Carnegie Mellon University Department of Civil and Environmental Engineering

Tenure-Track Faculty Position in Urban Systems Engineering

Carnegie Mellon University's Department of Civil and Environmental Engineering invites applications at the Assistant Professor level in the area of ***Urban Systems Engineering with a focus on Multi-Scale Modeling, Advanced Analytics and Visualization of Urban Systems of Systems.*** Exceptionally well-qualified applicants will also be considered at the Associate Professor level.

Cities are networked and heterogeneous systems of systems, including but not limited to building infrastructure systems, transportation systems, and water distribution and wastewater collection systems, all constructed on and within challenging natural environments and with an ever-increasing scarcity of resources. There is a clear need to advance the monitoring, modeling and management of these interconnected urban systems of systems so as to improve the quality of service, reduce the costs of operation, and be more resilient to change that is human-made or due to natural forces – in other words, we need to create smarter cities. The Department of Civil and Environmental Engineering at Carnegie Mellon University is recruiting faculty candidates with a strong research focus in one or more of the following areas of urban systems engineering: (1) information and data driven multi-scale (from individual systems, like building infrastructure systems to larger scale combinations of systems) modeling of behavior, deterioration and risk of interacting urban systems of infrastructure systems; and/or (2) advanced analytics and data visualization of such models and their predictions in order to generate information for cost effective, intelligent and sustainable management of these urban systems of systems. It is also expected that this research will influence the future design, construction and operations of these urban systems of systems so as to further increase their livability, sustainability and energy efficiency. It is expected that the new faculty member will work with and augment one or more centers of excellence within the department or university, such as: the Pennsylvania Smarter Infrastructure Incubator (PSSI), the Center for Water Quality in Urban Environmental Systems (WaterQuest), the Green Design Institute, Traffic21, the Center for Atmospheric Particles Studies (CAPS).

Successful candidates must have the ability to teach effectively at both the undergraduate and graduate levels within the Department and to develop an active and significantly funded research program. Applicants are required to have a doctorate in civil and environmental engineering or a related field. Applications from members of groups traditionally underrepresented on engineering faculties are encouraged.

The University has a long-standing tradition of interdisciplinary research and offers faculty members unparalleled opportunities to collaborate with colleagues from across the university and within the region. The Department has existing graduate programs in advanced infrastructure systems; environmental engineering, science and management; green design; and mechanics, materials, and computing, and maintains strong interdisciplinary ties with other programs (www.ce.cmu.edu).

Review of applications will begin on October 1, 2011 and will continue until the position is filled. E-mail inquiries concerning this position may be sent to the chair of the search committee.

Interested candidates should send a resume, transcripts or a list of graduate courses taken, statement of research and teaching interests, up to three publications or manuscripts, and a list of at least three references to:

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