

ABSTRACT:

Emerging mobility systems, such as connected and automated vehicles and mobility-as-a-service, are changing our mobility. In this seminar, we discuss theories and data infrastructure that support these systems, in order to show visions on future mobility systems with various modes and various scales. The topics are mathematical theories on ride-sourcing and ride-sharing services, data mining and urban computing, and transport hub service design.

DATE&TIME: 24th Jan 2020 13:30 – 17:30

PLACE: FUJI SOFT AKIBA PLAZA 7F EX room (富士ソフト秋葉プラザ 7F EX ルーム)

<https://www.fsi.co.jp/akibaplaza/en/index.html>

PROGRAM

13:30 – 13:50 Opening

Dr. Takahiko KUSAKABE

Assistant Professor, Center for Spatial Information Science, The University of Tokyo, Japan

13:50 – 14:40 Supply Management of On-Demand Ride-Hailing Services

Invited Speaker: Mr. Zhengtian XU

Ph.D. Candidate, Department of Civil and Environmental Engineering, University of Michigan, USA

14:40 – 15:30 Mechanism Design of Transportation Services for the Automated Vehicle-era

Invited Speaker: Dr. Yusuke HARA

Postdoctoral Associate, Singapore-MIT Alliance for Research and Technology (SMART), Singapore

Coffee Break

15:45 – 16:25 Urban human mobility analysis based on public transportation smart card data

Dr. Takashi Nicholas MAEDA

Postdoctoral Researcher, The Center for Advanced Intelligence Project, RIKEN, Japan

16:25 – 17:05 Joint optimization of SAV operation and infrastructure design

Dr. Toru SEO

Assistant Professor, Department of Civil and Environmental Engineering, The University of Tokyo, Japan

17:05 – 17:45 A Deep Reinforcement Learning-Based Intelligent Intervention Planning Framework for Real-Time Proactive Road Safety Management

Dr. Ananya ROY

Project Researcher, Center for Spatial Information Science, The University of Tokyo, Japan

17:45 – 17:50 Closing Remarks

SHORT BIO:

Takahiko KUSAKABE

Takahiko Kusakabe is an Assistant Professor in the Center for Spatial Information Science (CSIS), the University of Tokyo where he has been since 2016. He received the Dr.Eng. degree from Kobe University, Japan in 2010. From 2011 to 2016 he worked at Tokyo Institute of Technology in Tokyo as an Assistant Professor. His research interest is a transportation engineering with emerging technologies. Much of his work has been focusing on application and implementation of Bigdata, IoT (Internet of Things), and sensors to the traffic and transportation observation and surveys. And incorporating with transportation simulation, applications of these technologies in mobility data platforms, MaaS (Mobility as a Service), and urban mobility design have been explored.

Zhengtian XU

Zhengtian Xu is currently a doctoral candidate in Civil and Environmental Engineering at the University of Michigan, Ann Arbor, working with Professor Yafeng Yin. His research interests focus on the analysis and management of emerging mobility services and vehicle technologies. Zhengtian obtained his master of science from the University of Florida in 2016, his bachelor of science from Tsinghua University, China in 2014. He was the recipient of the Stella Dafermos Best Paper Award and the Ryuichi Kitamura Paper Award at the 95th TRB Annual Meeting.

Yusuke HARA

Yusuke Hara is a postdoctoral associate at Singapore-MIT Alliance for Research and Technology (SMART). He is affiliated with Future Urban Mobility IRG at SMART and ITS lab at MIT. His research topics are travel behavior analysis for long term, transportation services design, and mechanism design for urban transportation system. Now, he focuses on modeling the interaction between passengers' travel behavior and freight movement such as e-commerce, Automated Mobility on Demand (AMOD), and Flexible Freight on Demand (FFOD) services. After he got a Ph.D. from the University of Tokyo, he worked at Tohoku University as an assistant professor for 4 years and worked at the University of Tokyo as an assistant professor for 2 years. Further information on his academic research and professional work can be found on his website at <https://sites.google.com/site/harapon1012/>

Takashi Nicholas MAEDA

Takashi Nicholas Maeda received the B.A. degree in sociology from Kyoto University and the Ph.D. degree in engineering from The University of Tokyo, Japan. His research interests include human mobility, urban systems, and causal discovery. He is currently a postdoctoral researcher at RIKEN Center for Advanced Intelligence Project.

Toru SEO

Toru Seo is an Assistant Professor at the University of Tokyo. He earned his doctoral degree in 2015 at Tokyo Institute of Technology, and subsequently worked as a postdoc at Tokyo Institute of Technology and at University of Michigan. His main research interests are transportation science, traffic flow theory, transportation data analysis, and transportation system modeling and management. He is the recipient of Transportation Research Part C Best Paper Award 2017, Kometani-Sasaki Prize for Dissertation, and Best Paper Award at IEEE ITS Conference 2015.

Ananya ROY

Ananya Roy completed her Ph.D. from Tokyo Institute of Technology in 2019. She did her M.Sc. from the same university in 2016 and continued her research on real-time proactive road safety analysis. She was awarded the Japanese government scholarship from the Ministry of Education, Culture, Sports, Science and Technology (MEXT). She did her B.Sc. from BUET, Bangladesh where she majored in environmental engineering. Her research interest involves use of machine learning, deep learning and reinforcement learning methods for real-time crash prediction, intelligent transportation system (ITS), accident analysis and intervention implementation. She handles big data for traffic analysis. Currently, she is working on Committee on Advanced Road Technology (CART) project at CSIS in the university of Tokyo as a project researcher. The project involves traffic management and multi-scale traffic operation using big data and ITS.