

BIG GEO-DATA FOR AN URBAN CHINA: METHODS AND APPLICATIONS



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In the past forty years, China has gone through a rapid urbanization process where the urbanization rate reached about 60% in 2018, making us encounter a number of serious issues such as traffic congestion. Meanwhile, the development of information and communication technologies (ICTs) provides a technological foundation for many world-leading Internet enterprises (e.g., Alibaba and Tencent) to grow and prosper. These Internet giants constantly generate various big geo-data on a daily basis, which provides unprecedented opportunities for understanding the structure of Chinese cities and observing the dynamics of urban city life, and consequently, for tackling the abovementioned issues. To this end, this talk introduces the term social sensing as a theoretical framework that integrates various analytical methods for processing multi-source big geo-data in urban studies. These methods have been widely applied to "sensing" different aspects of cities, such as urban structures, land use patterns, human mobility dynamics, place sentiments, and spatial interactions. Several case studies, at both intra-urban and interurban scales, are presented to demonstrate the value of big geo-data for observing, analyzing, and modeling an urban China. This talk also summarizes the challenges and limitations of using big geo-data in urban studies.