



On behalf of my colleagues, I am pleased to announce that 11 new faculty members have joined the School of Civil Engineering at Purdue University. These faculty members are considered some of the brightest new talent in the field today, bringing with them a rich background of academic and professional experience.

It is an exciting time for them to be joining our school. Our undergraduate program has just been ranked fifth in the nation by *U.S. News & World Report* — a reflection of the outstanding teaching accomplishments of our veteran faculty members.

It is also an exhilarating time for our profession. Citizens around the world are increasingly demanding a cleaner environment along with safe and effective infrastructure, challenging civil engineers in every subspecialty. These new faculty members will broaden the scope of research and teaching in the School of Civil Engineering, and we look forward to supporting their contributions to our field.

M. Kathy Banks
Bowen Engineering Head and Professor
of Civil Engineering



◀ **Ghadir Haikal** received her bachelor's degree from Tishreen University in Syria and her master's degree and PhD from the University of Illinois. She previously worked as a graduate research assistant at UIUC. Haikal focuses on modeling of complex structural elements as characterized by the interaction of different mechanical components and/or physical media; stabilized finite element formulation of non-smooth contact; and finite element formation of contact based on intersecting volumes for quadrilateral and hexahedral elements.



◀ **Arun Prakash** earned his bachelor's degree from the Indian Institute of Technology, Delhi, and his MS and PhD from the University of Illinois. He comes to Purdue from UCLA, where he had been a post-doctoral research scholar. Prakash investigates computational and analytical methods for coupled multi-scale problems, design of structures subject to extreme events for risk management and hazard mitigation, and multi-scale modeling of heterogeneous and cellular materials at high strain rates.



◀ **Athanasios Tzempelikos** received his bachelor's degree from National Kapodistrian University of Athens, Greece, and his master's degree and PhD from Concordia University. He previously served as an investigator in Concordia's Solar Buildings Research Network. Tzempelikos studies the design of energy-efficient buildings, advanced building envelopes, indoor environments, dynamic facades, daylighting, glazings, shading design and control, lighting controls, integration of green and renewable technologies, solar energy applications, photovoltaics, building energy modeling, and simulation. He also is an independent facade energy consultant.



▲ **Pablo Zavattieri** received his bachelor's and master's degrees from Universidad Nacional de Cuyo, Argentina, and his PhD from Purdue University in aerospace engineering. He most recently served as a staff researcher for General Motors Corporation. Zavattieri focuses on the mechanics of materials and computational solid/structural mechanics applied to the multiscale analysis and design of advanced and novel materials (metals, composite materials, hierarchical, multifunctional, lightweight, micro-, nano-, and biomimetic composite materials), interfaces, and complex structures.



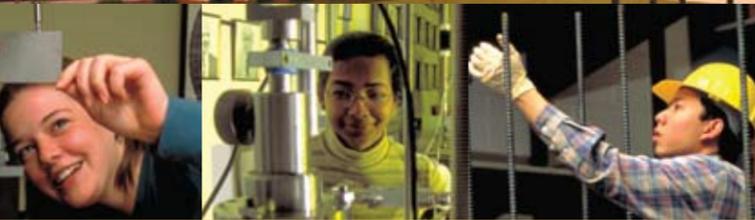
◀ **W. Travis Horton** received his bachelor's and master's degrees in mechanical engineering from Utah State University, and his PhD from the Purdue University School of Mechanical Engineering. He previously was a research assistant professor at the University of Maryland. A professional engineer dedicated to improving energy efficiency of residential, commercial, and industrial buildings and their systems, Horton studies energy conversion systems, including heating, air conditioning, refrigeration, and electrical systems; combined heat and power systems, and building energy modeling techniques. He is particularly interested in zero-energy homes and buildings.



◀ **Ming Qu** has a bachelor's degree in civil engineering from DaLian University of Technology, China, and a PhD in building performance and diagnostics from Carnegie Mellon University. She previously was a graduate fellow at Carnegie Mellon. Qu studies advanced solar cooling and heating systems, using mathematical models, system simulations, and experiments to investigate high-temperature solar thermal receivers to both cool and heat buildings. Before pursuing her PhD, Qu was a structural engineer with the Beijing Design Institute, China.



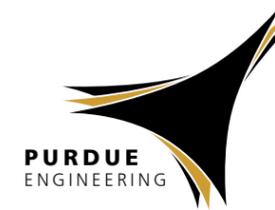
◀ **Satish Ukkusuri** earned a bachelor's degree from the Indian Institute of Technology, Madras, a master's degree from the University of Illinois, and a PhD from the University of Texas. Before joining the faculty at Purdue, he was an assistant professor at Rensselaer Polytechnic Institute. Ukkusuri is working to consolidate methodologies from a diverse array of domains including optimization theory, stochastic modeling, communication theory, and social sciences in order to solve high-impact transportation problems.



◀ **Amr Kandil** received his bachelor's and master's degrees from American University in Cairo, Egypt, and his PhD from the University of Illinois. Before joining the Purdue faculty, he served as an assistant professor at Iowa State University. Kandil is striving to develop robust IT-based decision support systems for sustainable development and maintenance of civil and building infrastructures, focusing on administration of construction contracts and the management of infrastructure planning decisions.



◀ **Hubo Cai** received his bachelor's degree from Tongji University, China, and his MS and PhD from North Carolina State University. Previously, he worked as an assistant professor at Western Michigan University. Cai studies infrastructure modeling, spatial data acquisition and management, and data quality; construction methods, sustainable construction, and sustainable infrastructure; application of information technology and decision support systems in construction and infrastructure management; health monitoring and performance assessment of civil infrastructure; and infrastructure interdependency and interaction with disasters.



◀ **Panagiota Karava** received her bachelor's degree from the National and Kapodistrian University of Athens, Greece, and her MS and PhD from Concordia University in Montreal. She comes to Purdue from the University of Western Ontario, where she served as an assistant professor. Karava studies sustainable building construction, focusing on roof-mounted photovoltaic-thermal systems, low-energy cooling techniques, high-performance green buildings, indoor air quality, building aerodynamics, and wind-induced building internal pressures and their codification.



◀ **Shirley J. Dyke** will join Purdue in mid-September as a professor of mechanical and civil engineering. Dyke earned her bachelor's degree from the University of Illinois at Urbana-Champaign and her PhD from the University of Notre Dame. She comes from Washington University-St. Louis, where she was the Edward C. Dicke Professor of Engineering and director of the Structural Control and Earthquake Engineering Laboratory. Dyke investigates ways to reduce losses and property damage from earthquakes. She also studies the use of structural control and monitoring systems for improving the behavior and lifetime of structural systems.



School of Civil Engineering

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New Faces of Civil Engineering at Purdue



School of Civil Engineering

