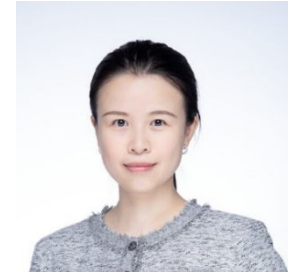# City Brain: Concept and Practice of City Digitalization

Zhenhui (Jessie) Li
Chief Scientist, Yunqi Academy of Engineering

Abstract:

Cities are facing the global challenge of accommodating increasing populations within the constraints of limited resources. Data emerges as a vital asset in navigating these complexities. City Brain, proposed in Yunqi Town of Hangzhou in 2016, aims to optimize the use of city resources through data. Through years of close collaboration with city practitioners, it is shown that transforming data into useful data resources is a revolutionary engineering process.

In this talk, it will be illustrated the resource-centric idea and engineering progress of City Brain through real-world examples, particularly in city-wide traffic systems. It will be revealed the intricacies behind the scenes and the novel solutions applied to the real scenarios. By sharing the concept and practices of City Brain, this talk intends to foster a paradigm shift towards the digitalization of cities, sparking new research in civil engineering, encouraging innovative solutions for city management and sustainability.

Bio:

Dr. Zhenhui (Jessie) Li currently serves as the chief scientist at the Yunqi Academy of Engineering, a non-profit institution situated in Hangzhou, China. Prior to this role, she held a tenured associate professor position at Pennsylvania State University. She earned her doctoral degree in Computer Science from the University of Illinois at Urbana-Champaign and her bachelor's degree from Shanghai Jiao Tong University. Her research has been primarily devoted to advancing computing technologies to unlock the potential of data for cross-disciplinary research, with a specific emphasis on city applications. Dr. Li has received NSF research award in 2017 and hold Haile Family Early Career Professorship with Penn State in 2017-2020.

Monday, April 15th, 2024   4:00 – 5:20 p.m.

1310 Yeh Student Center