

IVT - Seminar

“Macroscopic Fundamental Diagrams: Estimation methods”

by Prof. Ludovic Leclercq

Wednesday, April 29th, 2015, 15:00-15:45hr
HIL F36.1; ETH Hönggerberg, Zürich

Abstract:

This presentation first presents different estimation methods for Macroscopic Fundamental Diagram (MFD) either model or data oriented. The comparison between the methods show the limits of analytical ones especially at a network level and provide best practices when MFD are determined from observations. The second part of the presentation will address the question of traffic simulation based on MFD approach. Regular approaches will show to have some discrepancies due a single travel distance value within reservoirs and an oversimplified representation of traffic waves. A new approach based on the segregation of reservoirs into macroscopic routes will be presented and discussed.

Presenter's bio:

Ludovic Leclercq is a Professor at IFSTTAR (The French Institute of Science and Technology devoted to Transport, Planning and Networks) and is affiliated to the University of Lyon. He received his engineering and master degrees in Civil Engineering in 1998, his PhD in 2002 and his habilitation thesis (HDR) in 2009. He currently heads a research group within the LICIT laboratory and is a scientific councillor for IFSTTAR in the field of “quality, security and optimisation of transportation systems”. His research fields are related to dynamic traffic modelling and the assessment of the related environmental externalities. He is a member of the editorial board of the journals Transportation Research part B and CACAIE, the committee "Traffic Flow Theory and Characteristics » of the TRB, the international advisory committee of ISTTT and is associate editor for the journal Transportmetrica B and a French journal (Research Transport and Safety). He has co-authored 39 publications in top peer-reviewed journals, has supervised five PhD and is currently the supervisor or co-supervisor of 4 PhD students.

Organizer: Dr. Monica Menendez (monica.menendez@ivt.baug.ethz.ch)
No reservation is required.


Institut für Verkehrsplanung und Transportsysteme
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