebraska-Lincoln
Ph.D. Biomedical Engineering, University of Nebraska-Lincoln

Research
Chemical priming to enhance gene delivery to stem cells

B.S., Bioenvironmental Systems Engineering, National Taiwan University
M.S., Biological and Agricultural Engineering, North Carolina State University
Ph.D., Agricultural and Biological Engineering, Purdue University

Previous Experience
Post-doctoral research fellow, Clemson University

Research
Application of image analysis in crop and livestock management; advanced crop and livestock modeling; internet of things (IoT); precision agriculture

Qiang Liu
Assistant Professor
Computer Science and Engineering/School of Computing
City Campus

M.S., Communication and Information Systems, University of Electronic Science and Technology of China
Ph.D., Electrical Engineering, University of North Carolina at Charlotte

Previous Experience
Research intern, Nokia Bell Labs; research intern, Toyota InfoTech Labs; research intern, Facebook Reality Labs

Research
Designing and developing wireless technology and computing systems in industrial research labs, wireless networking, edge computing, network slicing, LTE/5G computer networks, and machine learning

Jason Hawkins
Assistant Professor
Civil and Environmental Engineering
City Campus

Andrew Hamann
Research Assistant Professor
Biological Systems Engineering
East Campus

B.Sc. and M.Sc., Civil Engineering, University of Calgary, Canada
Ph.D., Civil and Mineral Engineering, University of Toronto, Canada

Previous Experience
Post-doctoral research fellow, University of Texas at Austin; Transportation and Spatial Economic Modeler, HBA Specto Inc., Calgary, Canada

Research
Travel demand forecasting; choice model and survey methods; energy and GHG emissions of infrastructure; fusing special econometrics and machine learning on large datasets; emerging mobility

Andrew Hamann
Research Assistant Professor
Biological Systems Engineering
East Campus

Wei-zehn Liang
Research Assistant Professor
Panhandle Research and Extension Center
(Scottsbluff, Nebraska)
Biological Systems Engineering

B.S., Bioenvironmental Systems Engineering, National Taiwan University
M.S., Biological and Agricultural Engineering, North Carolina State University
Ph.D., Agricultural and Biological Engineering, Purdue University

Previous Experience
Post-doctoral research fellow, Clemson University

Research
Application of image analysis in crop and livestock management; advanced crop and livestock modeling; internet of things (IoT); precision agriculture

Qiang Liu
Assistant Professor
Computer Science and Engineering/School of Computing
City Campus

M.S., Communication and Information Systems, University of Electronic Science and Technology of China
Ph.D., Electrical Engineering, University of North Carolina at Charlotte

Previous Experience
Research intern, Nokia Bell Labs; research intern, Toyota InfoTech Labs; research intern, Facebook Reality Labs

Research
Designing and developing wireless technology and computing systems in industrial research labs, wireless networking, edge computing, network slicing, LTE/5G computer networks, and machine learning

Jason Hawkins
Assistant Professor
Civil and Environmental Engineering
City Campus

B.Sc. and M.Sc., Civil Engineering, University of Calgary, Canada
Ph.D., Civil and Mineral Engineering, University of Toronto, Canada

Previous Experience
Post-doctoral research fellow, University of Texas at Austin; Transportation and Spatial Economic Modeler, HBA Specto Inc., Calgary, Canada

Research
Travel demand forecasting; choice model and survey methods; energy and GHG emissions of infrastructure; fusing special econometrics and machine learning on large datasets; emerging mobility

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Biological Systems Engineering
East Campus

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Panhandle Research and Extension Center
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Ph.D., Agricultural and Biological Engineering, Purdue University

Previous Experience
Post-doctoral research fellow, Clemson University

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Computer Science and Engineering/School of Computing
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Civil and Environmental Engineering
City Campus

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Ph.D., Civil and Mineral Engineering, University of Toronto, Canada

Previous Experience
Post-doctoral research fellow, University of Texas at Austin; Transportation and Spatial Economic Modeler, HBA Specto Inc., Calgary, Canada

Research
Travel demand forecasting; choice model and survey methods; energy and GHG emissions of infrastructure; fusing special econometrics and machine learning on large datasets; emerging mobility

Andrew Hamann
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East Campus

Wei-zehn Liang
Research Assistant Professor
Panhandle Research and Extension Center
(Scottsbluff, Nebraska)
Biological Systems Engineering

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M.S., Biological and Agricultural Engineering, North Carolina State University
Ph.D., Agricultural and Biological Engineering, Purdue University

Previous Experience
Post-doctoral research fellow, Clemson University

Research
Application of image analysis in crop and livestock management; advanced crop and livestock modeling; internet of things (IoT); precision agriculture

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Computer Science and Engineering/School of Computing
City Campus

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Ph.D., Electrical Engineering, University of North Carolina at Charlotte

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Jason Hawkins
Assistant Professor
Civil and Environmental Engineering
City Campus

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Ph.D., Civil and Mineral Engineering, University of Toronto, Canada

Previous Experience
Post-doctoral research fellow, University of Texas at Austin; Transportation and Spatial Economic Modeler, HBA Specto Inc., Calgary, Canada

Research
Travel demand forecasting; choice model and survey methods; energy and GHG emissions of infrastructure; fusing special econometrics and machine learning on large datasets; emerging mobility

Andrew Hamann
Research Assistant Professor
Biological Systems Engineering
East Campus

Wei-zehn Liang
Research Assistant Professor
Panhandle Research and Extension Center
(Scottsbluff, Nebraska)
Biological Systems Engineering

B.S., Bioenvironmental Systems Engineering, National Taiwan University
M.S., Biological and Agricultural Engineering, North Carolina State University
Ph.D., Agricultural and Biological Engineering, Purdue University

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Post-doctoral research fellow, Clemson University

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Qiang Liu
Assistant Professor
Computer Science and Engineering/School of Computing
City Campus

M.S., Communication and Information Systems, University of Electronic Science and Technology of China
Ph.D., Electrical Engineering, University of North Carolina at Charlotte

Previous Experience
Research intern, Nokia Bell Labs; research intern, Toyota InfoTech Labs; research intern, Facebook Reality Labs

Research
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Jason Hawkins
Assistant Professor
Civil and Environmental Engineering
City Campus

B.Sc. and M.Sc., Civil Engineering, University of Calgary, Canada
Ph.D., Civil and Mineral Engineering, University of Toronto, Canada

Previous Experience
Post-doctoral research fellow, University of Texas at Austin; Transportation and Spatial Economic Modeler, HBA Specto Inc., Calgary, Canada

Research
Travel demand forecasting; choice model and survey methods; energy and GHG emissions of infrastructure; fusing special econometrics and machine learning on large datasets; emerging mobility
Nitesh Nama
Assistant Professor
Mechanical and Materials Engineering
City Campus

B.Tech., Mechanical Engineering, Indian Institute of Technology, Kharagpur, West Bengal, India
M.A., Mathematics and Ph.D., Engineering Science and Mechanics, Pennsylvania State University

Previous Experience
American Heart Association post-doctoral fellow, and post-doctoral research fellow, Department of Surgery, University of Michigan

Research

Shuai Nie
Assistant Professor
Computer Science and Engineering/School of Computing
City Campus

B.E., Telecommunications Engineering, Xidian University, Xi'an, China
M.S., Electrical Engineering, New York University
Ph.D., Electrical Engineering, Georgia Institute of Technology

Previous Experience
Graduate research assistant, Broadband Wireless Networking Laboratory, Georgia Institute of Technology; visiting researcher, A.A. Kharkevich Institute for Information Transmission Problems, Russian Academy of Sciences

Research
Millimeter wave and terahertz band communications, physical layer channel modeling, multiple-antenna techniques, intelligent surface communication systems, machine learning for wireless communications
Logan Perry
Assistant Professor
Civil and Environmental Engineering
City Campus

B.S., Civil Engineering, North Carolina State University
M.S., Civil Engineering, Virginia Tech
Ph.D., Engineering Education, Virginia Tech

Previous Experience
Graduate research assistant, Department of Engineering Education, Virginia Tech; graduate research assistant, Department of Civil and Environmental Engineering, Virginia Tech; student support and program staff member, Center for Enhancement of Engineering Diversity, Virginia Tech

Research
Transfer of learning, transitions between engineering school and work, cyberlearning (virtual and mixed reality technology) in engineering education

Yanan (Laura) Wang
Assistant Professor
Electrical and Computer Engineering
City Campus

B.S., Physics, Nankai University, China
Ph.D., Electrical Engineering, University of Houston

Previous Experience
Research assistant scientist, University of Florida; post-doctoral research associate, Case Western University; post-doctoral research scholar, University of Electronic Science and Technology of China

Research
Nano/microelectromechanical systems (NEMS/MEMS) based on two-dimensional (2D) crystals; single-photon quantum emitters in novel materials (wide-bandgap semiconductors and 2D crystals); photonic/phononic devices and transducers for integrated quantum circuits and scalable systems; nanophotonics, nonlinear photonics, optomechanical transducers for sensing and signal processing; plasmonics, optical metrology, single-cell and single-molecule biological sensing and detection

Emmeline Watson
Assistant Professor of Practice
Durham School of Architectural Engineering and Construction
City Campus

B.S., Civil Engineering, Federal University of Ceara, Brazil
M.S., Engineering Mechanics, University of Nebraska-Lincoln

Previous Experience
Visiting Assistant Professor of Engineering, Doane University; Certification Coordinator, Duncan Aviation; Structures Engineer, Duncan Aviation

Yijie Xiong
Assistant Professor
Animal Sciences/Biological Systems Engineering
East Campus

B.S., Agricultural Structure and Environmental Engineering, China Agricultural University
M.S. and Ph.D., Agricultural Engineering, University of Illinois at Urbana-Champaign

Research
Animal housing environmental control; precision livestock management; applied data analysis in agriculture
Robert Dyer
Assistant Professor
Computer Science and Engineering
City Campus

B.S., Computer Engineering and Computer Science, Iowa State University
M.S., Ph.D., Computer Science, Iowa State University

Previous Experience
Assistant professor of Computer Science, Bowling Green State University; post-doctoral researcher, Department of Computer Science, Iowa State University

Research
Software engineering and programming languages. Developing new programming models to maintain the benefits of software engineering practices such as separation of concerns, agile software development, etc.

Peixun Fan
Research Assistant Professor
Electrical and Computer Engineering
City Campus

B.Eng., Materials Processing & Control Engineering, Huazhong University of Science & Technology, China
Joint Ph.D., University of Manchester, United Kingdom
Ph.D., Materials Science and Engineering, Tsinghua University, China

Previous Experience
Post-doctoral research associate, Department of Electrical and Computer Engineering, University of Nebraska-Lincoln

Research
Laser micro-nano fabrication and laser precise machining techniques for both fundamental research and industrial applications; laser materials processing; ultrafast laser manufacturing
HAMZEH HAGHSHENAS FATMEHSARI
Research Assistant Professor
Civil and Environmental Engineering
City Campus

B.Sc., M.Sc., Civil Engineering, Tehran, Iran
M.Sc., Mechanical Engineering and Applied Mechanics, University of Nebraska-Lincoln
Ph.D., Civil Engineering, University of Nebraska-Lincoln

Previous Experience
Post-doctoral research associate, Department of Civil and Environmental Engineering, University of Nebraska-Lincoln; Highway Quality Assurance Manager, Nebraska Department of Transportation

Research
Chemo-physical and multi-scale characterization of infrastructure materials; recycling and engineered use of construction materials; mechanistic analysis and design of roadways and pavements; bituminous/cementitious materials and mixtures

JUSTIN FIRESTONE
Assistant Professor of Practice
Jeffrey S. Raikes School of Computer Science and Management | Computer Science and Engineering
City Campus

B.S., M.S., Ph.D., Computer Science, University of Nebraska-Lincoln
B.A., Latin and Economics, University of Nebraska-Lincoln
M.A., Classics, University of Nebraska-Lincoln
J.D., Nebraska College of Law

Previous Experience
Adjunct instructor, Nebraska Wesleyan University; Technology and Intellectual Property Associate, Baird Holm, LLP, Omaha

NEAL LEWIS
Assistant Professor of Practice
Master of Engineering Management Program
City Campus

B.S., Chemical Engineering, University of Missouri-Rolla
M.B.A., University of New Haven
Ph.D., Engineering Management, University of Missouri-Rolla

Industry Experience
30+ years of engineering management industry experience at Proctor & Gamble and Bayer, serving in such roles as technology manager, plant engineer and quality control manager

Academic Experience
(After receiving Ph.D.) 2004 - 2016: Marshall University and then University of Bridgeport, where he received tenure in 2013. Since 2016, he has been teaching mostly in web-based asynchronous environments. He has co-authored two best-selling undergraduate and graduate textbooks in engineering economy and is a fellow of the American Society for Engineering Management
FANBEN MENG
Assistant Professor
Mechanical and Materials Engineering
City Campus

B.S., Biotechnology, Nanjing University, China
M.S., Biochemistry and Molecular Biology, Nanjing, China
Ph.D., Materials Science and Engineering, Nanyang Technological University, Singapore

Previous Experience
Post-doctoral research associate, Department of Mechanical Engineering, University of Minnesota; post-doctoral research associate, Department of Mechanical and Aerospace Engineering, Princeton University

Research
Biomedical Engineering: 3D bioprinting, in vitro preclinical models, organ-on-a-chip, implantable devices, tissue engineering, medical diagnostics, translational medicine, drug screening, drug delivery; Materials and Mechanical Engineering: biocompatible polymers and hydrogels, functional nanomaterials, nanofabrication, microfabrication, additive manufacturing, flexible electronic devices; Chemical Engineering: (bio)electrochemistry, surface chemistry, bioanalytical chemistry, molecular self-assembly, (bio)molecular recognition, biosensors, bioelectronics

MOJDEH PAJOUH
Research Assistant Professor
Civil and Environmental Engineering
City Campus

B.Sc., Civil Engineering, K.N.T. University of Technology
M.Sc., Civil Engineering – Structural Earthquake Engineering, Tehran Polytechnic
Ph.D., Civil Engineering – Geotechnical Engineering, Texas A&M University

Previous Experience
Assistant professor of Civil and Environmental Engineering and Construction, University of Nevada, Las Vegas; post-doctoral research associate, Midwest Roadside Safety Facility, University of Nebraska-Lincoln

Research
Crashworthiness analysis, large-scale testing, and numerical simulation; transportation safety, design, analysis, and evaluation of roadside safety hardware; geotechnical earthquake engineering and soil dynamics; educational engineering and culturally responsive teaching
**ARMAN ROOHI**
Assistant Professor
Computer Science and Engineering
City Campus

B.Sc., Computer Engineering, Hardware, Shiraz University, Iran
M.Sc., Computer Architecture, Azad University, Iran
Ph.D., Computer Engineering, University of Central Florida

**Previous Experience**
Post-doctoral fellow, UT Design Automation Laboratory, University of Texas at Austin

**Research**
Energy efficient and high performance processing in-memory circuit, architecture and algorithm; brain-inspired (neuromorphic) computing and Boolean Logic based on emerging post-CMOS nano-devices; hardware aware deep in-memory accelerator circuit and architecture; design and implementation of scalable, energy-efficient and reliable architectures for resource-limited IoT devices; secure computation including hardware security of artificial intelligence and adversarial learning; reconfigurable and adaptive computer architectures

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**TONY ROEBUCK**
Assistant Professor of Practice
Durham School of Architectural Engineering and Construction
City Campus

B.S., Engineering Technology, Illinois State University
B.S., Business Administration, Colorado Technical University
M.S., Real Estate and Construction Management, University of Denver

**Previous Experience**
Instructor in mechanical systems, introduction to construction management and project management for mechanical systems, Colorado State University; project manager, RK Mechanical, Denver, Colorado; project manager, Trautman & Schreve, Denver, Colorado

---
HOANG-DUNG TRAN
Assistant Professor
Computer Science and Engineering
City Campus

B.S., Automation, Ho Chi Minh University of Technology, Vietnam
M.S., Control Science, Huazhong University of Science and Technology, China
Ph.D., Computer Science, Vanderbilt University

Research
Safe artificial intelligences; cyber-physical systems; formal methods; control theory; parallel computing

JUN WANG
Assistant Professor
Electrical and Computer Engineering
City Campus

B.Sc., M.Sc., Electrical Engineering, Zhejiang University, China
Ph.D., Electrical Engineering, Virginia Polytechnic Institute and State University

Previous Experience
Research assistant professor, Center for Power Electronics Systems (CPES), Virginia Polytechnic Institute and State University

Research
Wide-bandgap-device-based medium-voltage direct current (MVDC) distribution and microgrid for sustainable energy: topology, modeling, optimization, control, protection, stability, and electromagnetic compatibility; advanced control, communication, and sensing techniques for power electronics synergistic with data science, artificial intelligence, and 5G network technology; medical power electronics; fault prognostics and diagnostics, reliability, and resiliency of power electronic components and systems; high-voltage high-density high-performance power electronic packaging and integration

MATTHEW WILLIAMSON
Assistant Professor of Practice
Civil and Environmental Engineering
City Campus

B.S., M.S., Ph.D., Civil Engineering, Kansas State University

Previous Experience
Instructor and Program Coordinator, Construction Engineering Technology, Kansas State University; Senior Project Engineer & Office Manager, GeoSource, LLC

QIUMING YAO
Assistant Professor
Computer Science and Engineering
City Campus

B.S., M.S., Computer Science, Tongji University, China
M.A., Statistics, University of Missouri
Ph.D., Computer Science, University of Missouri

Previous Experience
Research fellow, Department of Hematology, Boston Children’s Hospital and Department of Pathology, Massachusetts General Hospital, Harvard Medical School; post-doctoral research associate, Oak Ridge National Laboratory

Research
GWAS and functional genomics in human disease; gene editing in therapeutics and functional analysis; meta-proteo-genomics in microbiology; high performance bio-computing; database and big data visualization; artificial intelligence and pattern recognition
BIOLOGICAL SYSTEMS ENGINEERING
Tami Brown-Brandl
Sorab Panday
Hyun-Seob Song

CHEMICAL AND BIOMOLECULAR ENGINEERING
Mona Bavarian

CIVIL AND ENVIRONMENTAL ENGINEERING
Congrui “Grace” Jin
Grace Panther
Tirthankar Roy

COMPUTER SCIENCE AND ENGINEERING
Motassem Al-Tarazi
Christopher Bohn
Shruti Daggumati
Nirnimesh Ghose
Marilyn Wolf

THE DURHAM SCHOOL OF ARCHITECTURAL ENGINEERING AND CONSTRUCTION
Kyungki Kim
Jennifer Lather
Marc Maguire

ELECTRICAL AND COMPUTER ENGINEERING
Benjamin Riggan

MECHANICAL AND MATERIALS ENGINEERING
Lucia Fernandez-Ballester
Mohammad Ghashami
Piyush Grover
Abdelghani Laraoui
Kurt Palik

MOTASSEM AL-TARAZI
Assistant Professor of Practice
Computer Science and Engineering
City Campus

B.S.c., Computer Information Systems, Jordan University of Science and Technology
M.S.c., Computer Science, Jordan University of Science and Technology
Ph.D., Computer Science, Iowa State University

Previous Experience
Instructor at Jerash University, Jordan; Graduate teaching assistant at Iowa State University

Research
Cloud computing, data centers, optimization, energy saving, and big data

CHRISTOPHER BOHN
Assistant Professor of Practice
Computer Science and Engineering
City Campus

B.S.E.E., Electrical Engineering, Purdue University
M.S.C.E., Computer Engineering, Air Force Institute of Technology
Ph.D., Computer & Information Science, The Ohio State University

Previous Experience
24 years as a U.S. Air Force officer, principally as a developmental engineer

Research
Parallel & distributed computing, software engineering, computer science education
MONA BAVARIAN
Assistant Professor
Chemical and Biomolecular Engineering
City Campus

B.Sc., Chemical Engineering, Sharif University of Technology
Ph.D., Chemical Engineering Drexel University

Previous Experience
Senior technical specialist at Pall Corp., Port Washington, New York; adjunct faculty at the University of Nebraska-Lincoln; principal process engineer at Brewer Science Inc., Rolla, Missouri

Research
Experimental and theoretical study of the reaction kinetics of organosiloxane polycondensation; integration of first-principles modeling and experimental work for the polymerization reaction of the specialty polymers and design of electrochemical systems

TAMI BROWN-BRANDL
Professor and Dr. William E. and Eleanor L. Splinter Chair
Biological Systems Engineering
East Campus

A.S. Math, Chemistry and Biology, McCook Community College
B.S., Biological Systems Engineering, University of Nebraska-Lincoln
M.S., Agricultural and Biological Systems Engineering and Animal Science, University of Nebraska–Lincoln
Ph.D., Agricultural Engineering, University of Kentucky

Previous Experience
Since 1998, served as an agricultural engineer for the USDA Meat Animal Research Center

Research
Improved animal well-being and production efficiency; precision animal management, prediction of individual animal susceptibility to heat stress, calorimetry and animal energetics, development of sensors and control systems

SHRUTI DAGGUMATI
Assistant Professor of Practice
Computer Science and Engineering
City Campus

B.S., Computer Engineering, University of Nebraska–Lincoln
M.S., Ph.D., Computer Science, University of Nebraska–Lincoln

Previous Experience
Lead researcher as a systems engineer at Verizon for OCR of government contracting

Research
Intersection of machine learning, data visualization, and computational linguistics. Research integrates non-linear stochastic models applied to the identification of ancient scripts using machine learning methodologies

LUCIA FERNANDEZ-BALLESTER
Assistant Professor
Mechanical and Materials Engineering
City Campus

B.S., Chemical Engineering, University of Alicante
M.S., Ph.D., Chemical Engineering, California Institute of Technology

Research
Physics and engineering of polymers to enable rational design of materials and processing with optimal properties. Specific areas of interest: interplay between molecular structure, processing, and final properties; conducting polymers; additive manufacturing; polymers for biomedical applications; flow-induced crystallization
MOHAMMAD GHASHAMI
Assistant Professor
Mechanical and Materials Engineering
City Campus

B.S., Mechanical Engineering, University of Tehran
M.S., Ph.D., Mechanical Engineering, University of Utah

Research
Micro/nanoscale heat transfer, near-field thermal radiation, energy conversion, experimental study of nanoscale thermal transport, thermonics and thermoelectric power generation, near-field thermophotovoltaics, radiation manipulation

PIYUSH GROVER
Assistant Professor
Mechanical and Materials Engineering
City Campus

B.S., Mechanical Engineering, Indian Institute of Technology, Guwahati
Ph.D., Engineering Mechanics, Virginia Tech

Previous Experience
Senior research scientist at Mitsubishi Electric Research Laboratories in Cambridge, Massachusetts

Research
Combining geometric and statistical methods in dynamics with optimization and control theory to enable optimal design and control; large-scale multi-agent/swarm robotics; fluid mechanics

NIRNIMESH GHOSE
Assistant Professor
Computer Science and Engineering
City Campus

B.Tech., Electronics and Communications Engineering, Uttar Pradesh Technical University
M.S., Electrical and Computer Engineering, Illinois Institute of Technology
Ph.D., Electrical and Computer Engineering, University of Arizona

Previous Experience
Research assistant in Electrical and Computer Engineering at University of Arizona and Illinois Institute of Technology, Chicago; application developer for Fidelity Investments, Covington, Kentucky

Research
Wireless network security, physical layer security, cyber-physical system security, Internet-of-Things security, aviation security, and interaction between cyber security and social networks

CONGRUI (GRACE) JIN
Assistant Professor
Civil and Environmental Engineering
City Campus

B.S., Electrical Engineering, Nankai University, Tianjin, China
M.S., Mechanical Engineering, University of Alberta, Canada
Ph.D., Mechanical Engineering, Cornell University

Previous Experience
Assistant professor in Mechanical Engineering at State University of New York at Binghamton; postdoctoral research associate in the Materials Science and Technology Division, Oak Ridge National Laboratory; postdoctoral research associate in Department of Civil Engineering, Northwestern University

Research
Construction materials, structural mechanics, porous structures, concrete structures, contact mechanics, fracture mechanics, wave propagation, computational mechanics
KYUNGGKIM
Assistant Professor
Durham School of Architectural Engineering and Construction
Scott Campus

B.S., Architectural Engineering, Dongguk University
M.S., Civil/Construction Engineering and Management, Texas A&M University
Ph.D., Civil/Construction Engineering, Georgia Institute of Technology

Research
Building Information Modeling (BIM); Immersive Augmented Reality (AR) for construction education and training; construction safety and health; real-time sensing for construction operation monitoring

ABDELGHANI LARAOUAI
Assistant Professor
Mechanical and Materials Engineering
City Campus

M.S., Condensed and Soft Matter Physics, University of Upper Alsace
Ph.D., Physics, University of Strasbourg (Louis Pasteur)

Previous Experience
Research assistant professor, Center for High Technology Materials, University of New Mexico; research scientist, City College of New York-CUNY; Marie Curie postdoctoral fellow, Technical University of Kaiserslautern

Research
Quantum sensing and nanoscale probing of condensed matter phenomena; defect discovery and spectroscopy in two dimensional materials and wide bandgap semiconductors; exploring magnetic, optical, and mechanical cavities and waveguides for coupling distant spin-qubits for scalable quantum networks; hybrid photonics

JENNIFER LATHER
Assistant Professor
Durham School of Architectural Engineering and Construction
Scott Campus

B.A., Architecture, University of California, Berkeley
B.S., Conservation and Resource Studies, Regenerative Design, University of California, Berkeley
M.S., Ph.D., Architectural Engineering, Construction Option, Pennsylvania State University

Research
Interactive workspaces to support integrative project delivery and collaborative teams; quantitative layout planning and optimization; stochastic simulation for healthcare operations and design to support data-driven decision making

MARC MAGUIRE
Assistant Professor
Durham School of Architectural Engineering and Construction
Scott Campus

B.S., M.S., Civil Engineering, University of Nebraska–Lincoln
Ph.D., Civil Engineering, Virginia Tech

Previous Experience
Assistant professor of Civil Engineering, Utah State University; research engineer, Virginia Tech

Research
Accelerated bridge construction; integrating sustainability, energy efficiency and structural performance; non-destructive testing, computer vision, and machine learning in structural engineering
KURT PALIK
Assistant Professor of Practice
Mechanical and Materials Engineering
City Campus

B.S., Mechanical Engineering, University of Nebraska–Lincoln

Previous Experience
Five years in manufacturing engineering and process design; 15 years in design engineering and project management; 18 years in engineering management

GRACE PANTHER
Assistant Professor
Civil and Environmental Engineering
City Campus

B.S., Environmental Sciences, Oregon State University
M.S., Ph.D., Environmental Engineering, Oregon State University

Previous Experience
Post-doctoral fellow at the University of Cincinnati

Research
Engineering education with a focus on spatial visualization, teamwork and gender, and authentic engineering practice

SORAB PANDAY
Research Professor
Biological Systems Engineering
East Campus

B.S.E.E., Civil Engineering, Indian Institute of Technology, Mumbai
M.S., Civil Engineering, University of Delaware
Ph.D., Civil and Environmental Engineering, Washington State University

Previous Experience
Thirty years in hydrogeologic consulting (and continuing). Elected to the National Academy of Engineering in 2017

Research
Modeling and development of model codes of water resources and subsurface systems: groundwater flow, unsaturated zone, surface water/groundwater interactions, solute fate and transport, reactive transport, heat transport and resource management

BENJAMIN RIGGAN
Assistant Professor
Electrical and Computer Engineering
City Campus

B.S., Computer Engineering, North Carolina State University
M.S., Ph.D., Electrical Engineering, North Carolina State University

Previous Experience
Postdoctoral fellowship in U.S. Army Research Laboratory’s Image Processing Branch; Electronics engineer with U.S. Army Research Laboratory’s Networked Sensing and Fusion Branch

Research
Computer vision; image and signal processing; biometrics and forensics; machine learning; domain adaptation
TIRTHANKAR ROY
Assistant Professor
Civil and Environmental Engineering
Scott Campus

B.Tech., Agricultural Engineering, BCKV, India
M.Tech., Civil Engineering, IIT Kanpur, India and TU Dresden, Germany
Ph.D., Hydrology, University of Arizona

Previous Experience
Doctoral research associate, Civil and Environmental Engineering, Princeton University;
DAAD research scholar, TU Dresden, Germany;
project associate, Civil Engineering, IIT Kanpur

Research
Hydrologic process understanding, modeling, and forecasting across scales; remote sensing applications in hydrology; risk assessment of hydrologic extremes; land-atmosphere interactions; integrated water resources management

HYUN-SEOB SONG
Associate Professor
Biological Systems Engineering
East Campus
Food Science and Technology
Innovation Campus

B.S., M.S., Ph.D., Chemical Engineering, Korea University

Previous Experience
Senior research scientist at Pacific Northwest National Laboratory, Richland, Washington

Research
Metabolic modeling, microbial interaction modeling, omics data-model integration, model-driven metabolic and microbiome engineering

Marilyn Wolf
Professor and Department Chair
Computer Science and Engineering
City Campus

B.S., M.S., Ph.D., Electrical Engineering, Stanford University

Previous Experience
Farmer Distinguished Chair in Embedded Computing Systems and GRA Eminent Scholar, Georgia Institute of Technology; faculty at Princeton University; AT&T Bell Laboratories

Research
Cyber-physical systems, Internet-of-Things, embedded computing, embedded computer vision, and VLSI systems