

Founded in 1898, Northeastern is a global research university and the recognized leader in experience-driven lifelong learning. Our world-renowned experiential approach empowers our students, faculty, alumni, and partners to create impact far beyond the confines of discipline, degree, and campus.

Our locations—in Boston; Charlotte, North Carolina; London; Portland, Maine; Oakland; San Francisco; Seattle; Silicon Valley; Toronto; Vancouver; and the Massachusetts communities of Burlington and Nahant—are nodes in our growing global university system. Through this network, we expand opportunities for flexible, student-centered learning and collaborative, solutions-focused research.

#### About Northeastern:

Northeastern University's main campus 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.

Northeastern's comprehensive array of undergraduate and graduate programs—in a variety of on-campus and online formats—lead to degrees from undergraduate through the doctorate in nine colleges and schools. Among these, we offer more than 195 multi-discipline majors and degrees designed to prepare students for purposeful lives and careers. The University and the College of Engineering are 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.

As part of a strategic initiative coordinated across the university under the broad theme of **Sustainability and Resilience**, the Civil and Environmental Engineering Department seeks faculty candidates for tenured or tenure-track appointments at the assistant, associate, or full professor ranks. We seek candidates conducting research that broadly applies to **Infrastructure Systems under Future Climates**. Academic rank at the Associate Professor and Full Professor levels will be commensurate with experience and qualifications reflecting a record of demonstrated teaching and scholarly excellence.

Appointments will be in the Department of Civil and Environmental Engineering. Candidates interested in joint appointments with other departments or colleges should indicate their intent in their application materials, including the cover letter.

#### About the Opportunity:

With climate change being a defining challenge of our era, novel design and construction methods and innovative operation strategies that leverage systems thinking are needed for our infrastructure systems. Infrastructure systems ranging from dams and reservoirs, buildings and bridges, transportation and water distribution networks, power grids, and communication systems, as well as energy systems, are impacted by, and in turn impact, climate change.

Future climates are difficult to predict owing to internal variability and our knowledge gaps in natural and human systems. Future changes will likely impact the intensity, duration, and frequency of weather extremes and the associations among and variations within changes in weather patterns at scales relevant to infrastructure design, construction, and operations.

**Design, construction and operations advances** may require novel materials, design and/or construction practices, use of robotics or sensors, hazard modeling systems, forecasting systems, mitigation strategies, or adaptable systems integration.

**Computational simulations**, whether data-driven or based on process

understanding, as well as knowledge-integrated data and Artificial Intelligence (AI) systems, may provide novel solutions, which often require methodological adaptations or innovations, for enabling advances in infrastructure design, construction and operation.

This position seeks applications and nominations for-tenure-track or tenured faculty who can bring transformative solutions to infrastructure and lifeline systems to changing patterns of weather and compound extremes or stresses.

Our recruitment initiatives at Northeastern are dedicated to fostering education and research across disciplinary boundaries. We aim to create a signature effort at the interface of the built and natural environments that will accelerate adaptation to a changing climate. Candidates are expected to demonstrate the potential to sustain a research program emphasizing interdisciplinary and translational research and teach undergraduate and graduate classes. They should also exhibit active and recognized leadership in their respective fields.

The ideal applicants will be able to leverage Northeastern's expertise and facilities in high-performance computing, machine learning and artificial intelligence, human-system interaction, network science, sensing, social justice, large-scale structural testing, materials manufacturing, materials characterization, and global community-based research while bringing new strengths in one or more areas.

**Responsibilities:**

Candidates should be committed to fostering diverse and inclusive environments as well as promoting experiential learning, which are central to a Northeastern University education. Under this initiative, the Department of Civil and Environmental Engineering seeks individuals who will develop vigorous research programs that attract external funding; teach courses at the graduate and undergraduate level; oversee students and post-doctoral associates; and participate in service to the department, university, and discipline. We encourage applicants from a wide range of backgrounds, including academia and industry.

**Requirements:**

A Doctorate degree in engineering or a related field is required by the appointment start date. Senior-level candidates at the Associate and Full Professor levels should have a demonstrated record of developing transformative solutions to global challenges, sustaining a research program with a strong emphasis on interdisciplinary and translational research, expertise in teaching both undergraduate and graduate classes, and being an active, recognized leader nationally and internationally.

Visit the College website <https://coe.northeastern.edu/faculty/faculty-hiring/>.

Applicants should select their theme of interest as **Infrastructure Systems under Future Climates**. For further information on the statements, please see *Additional Information*:

1. Cover letter
2. Full curriculum vita
3. Statement of Diversity, Equity, Inclusion, and Belonging
4. Statement of Research Interests, Objectives, & Vision
5. Statement of Teaching Interests & Philosophy
6. Names and contact information for at least three professional references

Screening will begin by November 1, 2023 and will continue until the search has concluded.

**Additional Information:**

Statement of Diversity, Equity, Inclusion, and Belonging: Please provide a statement of your commitment and/or contribution(s) that describe your past experience, activities, and/or future plans to advance diversity, equity, inclusion, and the value proposition of belonging in your teaching, research, and service. Your statement

should demonstrate an understanding of the barriers facing marginalized communities in your field/community and be in alignment with both Northeastern's mission and BEYOND 2025: The Academic Plan [Paragraph 4.1 A Magnet for Diversity, and a Place of Belonging](#). A more developed and substantial plan is expected for senior candidates.

Statement of Research Interests, Objectives, & Vision: Please describe the focus of your research, including the questions you have identified, any funding you have received to support the work, the results you have discovered, and the products of these efforts. Please also describe any research you have undertaken with students, with the external community, and/or with individuals from marginalized groups. Finally, please outline the research directions you foresee pursuing as a faculty member.

Statement of Teaching Interests & Philosophy: Please summarize your past instructional and mentorship experiences, your pedagogical philosophy, your plans/goals for teaching (including existing and proposed courses), and your strategies for teaching and mentoring a diverse cohort of undergraduate and graduate students.

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](http://www.northeastern.edu/diversity).