

Workshop title

Automated and Connected Transportation Systems: Modeling, Control and Deployment

Workshop proposer(s)

Mauro Salazar*, Marco Pavone

Abstract

Public debate about the future of mobility and transportation is increasingly informed by predictions about the impact of Autonomous Vehicles (AVs). As AVs are approaching market-readiness, it becomes more critical that we answer questions about them:

- How can we design profitable and sustainable mobility systems that leverage AVs?
- What will these new forms of mobility and transportation mean for society?
- How can we ensure that such technologies benefit all members of society, improving equity rather than undermining it?

This workshop will gather experts from transportation, operations research, robotics, and urban planning in order to:

- identify challenges and opportunities for the future of transportation that are triggered by the advent of AVs,
- identify modeling and control methodologies to address them,
- share insights from early deployments and turn such insights into an actionable research roadmap.

Keywords

- Theory and Models for Optimization and Control
- Automated Vehicle Operation, Motion Planning, Navigation

Topics of interest

- Theoretical modeling methods and analysis tools
- Real-time control algorithms
- Programmatic tools
- Simulation tools
- Technology infusion
- Real-world case studies