

Workshop V: Applications of Optimization in Science and Engineering

Tuesday November 30, 2010

- 8:30–9:15 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:15–9:30 *Welcome and Opening Remarks*
- 9:30–10:20 **Asuman Ozdaglar** (Massachusetts Institute of Technology)
Distributed Multi-Agent Optimization with State-Dependent Communication
- 10:30–11:00 *Break*
- 11:00–11:50 **Mung Chiang** (Princeton University)
Optimizer on WiFi Driver
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **Daniel Segre** (Boston University)
Applications and challenges in mathematical modeling of metabolic networks
- 3:00–3:15 *Break*
- 3:15–4:05 **Wei Yu** (University of Toronto)
Joint Scheduling, Beamforming and Power Spectrum Optimization for Wireless Multicell Networks
- 4:15–4:30 *Break*
- 4:30–5:20 **Laurent El Ghaoui** (University of California, Berkeley (UC Berkeley))
Sparse PCA, variants, algorithms and applications
- 5:30–7:30 *Poster Session & Reception (Hosted by IPAM)*

Wednesday December 1, 2010

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:20 **Michal Kocvara** (University of Birmingham)
Topology and material optimization problems with stress constraints
- 10:30–11:00 *Break*

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- 11:00–11:50 **Moritz Diehl** (Katholieke Universiteit Leuven)
Embedded Optimization - Convex and Beyond
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **Yonina Eldar** (Technion - Israel Institute of Technology)
Optimization Techniques in Modern Sampling Theory
- 3:00–3:15 *Break*
- 3:15–4:05 **Daniel Palomar** (Hong Kong University of Science and Technology)
Design of Cognitive Radio Systems Under Temperature-Interference Constraints: A Variational Inequality Approach
- 4:15–4:30 *Break*
- 4:30–5:20 **Mikhael Johansson** (Royal Institute of Technology (KTH))
The need for speed: convergence rates and accelerated algorithms for networked optimization.

Thursday December 2, 2010

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:20 **Amir Beck** (Technion - Israel Institute of Technology)
On the Solution of the GPS Localization and Circle Fitting Problems
- 10:30–11:00 *Break*
- 11:00–11:50 **Luminita Vese** (University of California, Los Angeles (UCLA))
Optimization based image restoration using one-dimensional Sobolev norm profiles of noise and texture
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **Kristin Bennett** (Rensselaer Polytechnic Institute)
Nonsmooth Nonconvex Optimization in Machine Learning and Data Mining
- 3:00–3:15 *Break*
- 3:15–4:05 **Martin Wainwright** (University of California, Berkeley (UC Berkeley))
Fast global convergence of gradient methods for high-dimensional statistical recovery
- 4:15–4:30 *Break*
- 4:30–5:20 **Suvrit Sra** (Max-Planck-Institute for Biological Cybernetics)
Multiframe blind deblurring

Friday December 3, 2010

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:20 **Daniel Cremers** (Technische Universität München)
Convex Relaxation Techniques for Computer Vision
- 10:30–11:00 *Break*
- 11:00–11:50 **Richard Hartley** (Australian National University)
Provably optimal algorithms in computer vision
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **Juan Meza** (Lawrence Berkeley Laboratory)
A Direct Constrained Optimization Method for Electronic Structure Calculations
- 3:00–3:15 *Break*
- 3:15–4:05 **Stanley Osher** (Institute for Pure and Applied Mathematics)
New Algorithms in Information Science

