

Workshop IV: Social Dynamics beyond Vehicle Autonomy

Monday November 30, 2020

- 7:55 *Session Chair Hani Mahmassani*
- 7:55–8:00 *Welcome & Opening Remarks: Dean Miguel García-Garibay (Dean of Physical Sciences, UCLA) and Dima Shlyakhtenko (Director, IPAM)*
- 8:00–8:50 **Daniel Chatman** (University of California, Berkeley (UC Berkeley))
Municipal policy responses to autonomous vehicles.
- 8:50–9:00 *Break*
- 9:00–9:50
TBA
- 9:50–10:00 *Break*
- 10:00–10:50 **Theodore Pavlic** (Arizona State University)
Viewing the socio-technological dimensions of vehicle autonomy through the lens of ecology and organismal and integrative biology
- 10:50–11:00 *Break*
- 11:00–11:50 **Susan Shaheen** (University of California, Berkeley (UC Berkeley))
Synthesis of State-Level Planning and Strategic Actions on Automated Vehicles: Lessons and Policy Guidance for California.
- 11:50–12:00 *Lightning Poster Presentations: Rabie Ramadan, Junyi Dong, Qingze Huo, Keith LeGrand, Xu Chen, Anastasia Bizyaeva and Tomer Weiss*

Tuesday December 1, 2020

- 8:00 *Session Chair Sebastien Motsch*
- 8:00–8:50 **Jack Stilgoe** (University College London)
The Myth of the Autonomous Vehicle.
- 8:50–9:00 *Break*
- 9:00–9:50 **David Hess** (Vanderbilt University)
Joint talk with Dasom Lee (Vanderbilt University), and Rachel McKane (Vanderbilt University) - Assessing Societal Concerns of Automated Vehicles: Policy and Design Implications.
- 9:50–10:00 *Break*
- 10:00–10:50 **Joan Walker** (University of California, Berkeley (UC Berkeley))
Travel Behavior Implications of Autonomous Vehicles
- 10:50–11:00 *Break*
- 11:00–11:50 **Andrea Bertozzi** (University of California, Los Angeles (UCLA))
Active learning and graphical models



Wednesday December 2, 2020

- 8:00 *Session Chair Spring Berman*
- 8:00–8:50 **Michael Herty** (RWTH Aachen University)
Novel Control Concepts for Heterogenous Systems
- 8:50–9:00 *Break*
- 9:00–9:50 **Dirk Helbing** (ETH Zurich)
Towards Digital Democracies and Societal Resilience: Upgrading Smart Cities with Collective Intelligence, and More
- 9:50–10:00 *Break*
- 10:00–10:50 **Benedetto Piccoli** (Rutgers University)
Social dynamics, control of large groups and vehicular traffic.
- 10:50–11:00 *Break*
- 11:00–11:50 **Gary Marchant** (Arizona State University)
Autonomous Vehicles, Liability and Private Standards
- 11:50–1:00 *Lunch (on your own)*
- 1:00–1:50 **Rinaldo Colombo** (Università di Brescia)
On the Interplay between Mathematical Analysis and Traffic Modeling.

Thursday December 3, 2020

- 8:00 *Session Chair Benedetto Piccoli*
- 8:00–8:50 **Danielle Bassett** (University of Pennsylvania)
How humans build models of the world through temporal contingencies.
- 8:50–9:00 *Break*
- 9:00–9:50 **Spring Berman** (Arizona State University)
Techniques and Testbeds for Integrating Human Control at Multiple Scales in Distributed Robotic Systems
- 9:50–10:00 *Break*
- 10:00–10:50 **Silvia Ferrari** (Cornell University)
Active Planning and Perception Under Pressure
- 10:50–11:00 *Break*
- 11:00–11:50 **Kristi Morgansen** (University of Washington)
Analytical and Empirical Tools for Nonlinear Network Observability in Autonomous Systems.

Friday December 4, 2020

- 8:00 *Session Chair Maria Laura Delle Monache*
- 8:00–8:50 **Tierra Bills** (Wayne State University)
Case Studies of Travel Demand Analysis on Transport Disadvantaged Communities.
- 8:50–9:00 *Break*
- 9:00–9:50 **Alethea Barbaro** (Technische Universiteit te Delft)
A two-dimensional model for territorial development
- 9:50–10:00 *Break*
- 10:00–10:50 **Marie-Therese Wolfram** (University of Warwick, RICAM)
Mean-field pedestrian models: stationary profiles and parameter estimation,
- 10:50–11:00 *Break*
- 11:00–11:50 **Sebastien Motsch** (Arizona State University)
Fundamental diagrams for pedestrian and ant dynamics

