

Research Topics in Traffic Control and Management

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Various research topics are suggested for graduate studies in the area of traffic flow control and management. Graduate students are invited to conduct research under the (co-)supervision of Asst. Prof. Jack Haddad at the Transportation and Geo-Information department of the Civil and Environmental Engineering. The research topics presented below might combine traffic flow, control, optimal control, and other theories, and they would be suitable for graduate students from different faculties (Computer science, Electrical, Mechanical, Civil engineering, and others). For more detailed information, please contact Prof. Haddad at jh@technion.ac.il.

- Hierarchical management and control for large-scale transportation systems.
- Optimal control for isolated or paired signalized intersections.
- Integrated control for freeways: ramp metering and variable speed limit.
- Network traffic flow monitoring and estimation from multi-sensor data.
- Control design of robust transportation systems.
- Improving transportation energy efficiency in urban cities by network traffic control.