

36th Southern California Control Workshop

Viterbi School of Engineering, USC; May 31, 2019

Technical Program

- 8:30 – 8:55 **Breakfast**
- 8:55 – 9:00 **Opening remarks**
- Session I** Chair: Mihailo Jovanovic
- 9:00 – 9:25 Speaker: **Dhruva Kartik**, USC
Zero-sum stochastic games with asymmetric information
Advisor: Ashutosh Nayyar
- 9:25 – 9:50 Speaker: **Tommaso Menara**, UC Riverside
Cluster synchronization of Kuramoto oscillators for the analysis and control of functional connectivity in the human brain
Advisor: Fabio Pasqualetti
- 9:50 – 10:15 Speaker: **Prasad Vilas Chanekar**, UC San Diego
Edge modification in networks using novel edge centrality measures
Advisor: Jorge Cortes
- 10:15 – 10:45 **Refreshment Break**
- Session II** Chair: Ashutosh Nayyar
- 10:45 – 11:10 Speaker: **Xiaobin Xiong**, Caltech
Optimal control on a simple pendulum model: A perspective towards continuous gait generation and stabilization for 3D underactuated bipedal walking
Advisor: Aaron Ames
- 11:10 – 11:35 Speaker: **Zhouyu Lu**, UC Riverside
Planning and control for collision-enhanced robot navigation at small scales
Advisor: Konstantinos Karydis
- 11:35 – 12:00 Speaker: **Ben Dunst**, UC Los Angeles
Analysis of X-ray pulsars for navigation and clock blending
Advisor: Jason Speyer
- 12:00 – 12:25 Speaker: **Yangyao Ding**, UC Los Angeles
Microscopic modeling and optimal operation of thermal atomic layer deposition
Advisor: Panagiotis Christofides
- 12:30 – 2:00 **Lunch**
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Session III

Chair: Ketan Savla

Speaker: **Karena Cai**, Caltech2:00 - 2:25 **Rules of the road: Towards assume-guarantee profiles for autonomous vehicles**

Advisors: Soon-Jo Chung and Richard Murray

Speaker: **Yanwen Mao**, UC Los Angeles2:25 - 2:50 **When is the secure state-reconstruction problem hard?**

Advisor: Paulo Tabuada

Speaker: **Raphael Chinchilla**, UC Santa Barbara2:50 - 3:15 **Optimization-based estimation of expected values with applications to optimal stochastic control**

Advisor: Joao Hespanha

3:15 – 3:45

Refreshment Break**Session IV**

Chair: Nestor Perez-Arancibia

Speaker: **Dimitris Boskos**, UC San Diego3:45 - 4:10 **Characterization of ambiguity sets built from progressively collected dynamic data**

Advisors: Sonia Martinez and Jorge Cortes

Speaker: **Pratyush Kumar**, UC Santa Barbara4:10 – 4:35 **Approximate model predictive control using neural networks**

Advisor: James Rawlings

Speaker: **Yu-Chen Sung**, USC4:35 - 5:00 **Stability of switched nonlinear feedback systems with bounded average time-variation**Advisor: Michael Safonov
