ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

# TRANSPORT SERVICES, PLATFORMS AND APPLICATIONS

*The transport of people and goods is receiving a great innovation through the design, realization and use of advanced value added services, platforms and pervasive applications dealing with reduction of costs and emissions, multi-modal transport, energy efficiency and user centric approach.*

A number of innovation factors in transport services, platforms and applications have a great impact in how the transport of people and goods deals with objectives like green and clean energy transportation, low emissions, multi-modal integration of transport networks, improvement of utilization of resources, satisfaction of user needs.

Research at the University of Bologna covers a wide range of issues:

- Development of methodologies and tools for impact assessment and planning of transport service platforms, benchmarking and tuning in mixed simulation/operational, and man-in-the-middle environments
- Methodologies and standards for data collection, semantic data representation, analysis and querying in big data/open data, cloud services and multiple layered information services for transport
- Methodologies for traffic modeling, analysis, forecasting, demand/response analytics, and validation of service assumptions and service platforms for transport
- Transport optimization via data monitoring, analysis, traffic management, control, bottleneck reduction, flows equalization
- Fleet management, logistics support services and pervasive monitoring, security/safety/alert applications for transport
- Economic/environmental evaluation of transport policies, user enforcement, gamification, mobile applications, sharing economy applications in transport

## HIGHLIGHTS

**Modeling and Simulation** of transport in realistic network models, transportation engineering, what-if analysis, optimization, pre-deployment analysis (e.g. electric vehicles' support, transport infrastructures).

**Transport monitoring,** data collection, semantic data integration platforms, data science and analytics applied to transport data.

**Smart transport services,** innovative mobile applications and services for transportation of people and goods, user centric value added services and platforms for transport.