Understanding and Designing sustainable neighborhoods in Seoul and Shanghai: A tale of two cities

This lecture will introduce the works by Prof Jige Quan and his City Energy Lab on sustainable urban form and neighborhood development in two Asian cities: Seoul and Shanghai. Both cities have diverse urban patterns through a long history of urban development, and are facing similar sustainability issues. Understanding the urban form and tackling those issues have been challenging in urban planning and design because of the complexity of urban systems. In recent years, the increasing computational power, greater urban data availability, and more advanced artificial intelligence techniques present new opportunities to better address those urban sustainability issues. With the utilization of those computational technologies, the City Energy Lab led by Prof Jige Quan has been working on understanding and designing sustainable neighborhoods for the two cities of Seoul and Shanghai. The lecture will include two parts. The first part will mainly introduce analytical studies on urban form and its environmental performance in the two cities, with both expert-based and data-driven methods. The second part will focus on design strategies for sustainable neighborhoods in the two cities, based on not only current pressing city issues but also future visions of urban systems. This lecture will conclude with the discussion about integrating science and design in sustainable neighborhood development, and applying artificial intelligence techniques to facilitate plural urban design. The lecture is expected to ask important questions about sustainable neighborhood development in the two cities and discuss potential perspectives and methods to address them, rather than provide definitive answers that may not apply in complex and dynamic urban systems.