

HU LAB.

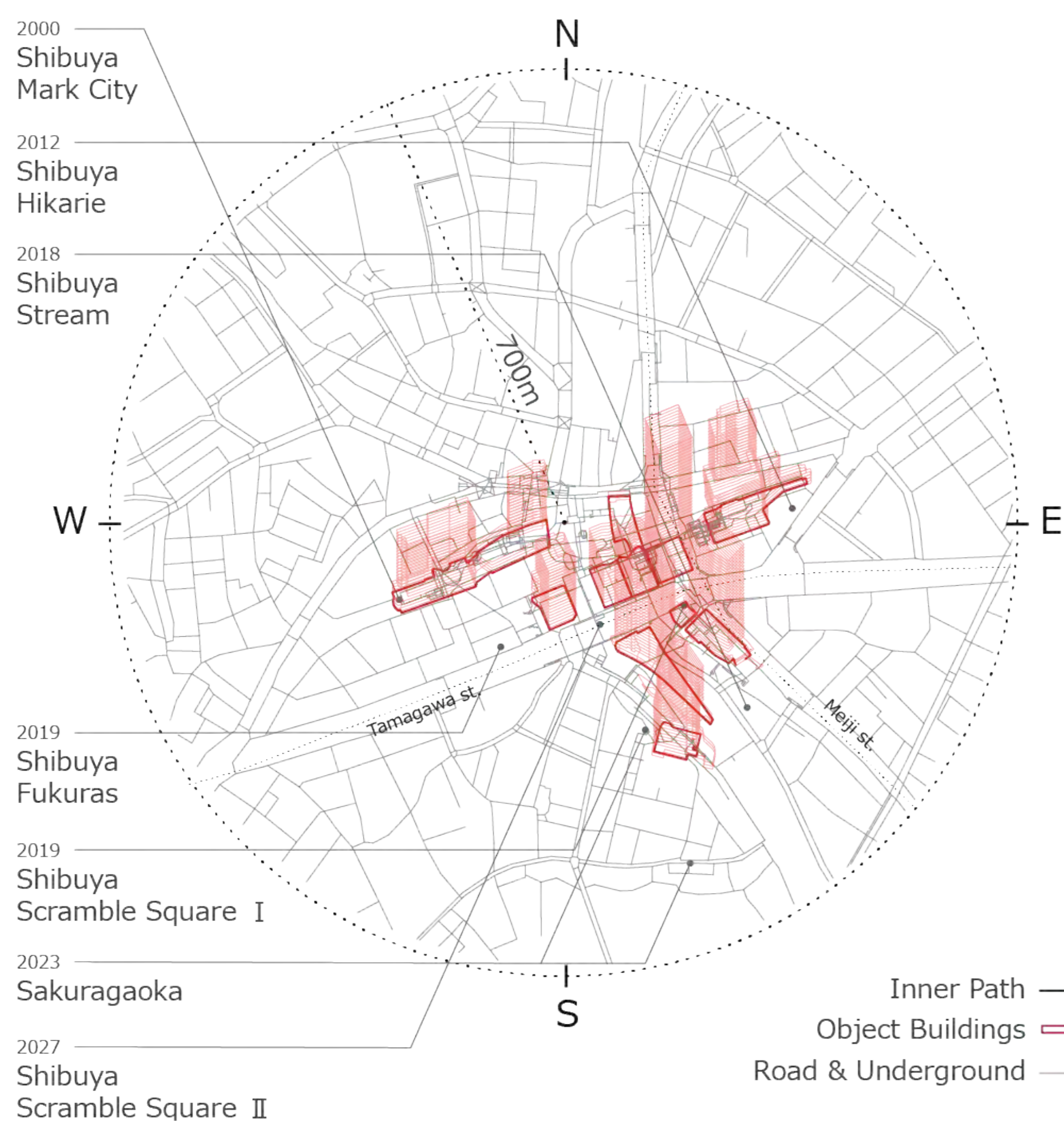
Asian Urban TOD Research



Department of Human and Social Systems
Asian Urban TOD Research

TOD Urban Engineering

<https://www.hulab.iis.u-tokyo.ac.jp>



The United Nations predicts that by 2050, the number of megacities with populations of over 10 million people will increase to 43 worldwide, with 60% of them being in Asian cities. Megacities must deal with large-scale population movements, transportation, infrastructure development, aggregation of complex functions, and ensuring safety. Among these challenges, one of the biggest will be how to coordinate transportation systems and urban development. The Transit-Oriented Development (TOD) model, which advocates for "public transportation-oriented urban development" that can provide highly efficient and large-scale public transportation services, is considered the best solution for efficiently allocating resources in megacities.

Tokyo, one of the largest cities in the world, is becoming a model for Asian cities as a "large-city TOD model," featuring development supported by a high-density railway network and an advanced three-dimensional transportation system. In our research, the analysis of the pedestrian network in the Shibuya station area, designated as an "emergency urban regeneration area," reveals a part of the impact of the redevelopment of Shibuya station on pedestrians. We analyze the pedestrian networks in 2011 and in 2027, considering pedestrian reachability and trip distance distribution using network theory's centrality measures.

