



# The Roux Institute at Northeastern University

## ASSOCIATE OR FULL PROFESSOR - THE ROUX INSTITUTE/COLLEGE OF ENGINEERING

### About the Opportunity

The College of Engineering, in collaboration with the Roux Institute at Northeastern University in Portland Maine, announces a strategic hiring initiative of multiple complementary faculty members in areas of mutual research interest. This hiring initiative is principally focused on ***Digital Transformation in Life Sciences, Engineering, and Human-Data Interaction***. These Portland-based appointments will be made for tenured or tenure-track faculty members at the associate or full professor levels, and principally made in the College of Engineering within the Departments of Bioengineering, Civil and Environmental Engineering, Electrical and Computer Engineering, and/or Mechanical and Industrial Engineering.

The Roux Institute is driving economic development in Maine through **Research, Learning, and Entrepreneurship, all through a lens of Partnership**. These partnerships are at the center of all the Institute's activities. With over 150 partners - for-profit, non-profit, academic, and governmental organizations – the Roux Institute looks towards collaborating to resolve partners' challenges in workforce development, research, and innovation, helping these organizations be successful while growing the state of Maine economy in technology and life sciences. Faculty members and researchers at the Roux Institute are expected to embrace the partner-first and technology transfer mindset and bring an experiential learning and use-inspired research focus to bear on the Institute's mission.

**Research.** The Roux Institute Research team is focused on impacting the Maine economy through the development of technology solutions and talent in the areas of life sciences (computational medicine, biotechnology), health (care delivery to distributed populations), engineering (advanced materials and manufacturing, energy, and sustainability), and human-data interaction, which is central to the nature of the research team's data-centric approaches.

Under this joint faculty recruitment initiative, the College of Engineering seeks individuals conducting research who will develop vigorous research programs cross-cutting the fields of engineering and/or science, particularly those aligned with the AI and machine learning-centric foci of the [Roux Institute Research Enterprise](#):

- **Life Science and Medical Research:** computational approaches to diagnostic medicine, rural medicine, predictive diagnostics
- **Engineering Research:** bio-manufacturing, energy, climate, & sustainability, medical devices, advanced materials and manufacturing, and robotics
- **Human-Data Interaction Research:** Human-AI interaction (HAI), Human-computer interaction (HCI), Data visualization, BioVis, or human-robot interaction (HRI) for applications in Life Science and Medical Research or Engineering Research as defined above

The successful candidates should also be aligned with one or more of the following Research Institutes located on the Portland Campus:

- Institute for Experiential Artificial Intelligence (<https://ai.northeastern.edu/>)
- Institute for Experiential Robotics (<https://robotics.northeastern.edu/>)
- Network Science Institute (<https://www.networkscienceinstitute.org/>)
- Kostas Research Institute (<https://www.northeastern.edu/kostas/>)



**Learning.** The learning portfolio at the Roux Institute is threefold – (1) graduate degree ([MS](#), [PhD](#)) and [graduate certificates](#); (2) [postdoctoral](#) training programs; and (3) [customized learning opportunities](#) directed at up-skilling and re-skilling employees at our partner organizations. (4) We also provide learning opportunities for Northeastern students at all levels from around the Global University System.

**Entrepreneurship.** The Roux Institute Entrepreneurship team is focused on making Maine the most exciting place to start and grow a business. Entrepreneurship programming includes co-located startup residencies, mentorship for starting new ventures, venture creation, and entrepreneurship for learners at all levels. This presents a powerful opportunity for faculty members and researchers to translate their research work into starting new businesses, as well as to engage with co-located companies.

### **Responsibilities**

Faculty members at Northeastern are expected to develop independent research programs that attract external funding; teach courses at the graduate and undergraduate level; supervise students and postdocs in their area of research; and participate in service to the Institute, department, university, and discipline. Academic rank at the Associate Professor or Full Professor levels will be commensurate with experience and qualifications reflecting a record of demonstrated teaching and scholarly excellence.

### **Requirements**

A Ph.D. degree in an engineering discipline or a related field relevant to the department of primary appointment is required by the appointment start date and an established record of excellence in research, teaching, and service. We encourage applicants from a wide range of backgrounds, including academia and industry. Senior-level candidates should have a demonstrated record of developing transformative solutions to global challenges, sustaining a research program emphasizing interdisciplinary and translational research, teaching both undergraduate and graduate classes, and being an active, recognized leader nationally and internationally in the discipline.

Applicants should clearly define their interest in a primary department within the College of Engineering, as well as secondary departments or colleges of interest.

Applicants must submit the items listed below; for further information on the statements, please see *Additional Information*:

- Cover letter that clearly states (i) primary department along with any secondary department interests and (ii) particular alignments with the Roux Institute research priorities and verticals as listed above, and (iii) primary interest in the research institutes resident at the Roux Institute.
- Full curriculum vitae.
- Statement of Research Interests, Objectives, & Vision, highlighting linkages to the priorities listed above, and potential partnerships.
- Statement of Teaching Interests & Philosophy.
- Statement of Diversity, Equity, Inclusion, and Belonging.
- Names and contact information for at least three professional references.

Screening will begin by October 30, 2023. Completed applications received by December 31, 2023 will receive full consideration.



Statement of Research Interests, Objectives, & Vision: Please describe the focus of your research, including the questions you have identified, 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 at the Roux Institute, noting alignment with the priorities described above.

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.

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.

Apply here: [https://northeastern.wd1.myworkdayjobs.com/en-US/careers/details/Associate-or-Full-Professor---College-of-Engineering-The-Roux-Institute\\_R119942?q=R119942](https://northeastern.wd1.myworkdayjobs.com/en-US/careers/details/Associate-or-Full-Professor---College-of-Engineering-The-Roux-Institute_R119942?q=R119942).