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Seminar Presentation

Dr. Rishee Jain
Stanford University

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4:00-5:00pm

Urban Informatics: Harnessing data to understand dynamics between people, buildings and energy systems in cities

Abstract:

The world is rapidly urbanizing. Scientists, engineers and policy-makers are now facing the daunting task of providing billions of urban citizens with such core necessities as clean energy, air and water. Doing so will undoubtedly require re-thinking the complex relationships, dynamics and interactions between *people*, *buildings* and *energy* systems in cities. Fortunately, the emergence of new data streams from in-situ sensors (e.g. smart meters) and remote sensors (e.g. mobile phones) as well enhanced access to existing data (e.g. municipal records) enables us to study the complex socio-technical dynamics between people and their urban infrastructure on spatial and time scales previously not possible. This talk will encompass work done by the Stanford Urban Informatics Lab that aims to utilize such data streams to understand the complex interactions between *people*, *buildings* and *energy* systems across three key scales (building, community, urban). In doing so, we aim to develop holistic solutions that can enhance the sustainability and energy efficiency of our cities.

Bio:

Rishee K. Jain is an Assistant Professor of Civil & Environmental Engineering at Stanford University and an affiliate scientist at SLAC's Grid Integration, Systems, and Mobility (GISMo) group. His research focuses on the development of data-driven and socio-technical solutions to sustainability problems facing the urban built environment and lies at the intersection of civil engineering, data analytics and social science. He is a recipient of the *Science, Engineering and Education for Sustainability (SEES) Fellowship* from the National Science Foundation and a *Building Innovator Fellowship* from the Department of Energy. Rishee earned his BS in Civil & Environmental Engineering from the University of Texas at Austin and his MS/PhD from Columbia University as part of a joint a IGERT program between civil engineering and urban planning.

