Northeastern

Department of Civil and Environmental Engineering:
Smart Civil and Environmental Engineering Systems

2019-2020

Department of Civil and Environmental Engineering

400 Snell Engineering Ctr.
360 Huntington Ave.
Boston, MA 02115

617.373.2444
f 617.373.4419

As part of a strategic initiative in the areas of automation, robotics, and artificial intelligence in the context of Civil Infrastructure Security and Sustainable Engineering, Northeastern University seeks faculty candidates for tenured or tenure-track appointments at the assistant, associate, or full professor level in the Department of Civil and Environmental Engineering across the broad area of **Smart Civil and Environmental Engineering Systems.** Interested candidates may be considered for joint appointments in other departments commensurate with their areas of expertise. The department is in the midst of a significant, multi-year expansion in size and scope, including faculty, facilities, and programs within several disciplines and across disciplinary boundaries.

Candidates should have the background to contribute to the advancement of knowledge through the use of problem-centric innovative approaches based on recent developments in robotics, artificial intelligence (AI), data science and sensors. These developments are drivers of change and will dramatically impact the planning, design, operations, and control of Civil and Environmental Systems. Candidates are especially sought with expertise in the following areas:

Future Urban Mobility. Urban transportation of people and goods is undergoing a significant transformation with the introduction of new types of services (bike sharing, ride hailing, etc.) and concepts such as mobility on demand and mobility as a service. Coupled with technological advances related to electric, connected, and autonomous vehicles, these developments promise to change the nature of urban mobility, while addressing the significant challenges of safety, sustainability, and equity. Examples of specific areas of interest include, but are not limited to: Mobility as a Service, Mobility on Demand, electric vehicles, connected and autonomous vehicles, urban logistics.

Infrastructure Automation. Advances in automation technologies fueled by developments in robotics, AI, data science, and sensors provide opportunities to impact the design, control, maintenance, and construction of civil and environmental infrastructure. Examples of specific areas of interest include, but are not limited to: automation in construction and associated algorithms and software, modular building design and robotic assembly, sensor data informed modeling, simulation and automated control of

Northeastern

infrastructure systems against extreme events, AI based process automation, human factors in automation.

Candidates should have background in fields such as sensors, robotics, intelligent control, AI, and machine learning, and related areas in the Civil and Environmental Engineering domain. The hiring efforts at Northeastern University seek to foster education and research across disciplinary boundaries. The successful candidates are expected to demonstrate a proven ability to sustain a research program with emphasis on interdisciplinary and translational research, teach both undergraduate and graduate classes, and be active, recognized leaders in their disciplines.

Candidates should be committed to fostering diverse and inclusive environments as well as to promoting experiential learning, which are central to a Northeastern University education.

Northeastern University is located in the heart of Boston and benefits from the intellectual and cultural vitality of an urban environment. Northeastern is a top-tier research university and premier experiential education institution, and is a National Science Foundation ADVANCE Institutional Transformation site. A university-wide vision for use-inspired transformative research that crosses traditional disciplinary boundaries has resulted in strong cross-departmental ties among the faculty, including joint and affiliate appointments across departments and colleges. The Civil and Environmental Engineering department houses major research centers, including the NIH-sponsored program Puerto Rico Testsite for Exploring Contamination Threats (PROTECT), the NIH-sponsored Center for Research on Early Childhood Exposure and Development in Puerto Rico (CRECE), the NIH-sponsored program on Environmental Influences on Child Health Outcomes (ECHO), as well as the NIST-funded center on Versatile Onboard Traffic Embedded Roaming Sensors (VOTERS). Faculty enjoy collaboration with other research centers and clusters across the College of Engineering, Khoury College of Computer Sciences, College of Science, Bouvé College of Health Sciences, College of Arts, Media and Design, D'More-McKim School of Business, and the College of Social Science and Humanities, including the NSF-funded Center for High-Rate Nanomanufacturing (CHN), the DHS-funded Homeland Security Center of Excellence on Awareness and Localization of Explosive-Related Threats (ALERT), the Institute for Experiential Robotics, the Network Science Institute (NSI), the Marine Science Center (MSC), the Coastal Sustainability Institute (CSI), the Global Resilience Institute (GRI), the George J. Kostas Research Institute for Homeland Security, the Sherman Center for Engineering Entrepreneurship Education, and entrepreneurship programs in the D'Amore-McKim School of Business.

Department of Civil and Environmental Engineering

400 Snell Engineering Ctr.
360 Huntington Ave.
Boston, MA 02115

617.373.2444
f 617.373.4419

Northeastern

Department of Civil and Environmental Engineering

400 Snell Engineering Ctr.
360 Huntington Ave.
Boston, MA 02115

617.373.2444
f 617.373.4419

For further information see: https://cee.northeastern.edu/faculty/faculty-hiring/

Qualifications: A Doctorate degree in civil engineering or a related field is required by the start date as well as excellence in research, teaching, and service. Senior-level candidates should have a demonstrated record of developing transformative solutions to global challenges, sustaining a research program with an emphasis on interdisciplinary and translational research, teaching both undergraduate and graduate classes, and being an active, recognized leader nationally and internationally in the discipline.

About Northeastern University: Founded in 1898, Northeastern is a global research university and a world leader in experiential learning. The same commitment to connecting with the world drives our use-inspired research enterprise. The university offers a comprehensive range of undergraduate and graduate programs leading to degrees through the doctorate in nine colleges and schools. Our campuses in Charlotte, N.C., San Francisco, Seattle, and Toronto are regional platforms for undergraduate and graduate learning and collaborative research. Northeastern pursues advanced research in security and materials at the Innovation Campus in Burlington, Massachusetts, and in coastal sustainability at the Marine Science Center in Nahant, Massachusetts.

Equal Employment Opportunity: Northeastern University is an equal opportunity employer, seeking to recruit and support a broadly diverse community of faculty and staff. Northeastern values and celebrates diversity in all its forms and strives to foster an inclusive culture built on respect that affirms inter-group relations and builds cohesion. All qualified applicants are encouraged to apply and will receive consideration for employment without regard to race, religion, color, national origin, age, sex, sexual orientation, disability status, or any other characteristic protected by applicable law. To learn more about Northeastern University's commitment and support of diversity and inclusion, please see www.northeastern.edu/diversity.

How to Apply: Visit the College website https://coe.northeastern.edu/faculty/faculty-hiring/ and click on Faculty Positions. Applications should be submitted under the position entitled **Smart Civil and Environmental Engineering Systems** and should include (1) cover letter, (2) detailed resume, (3) research development statement, (4) teaching statement, (5) copy of one sample journal paper, and (6) list of four references with contact information. Screening of applications begins November 1, 2019 and continues until the position is filled. Questions regarding this position should be directed to Taryn Sullivan at cee-smart-search@coe.neu.edu.