FM Lunch Seminar

FUTURE URBAN MOBILITY

Development a database system for a large-scale vehicle trajectory dataset

Abstract: In recent years, a large amount of individual vehicle's trajectories are accumulated. They can be utilized for analysing transport phenomena such as demand patterns and drivers' behaviour and evaluating policies. However, to utilise a dataset of trajectories, we need to pay attention to two points, i.e. size and quality. The size of the dataset will be quite massive in near future. For example, in Japan, the size of the government-based trajectory dataset is growing quite rapidly owing to the rapid diffusion of in-vehicle devices. Analysing trajectories in such a large-scale dataset can be very hard without any smart implementation of a database. In addition, quality of trajectory data needs to be carefully checked because it can be sometimes deteriorated due to various technical reasons. The seminar provides an overview and findings of our project, which aims to develop a methodology for building a database that is suitable to handle a huge amount of trajectories and check and maintain quality of the government-based trajectory dataset that is to be stored in the database system we are developing.

Takamasa Iryo

Takamasa Iryo is a professor of Kobe University, Japan. He received Dr. Eng. (civil engineering) from the University of Tokyo in 2002. After working as a post-doc fellow, he moved to Kobe University as a research associate in 2003. He was then promoted to an associate professor in 2010 and a full professor in 2013. He is an ISAC member of the international symposium on dynamic traffic assignment since 2010, an associate editor of Transportmetrica B since 2013, and a member of the editorial advisory board of Transportation research part B. His research topics include dynamic traffic assignment, big-data analysis for transport systems, and implementation of a traffic simulator for a large-scale network in a high-performance computer.

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SMART-FM Seminar Space @ Level 9

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