



COLUMBIA UNIVERSITY School of Engineering and Applied Science

Faculty Position in Civil Engineering and Engineering Mechanics

The Department of Civil Engineering and Engineering Mechanics at Columbia University in the City of New York invites applications for an open rank faculty position. Tenured or tenure-track appointments at the assistant, associate or full professor level will be considered.

Applications are specifically sought in the general field of **Smart and Sustainable Cities**. Areas of emphasis include *urban systems modeling and simulation*, the *future of urban transportation and mobility*, and *new and advanced materials for urban infrastructure applications*. Representative areas of interest for the *urban systems modeling and simulation* include: complex and interdependent dynamic networks (including infrastructure interdependencies); urban systems digital twin development based on sensor data informed by civil domain expertise; urban modeling at different scales from building systems modeling to regional systems; transportation, water and energy systems performance assessment and optimization; internet of things solutions to smart infrastructure management; future cities scenarios. Representative areas of interest for the *future of urban transportation and mobility* include: transportation modalities; information and simulation-based coordination of different modes of transportation; adaptation of legacy public transportation infrastructure with emerging disruptive transportation modalities; transportation system management and resilience. Representative areas of interest for *new and advanced materials for urban infrastructure applications* include: self-sensing and self-healing materials; new composite materials with hybrid properties; bio-mediated and bio-inspired construction materials; materials that sequester CO₂ and/ or reduce Urban Heat Island impacts; energy harvesting materials; 3D printing for smart and sustainable infrastructure. Applicants with expertise in theoretical, experimental and/ or field studies aspects of the aforementioned areas are all welcome to apply.

Candidates must have a Ph.D. or its professional equivalent by the starting date of the appointment, and have the potential to do pioneering research and to teach effectively.

The successful candidate is expected to further the advancement of the department by developing an externally funded research program in the area of Smart and Sustainable Cities, making contributions to the undergraduate and graduate educational mission of the Department

and establishing multidisciplinary research and educational collaborations with academic departments and units across Columbia University. The Department is especially interested in qualified candidates who can contribute, through their research, teaching, and/or service, to the diversity and excellence of the academic community.

Applications should be submitted electronically and include the following: curriculum-vitae including a publication list, a description of research accomplishments, a statement of research/teaching interests and plans, contact information for three people who can provide letters of recommendation, up to three pre/reprints of scholarly work. The screening of applications will begin November 15, 2019, with full consideration given to applicants received before January 15, 2020.

Applicants can consult <http://civil.columbia.edu/> for more information about the department, <https://engineering.columbia.edu> for more information about the School, and <https://pa334.peopleadmin.com/postings/4479> for more details on the position and application.

Columbia University is an Equal Opportunity/Affirmative Action employer -- Disability/Veteran