Teaching Activities

Ongoing teaching

- Yhd-71.3250 Traffic Management (responsible teacher)
- Yhd-71.3145 Traffic Simulation (responsible teacher)
- Yhd-71.2220 Sustainable Transportation System (lecturing)
- Yhd-71.3240 Traffic Flow Characteristics (lecturing)

Past teaching

- Yhd-0.1110 Introduction to Transportation and Highway Engineering
- Yhd-71.2120 Transportation System Planning
- Ene-59.4301 Energy Systems for Communities
- Yhd-71.148 Transportation Telematics (responsible teacher)
- Yhd-71.150 Traffic Control
- Yhd-71.135 Traffic Studies and Forecasting

Other teaching activities

- Helsinki Summer School in Transportation
- Transportation planning (Dipoli center of executive education)
- Traffic simulation course (KTH)
- Simulation programming course (KTH)

Experience in individual student guidance

Phd-studies (instructor)

- Michail Ziotis (2014-) TrafficSense- Energy efficient traffic with crowdsensing
- Sanaz Bozorg Chenani (2012-). Light Energy - Traffic Responsive Street Lighting
- Jaeyoung Kwak (2011-). 4D-space – modeling of indoors pedestrian flows
- Antero Alku (2010-). SIMBe (Smart Infratructures for electric vehicles)
- Ute Ehlers (2010-2011). Safety assessment of road sections (FOTsis)
- Kari Koskinen (2006-2009). Nanoscopic traffic simulation.
- Karel Capek (2005-2008). Real-time traffic situation modeling.
- Mu Zhou (2004-2008). Simulation of traffic model algorithms.
- Arto Hämäläinen (2002-2006). Cellular automata modelling of vehicular traffic
- Roger Ma (2002). ITS-related traffic simulation. Royal Institute of Technology, PhD thesis. Royal Institute of Technology, Department of Infrastructure, Stockholm.
- Jeffery Archer (2002). Improve and integrate micro-simulation model of road traffic and effects of ITS. Phd thesis. Royal Institute of Technology, Department of Infrastructure, Stockholm.

M.Sc.-studies (instructor)

- Tomas Boril (2014). Modeling emississions on ring road of Prague.
- Hannes Keskikiikonen (2014). The potential of crowdsensing in traveling behavior studies.
- Niko Setälä (2007). Traffic signal control system based on weather, road and traffic conditions
- Kari Koskinen (2005). Simulation of automatic persons and goods mover (APGM)
- Thomas Twietholt (2005). Calibration of two-lane rural road simulation model. M.Sc. thesis. Ruhr University of Bochum.
- Reetta Jokinen (2004). Simulation of signal controlled intersections with real-time traffic.
- Sampo Hietanen (2004). The business logic of mobile services for travelers - Case mobile road weather.
- Heli Mattila (2003). Real-time estimation of traffic conditions on road sections.
- Laura Lanne (2003). Microscopic simulation of bus -line operation.
- Heidi Arjamaa (2003). Planning of real-time database model for traffic.
- Vesa Laakko (1998). Three dimensional presentation of traffic simulation.
- Irfan Gul (1998). A Java interface for a GIS traffic system. M.Sc. thesis. The Nottingham-Trent University, Department of Computing.
- Jarkko Niittymäki (1993). The calibration of HUTSIM traffic signal simulator.

Project courses (supervising a group work)

- Project group ITSUPS (2005). Integration of traffic simulation with urban planning system.
- Project group AMPEL (2004). Development of interactive traffic signal game. The result of the project is in permanent use in the science center HEUREKA.
- Emmerich & Courbey (2004). Visualization of traffic simulation in urban planning. French Naval Academy.
- Chabredier & David (2003). Calibration tool for microscopic traffic simulation. French Naval academy.