



COLLEGE OF ENGINEERING

Civil & Architectural
Engineering & Mechanics

The Department of Civil and Architectural Engineering and Mechanics at the University of Arizona invites applications for a tenure-track faculty position at the Assistant or Associate Professor level in one of the following three areas: Advanced Materials in Civil Engineering, Cyber-Physical Urban Engineering Systems, or Sustainable and Resilient Design and Construction. This position represents the first of a multi-year hiring process associated with planned growth in the Civil and Architectural Engineering programs, and is aligned with the Building a Changing World vision as a pillar within the University's Strategic Plan. A job description for each the specific areas follow:

Advanced Materials in Civil Engineering. We seek to hire an assistant or associate professor with research interests in the area of innovative materials and evaluation methods. We are interested in applicants with expertise in one or more of the following: innovative material development; structural/material health monitoring; new efficient construction materials; and non-destructive evaluation. Emphasis in areas that will improve the sustainability and resilience of civil infrastructure is preferred. Examples of desirable expertise include, without being limited to: (i) design and development of new construction materials such as new composites and smart materials based on coupled advanced multiscale computational modeling and experimental characterization; (ii) Utilization of 3-D printing including large scale printing in development and application of new construction materials; and (iii) development and application of novel non-destructive evaluation methods for material characterization and health monitoring. Preference will be given to those candidates with a strong background in geotechnical engineering.

Cyber-Physical Urban Engineering Systems. We seek to hire an assistant or associate professor with research interests centered on the integration of computational and physical systems focused on urban engineering systems – defined as a multi-disciplinary field that addresses both the foundational principles and integrative outcomes of various inter-dependent elements composing a modern city. We are seeking a candidate with expertise in the development and/or utilization of distributed data networks to improve the understanding, maintenance, and/or operation of urban engineering systems. Successful candidates are expected to have expert knowledge in one or more aligned research areas including, but not limited to, connecting behavior with system response; integrated operation of multiple infrastructure systems; advanced networking and communication; integration with mobile data streams; big-data analytics; machine learning/AI; sensor technology, modeling and simulation of urban engineering system dynamics; and incorporation of uncertainty in all phases of analysis and design. The successful candidate will be expected to complement existing research areas in the transportation, water resources, and structural areas.

Sustainable and Resilient Design and Construction. We seek to hire an assistant or associate professor with research interests focused on engineering solutions for increasing the sustainability and/or resiliency of the built environment including civil infrastructure systems and buildings. We will consider research in all areas of sustainable and resilient design relevant to the built environment, particularly those that complement or create synergies with existing efforts within UA. The department has on-going research in seismic design, structural health monitoring, construction engineering, flood mitigation, and integrated water management for net-zero utilization. Preference will be given to individuals with research expertise focused on building

science/technology or large-scale urban planning and design; and to individuals that can integrate their educational objectives within our undergraduate Architectural Engineering program, and provide synergies between Civil and Architectural Engineering and Architecture.

Duties and Responsibilities: The successful candidate is expected to develop and maintain an internationally-recognized, externally-funded research program; provide excellence in undergraduate and graduate teaching and education; contribute to mentoring students, including those from underrepresented backgrounds; and contribute to scholarly activities performed within academic communities across the university. The successful candidate will also be expected to contribute in meaningful ways to interdisciplinary research and educational activities that complement and are synergistic within the University's Strategic Plan.

Qualifications: A Ph.D. degree in the specified, or closely related, discipline is required. Candidates will be evaluated based on their alignment within the posted areas of interest and on their academic credentials, their record of research, teaching and scholarly activities and potential for success in developing a funded research program and making contributions in research, teaching and service to the field. The selected candidate may be required to provide higher education credentials during the offer discussions.

Proposed Start Date: Start of the academic year, 2020 or as negotiated.

To Apply: Please submit a cover letter, a curriculum vita that includes a list of recent publications; a list of four references with address, email and phone contact information; and a detailed statement of research interests (3 page maximum) and teaching/educational philosophy (2 page maximum).

For full consideration, candidates are encouraged to submit all application material electronically to the University of Arizona's on-line application system at <http://uacareers.com/postings/44047> before January 20, 2020. However, applications will be accepted until the position is filled.

After January 20, 2020 the University of Arizona will be transitioning to a new application portal. Beginning on January 27, 2020, applicants will be able to apply for this position (Posting Number F22223) through <http://talent.arizona.edu>.

For questions about the positions, please contact Dr. Dominic Boccelli, Professor and Department Head (dboccelli@arizona.edu).

EEO/AA: At the University of Arizona, we value our inclusive climate because we know that diversity in experiences and perspectives is vital to advancing innovation, critical thinking, solving complex problems, and creating an inclusive academic community. As a Hispanic-serving institution, we translate these values into action by seeking individuals who have experience and expertise working with diverse students, colleagues, and constituencies. Because we seek a workforce with a wide range of perspectives and experiences, we provide equal employment opportunities to applicants and employees without regard to race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information. As an Employer of National Service, we also welcome alumni of AmeriCorps, Peace Corps, and other national service programs and others who will help us advance our Inclusive Excellence initiative aimed at creating a university that values student, staff and faculty engagement in addressing issues of diversity and inclusiveness.