

Autonomous Vehicles

Monday February 25, 2019

- 8:00–8:55 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:55–9:00 *Welcome & Opening Remarks: Dean Miguel García-Garibay (Dean of Physical Sciences, UCLA) and Dima Shlyakhtenko (Director, IPAM)*
- 9:00–9:50 **Ruzena Bajcsy** (University of California, Berkeley (UC Berkeley))
Multimodal real time assessment of the driver state using, Visual, Acoustic and body motion observations.
- 10:00–10:15 *Break*
- 10:15–11:05 **Andrea Censi** (ETH Zurich)
Liability, Ethics, and Culture-Aware Behavior Specification using Rulebooks
- 11:15–11:30 *Break*
- 11:30–12:20 **Karl Johansson** (Royal Institute of Technology (KTH))
Large-scale and networked control of automated freight transport
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Jana Kosecka** (George Mason University)
Challenges and Opportunities in Autonomous Navigation
- 3:30–4:00 *Break*
- 4:00–4:50 **Ragunathan Rajkumar** (Carnegie Mellon University)
Self-Driving Vehicles: The Promise, Peril and Challenges
- 5:00–6:30 *Poster Session & Reception (Hosted by IPAM)*

Tuesday February 26, 2019

- 8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*
- 9:00–9:50 **Fisher Yu** (University of California, Berkeley (UC Berkeley))
Towards Human-Level Recognition via Contextual, Dynamic, and Predictive Representations
- 10:00–10:15 *Break*
- 10:15–11:05 **Alain Kornhauser** (Princeton University)
Market Forces and Market Potential for SmartDrivingCars (aka Autonomous Vehicles)
- 11:15–11:30 *Break*

(Tuesday schedule continued on next page)



(Tuesday schedule continued from previous page)

- 11:30–12:20 **Adam Oberman** (McGill University)
Generalization and adversarial robustness of Regularized Deep Neural Networks
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Stefano Soatto** (University of California, Los Angeles (UCLA))
Deep Representations for Decision and Control Tasks: The Emergence Theory of Deep Learning
- 3:30–4:00 *Break*
- 4:00–4:50 **Richard Sowers** (University of Illinois at Urbana-Champaign)
Urban data; patterns for the connected vehicle

Wednesday February 27, 2019

- 8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*
- 9:00–9:50 **Daniel Work** (Vanderbilt University)
Controlling traffic composed of humans and automated vehicles
- 10:00–10:15 *Break*
- 10:15–11:05 **Benjamin Seibold** (Temple University)
Instabilities in homogeneous and heterogeneous traffic flow
- 11:15–11:30 *Break*
- 11:30–12:20 **Bozenna Pasik-Duncan** (University of Kansas)
Advances in noise modeling in stochastic systems and control
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Cathy Wu** (Microsoft Research AI, MIT)
Integrating Autonomy into Transportation Systems
- 3:30–4:00 *Break*
- 4:00–4:50 **Paola Goatin** (Institut National de Recherche en Informatique Automatique (INRIA))
Non-local macroscopic models accounting for the presence of autonomous vehicles

Thursday February 28, 2019

- 8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*
- 9:00–9:50 **Don MacKenzie** (University of Washington)
How might automated vehicles affect energy use and emissions?
- 10:00–10:15 *Break*

(Thursday schedule continued on next page)

(Thursday schedule continued from previous page)

- 10:15–11:05 **Jonathan Sprinkle** (University of Arizona)
Model-Based Processes for Real-Time Cyber-Physical Systems Testbeds
- 11:15–11:30 *Break*
- 11:30–12:20 **Luc Vincent** (Lyft)
From large-scale rideshare service to autonomous driving service
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Maria Laura Delle Monache** (INRIA)
Micro - macro models for traffic with autonomous vehicles
- 3:30–4:00 *Break*
- 4:00–4:50 **Hani Mahmassani** (Northwestern University)
Shared Autonomous Fleet Services and Multimodal Urban Mobility: Optimization, Prediction and Dynamic Network Modeling

Friday March 1, 2019

- 8:00–9:00 *Check-in/Breakfast (hosted by IPAM)*
- 9:00–9:50 **Katherine Driggs-Campbell** (University of Illinois at Urbana-Champaign)
Trustworthy Autonomy: Algorithms for Human-Robot Systems
- 10:00–10:15 *Break*
- 10:15–11:05 **Raquel Urtasun** (Uber ATG, University of Toronto)
A future with affordable self-driving vehicles
- 11:15–11:30 *Break*
- 11:30–12:20 **Ramanarayan Vasudevan** (University of Michigan)
Bridging the Gap Between Safety and Real-Time Performance for Autonomous Vehicle Control
- 12:30–2:30 *Lunch (on your own)*
- 2:30–3:20 **Samitha Samaranyake** (Cornell University)
Network level implications of Autonomous Mobility-on-Demand Systems: Challenges and Opportunities
- 3:30–4:00 *Break*
- 4:00–4:50 *Wrap-up discussion*

