

Multiple Assistant Professor Positions in Resilient Infrastructure and Environmental Biotechnology, Department of Civil and Environmental Engineering, Duke University

The Department of Civil and Environmental Engineering at Duke University invites applications for multiple tenure track faculty positions at the Assistant Professor level. We are a top ranked program which strives to operate with *integrity, purpose, and excellence* in seeking to provide a working and learning environment that fosters the values of *creativity, collegiality, and inclusivity*. The guiding mission of the department is *to generate solutions that restore and maintain the integrity and stewardship of human-environment systems*. The department aims at being a global leader in science-based, data-driven engineering of human-environment systems that are inclusive, equitable, and resilient to global change.

We seek to hire colleagues who will foster collaboration and advance the vision of the department. We are looking for colleagues interested in building and maintaining an inclusive, collegial and interdisciplinary community that combines fundamental and applied research with innovative teaching. The department has 23 primary faculty and is the home of the newly funded [NSF Engineering Research Center on Precision Microbiome Engineering](#). While all research areas will be considered, topics of particular interest for this search include (a) cyber-physical systems (CPS)-informed solutions for resilient infrastructure systems and (b) environmental biotechnology in the built environment. Both of these positions are synergistic with [Duke's Climate Commitment](#). More details for each area of interest are provided below.

(a) **CPS-informed Solutions for Resilient Infrastructure Systems.** Expertise is sought in bridging the fundamentals of civil infrastructure (mechanics of solids, fluids, soils and structures; mathematical modeling; computational mechanics and scientific computing) with those of CPS (nonlinear systems; network analysis; control theory; sensor deployment optimization; machine learning) to advance frontiers in monitoring, risk-assessment and automation for infrastructure and geostucture systems resilient and adaptable to global change. Scholars with excellent background in these areas with possible applications to smart and resilient city design, hazard monitoring and mitigation from extreme events, carbon sequestration and renewable energy, water infrastructure and transportation networks are encouraged to apply.

(b) Environmental Biotechnology in the Built Environment. Candidates are sought with expertise in environmental biotechnology that is complementary to existing departmental strengths, particularly in the areas of environmental assessment, modeling and engineering of environmental microbiomes with application to the built environment. Scholars advancing boundaries of sensor development, building control systems, multi-omics modeling, applications of AI / machine learning and architectural epidemiology are encouraged to apply. A preference will be given to scholars who leverage multiple approaches to these problems including environmental justice, occupational health, health disparities, precision environmental health and disease ecology.

By the time of hiring, candidates are expected to have been awarded a doctoral degree in a relevant field of engineering or applied sciences. The ideal candidate will have commitment, passion, and excellence in research and teaching in a collegial, inclusive and collaborative community. Candidates should be dedicated to research and teaching that expands scientific boundaries in service to society and to educating a broad and diverse group of students at both the undergraduate and graduate levels.

Duke University and the Pratt School of Engineering are strongly committed to advancing equity, inclusion, diversity, and community throughout our research, teaching, and service activities. We aspire to create a community built on collaboration, innovation, creativity, and belonging. Our collective success depends on the collegial exchange of ideas - an exchange that is best when the rich diversity of our perspectives, backgrounds, and experiences flourishes. To achieve this exchange, it is essential that all members of the community feel valued and welcome, that the contributions of all individuals are respected, and that all voices are heard. All members of our community are expected to uphold these values, and we seek to hire faculty who are passionate about working to increase the participation and success of individuals from groups historically marginalized in engineering and science.

Review of applications will start immediately, and applications received before December 1st, 2022 will have priority consideration. Applications will continue to be reviewed until the position is filled. We expect to hire for the Fall 2023 semester, although we may extend offers to highly qualified individuals who may not be available for a fall start due to postdoctoral research commitments. Questions regarding this search should be directed to ceefacultysearch@duke.edu.

Application Materials Required:

To apply, please submit the following items at <https://academicjobsonline.org/ajo/jobs/23516>:

- Cover Letter

- Curriculum Vitae (including a link to the applicant's Google Scholar page)
- Research Plan
- Teaching Statement
- Statement on diversity, equity, inclusion and community
- Referee List (names and email addresses of at least three references). Note that letters of recommendation will not be accepted unless specifically requested.

Duke University is an Affirmative Action/Equal Opportunity Employer committed to providing employment opportunity without regard to an individual's age, color, disability, gender, gender expression, gender identity, genetic information, national origin, race, religion, sex, sexual orientation, or veteran status.

