NSF-RCN-SEES: Predictive Modeling Network of Sustainable Human-Building Ecosystems (SHBE) Workshop Series

Smart Cities, Human Behavior, and Sustainable Development

"Better smart-City, Better Life". Smart cities are increasingly considered as key to improving the quality of life. They also challenge the status quo and require a higher standard for balanced development in many city sectors such as infrastructure, buildings, industries, municipalities, and eco-systems. These inter-connected sectors form a foundation to support normal urban activities and cope with various emergencies. Human and their behavior play a significant role in shaping the foundation, and affecting urban activities and city's capability of dealing with emergencies. More importantly, through design, construction, and operation of buildings and infrastructure, human and its behavior can impact a wide range of inter-connected sectors for a long period of time. Thus, a better understanding of smart cities, human behavior and sustainable development is crucial for policy making, urban planning and development, industry development, sustainability, emergency management, and the quality of life. Today, latest data analytic, communication and information technologies offer new opportunities to support research and development in this area. The proposed workshop will be conducted in such a broad context, but with a specific focus on building and infrastructure.

The workshop will cover the following topics,

(1) Smart and resilient infrastructure and modeling

(2) Human behavior and modeling

(3) Social/policy impact modeling

(4) Urban sustainability and modeling

(5) Sustainability education

The organizer of the workshop will invite about fifty attendees, fifteen from the

NSF RCN-SEES-SHBE network and the rest from China. The attendees will have a variety of academic backgrounds, including, architecture, engineering, construction, computer sciences, psychology, sociology, and cyberlearning. Government and industry participants will be invited as well.

Venue and Dates

Research hall of Central University of Finance and Economics

Beijing, China

September 28-30, 2017

Organizer:

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Sponsors:

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科学-工程-教育可持续协同研究网络

未来可持续人居生态系统协作研究网络系列工作坊

智慧城市-人的行为和可持续发展

建设智慧城市已经被各界普遍认为是实现“城市，让生活更美好！”，使人类通往幸福生活的关键钥匙。“**更加智慧的城市，才能让生活更加美好！**”然而，智慧城市建设也给当前城市建设和管理带来巨大挑战：**对不同的城市管理部门，如基础设施、建筑、工业、市政和生态系统等的和谐发展提出了更高的要求和标准。**上述互相联结部门的协同工作，是支持城市正常运行和处理各类突发事件的基础。而人的行为不但对这一智慧基础的塑造发挥关键作用，而且也影响着城市运行和处理突发事件的能力。尤其是，**通过各类建筑和基础设施的设计、建造和运营环节，人的行为对智慧城市建设中广泛的互相联结部门有一个长期而又深刻的影响。**因此，更深刻地认知智慧城市、人的行为与可持续发展之间的科学规律将对政策制定、城市规划、产业开发、应急管理、持续发展和高质生活具有决定性作用。

特别地，数据分析、信息通信和物联网技术的飞速发展为支持该领域的研究与发展提供了绝佳的机会。有鉴于这样的一个广阔的时代背景，本次科学工作坊将着重聚焦在智慧城市建设中建筑与基础设施领域跨学科科学合作与未来研究的探索。具体包括但不限于如下方面。

（1） 智慧弹性基础设施与建模

（2） 人的行为研究与建模

（3） 政策对社会影响与建模

（4） 城市可续发展与建模

（5） 工程领域可持续发展教育

本次科学工作坊将邀请约 50 人参加，其中有 15 位来自美国自然科学基金资助的 RCN-SEES-SHBE 全球跨学科合作研究网络。与会者将有不同的科学专业背景，具体包括但不限于建筑设计、工程与建造、计算机科学技术、心理学、社会

学和网络学习（Cyberlearning）等。政府官员和业界精英以及相关非政府组织领导者也将被邀请参加。

地点和日期

中国-北京-中央财经大学学术会堂

2017 年 9 月 28-30 日

会议组织者：

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