

Machine Reasoning Workshops III & IV: Mission-Focused Actions/Reactions Based on & System Integration of Information Derived from Complex Real-World Data (by invitation only)

Monday October 18, 2010

- 8:00–9:00 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:00–9:05 *Welcome and Opening Remarks*
- 9:05–9:15 **Wen Masters** (Office of Naval Research)
Machine Reasoning Kickoff Presentation
- 9:15–10:05 **Vijay Kumar** (University of Pennsylvania)
- 10:15–10:30 *Break*
- 10:30–11:20 **Igor Mezic** (University of California, Santa Barbara (UC Santa Barbara))
Complexity management
- 11:30–12:30 *Group Discussion*
- 12:30–1:30 *Lunch (on your own)*
- 1:30–2:20 **W Carlyle** (Naval Postgraduate School)
Navy Mission Planner: Decision Support for Operational Level Multi-ship, Multi-mission Planning
- 2:30–3:20 **Andre Banaszuk** (United Technologies Research Center)
Uncertainty Management in Analysis and Design of Autonomous Systems
- 3:30–3:45 *Break*
- 3:45–4:35 **Alfred Wicks** (Virginia Polytechnic Institute and State University)
Evolving Ground Vehicle Autonomy at Virginia Tech
- 4:45–6:00 *Group Discussion and Evening Reception*

Tuesday October 19, 2010

- 8:30–9:00 *Continental Breakfast*
- 9:00–9:50 **Andreas Krause** (California Institute of Technology)
Optimizing Sensing using Adaptive Submodularity
- 10:00–10:50 **Andrea Bertozzi** (University of California, Los Angeles (UCLA))
Design and implementation of cooperative mobile sensing algorithms
- 11:00–11:15 *Break*

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- 11:15–12:30 *Group Discussion*
- 12:30–1:30 *Lunch (on your own)*
- 1:30–2:20 **Missy Cummings** (Massachusetts Institute of Technology)
Investigating Human-Algorithm Interactions in Supervisory Control Settings
- 2:30–3:20 **David Blei** (Princeton University)
Scalable inference in probabilistic topic models
- 3:30–3:45 *Break*
- 3:45–4:35 **Subbarao Kambhampati** (Arizona State University)
Incomplete Domain Models, Uncertain Users and Open Worlds: Model-Lite Planning for Autonomy
- 4:45–6:00 *Group Discussion and Evening Reception*

Wednesday October 20, 2010

- 8:00–8:30 *Continental Breakfast*
- 8:30–9:20 **Patrick Jaillet** (Massachusetts Institute of Technology)
Data-Driven Optimization - Combining Online, Real-time, and Stochastic Aspects
- 9:30–10:20 **Abhijit Mahalanobis** (Lockheed Martin)
On the Adaptation of Sensors to current data
- 10:30–10:45 *Break*
- 10:45–11:45 *Group Discussion*
- 11:45–12:45 *Lunch (on your own)*
- 12:45–1:35 **Stefano Soatto** (University of California, Los Angeles (UCLA))
Actionable Information as the Link Between Sensing and Control
- 1:45–2:35 **Doug Cochran** (Arizona State University)
Optimal Registration in Networks
- 2:45–3:00 *Break*
- 3:00–4:00 *Group Discussion*

