

Open Position:  
**Impact Engine Fellow**  
Tenure/Tenure-Track

Department of Civil and  
Environmental Engineering

Northeastern University



**Assistant/Associate/  
Full Professor**  
Atmospheric Engineering  
and Science

*iSUPER Impact Engine Fellow*



## About Northeastern

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; 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.

Northeastern's comprehensive array of undergraduate and graduate programs—in a variety of on-campus and online formats—lead to degrees 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.

*Pictured: Cape Cod National Seashore, a 2-hour drive from Northeastern's Boston campus.*





## About the Opportunity

The Department of Civil and Environmental Engineering at Northeastern University seeks faculty candidates for tenure-track or tenured appointments at the assistant, associate, or full professor levels across the broad field of **Atmospheric Engineering and Science**. Appointments will be primarily in the Department of Civil and Environmental Engineering with potential for joint cross-department appointments in the Departments of Bioengineering, Chemical Engineering, Mechanical and Industrial Engineering, and Electrical and Computer Engineering and joint cross-college appointments in the College of Science, Bouvé College of Health Sciences, and the College of Social Sciences and Humanities.

These positions (designated as “Impact Engine Fellows”) are the latest in a significant, multi-year expansion in size and scope of environmental research expertise and capabilities, including faculty, facilities, and programs, emphasizing cross-disciplinary themes, and are aligned with the “Impact Engine” iSUPER (*Healthier Air and People: Intelligent Solutions to Urban Pollution for Equity and Resilience* (<https://impactengines.northeastern.edu/ie/isuper/>), one of several strategic, university-wide investments in high-impact research. Impact Engines bring together diverse interdisciplinary expertise and experience focused on a global problem and its contexts and perspectives. The tenured/tenure-track faculty line will persist beyond the lifetime of the impact engine, while the impact engine fellow title persists while the impact engine is active (minimum 3 years). All other processes related to faculty recruitment, hiring, tenure and promotion will remain consistent with Northeastern practices.

There are two general areas of interest for the positions, but researchers in any area of Atmospheric Engineering and Science are encouraged to apply:

- 1. Air Quality and Atmospheric Composition Measurements.** This interest area involves atmospheric field observations or laboratory measurements of air pollutants and their precursors, atmospheric oxidants, and/or greenhouse gases. Expertise can be at single or multiple scales, covering surface monitoring, field campaigns, laboratory experiments, and satellite observations. Experience in applications for urban systems and policy-making, community involvement, and environmental justice is also welcome.
- 2. Atmospheric Fluid Dynamics Modeling.** This interest area involves high resolution modeling of atmospheric boundary layer flow dynamics and turbulence, and interactions of air pollutants with urban microenvironments and micrometeorology. Additional expertise in numerical modeling and the application of data science in these areas is also welcome.

**Northeastern University's Boston campus is located in the heart of the city 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 an Impact Engine (Healthier Air and People: Intelligent Solutions to Urban Pollution for Equity and Resilience (iSUPER)) and several major research centers, including the NIH-sponsored program Puerto Rico Testsite for Exploring Contamination Threats (PROTECT) and the NIH-sponsored Center for Research on Early Childhood Exposure and Development in Puerto Rico (CRECE).

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 Institute for Experiential AI, the Network Science Institute (NSI), the Roux Institute, 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, the Social Science Environmental Health Research Institute (SSEHRI), the Burnes Center for Social Change, and entrepreneurship programs in the D'Amore-McKim School of Business.





### 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 that will develop vigorous research programs and are expected to develop independent research programs that attract external funding; teach courses at the graduate and undergraduate level; supervise students and post-doctoral associates in their area of interest; and participate in service to the department, university, and discipline. We encourage applicants from a wide range of backgrounds, including academia and industry.

### Qualifications

A Doctorate degree in engineering, environmental science, or a related field is required by the appointment start date as well as excellence in research, teaching, and service. 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.

### How to Apply

Visit the College website <https://coe.northeastern.edu/faculty/faculty-hiring/>. Applicants should indicate their primary theme of interest in their cover letter, and then identify the Department of Civil and Environmental Engineering for their primary appointment. Applicants may also identify a department of interest for a joint secondary appointment within the College of Engineering or other colleges. Applicants must submit the items listed below; for further information on the statements, please see Additional Information:

1. Cover letter that clearly states interest in (i) the **Air Quality and Atmospheric Composition Measurements** or the **Atmospheric Fluid Dynamics Modeling** theme, (ii) the area of interest from the list of two above, and (iii) a secondary cross-department or cross-college appointment (if desired).
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 of applications will begin by January 31, 2023.*

**Salary Grade:** Assistant/Associate/Full Professor



**N** Northeastern University  
Civil and Environmental Engineering

### **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).*