

Sessions with Late Changes (as of August 11, 2016)

The conference booklet (whether printed or PDF) does not reflect late changes listed below.

Semiplenary Talk

Title and abstract of a semi-plenary talk by Caroline Uhler, which takes place at m3S on Monday, August 8, 15:15–16:00, have been changed as below:

Totally positive exponential families and graphical models

Caroline Uhler

We study maximum likelihood estimation for exponential families that are multivariate totally positive of order two (MTP2). Such distributions appear in the context of ferromagnetism in the Ising model and various latent models, as for example Brownian motion tree models used in phylogenetics. We show that maximum likelihood estimation for MTP2 exponential families is a convex optimization problem. For quadratic exponential families, such as Ising models and Gaussian graphical models, we show that MTP2 implies sparsity of the underlying graph without the need of a tuning parameter. Moreover, we show that the maximum likelihood estimator always exists even in the high-dimensional setting. These properties make MTP2 constraints an intriguing alternative to methods for learning sparse graphical models such as the graphical lasso.

Mon.A.5H

Financial Optimization and Robo Advisors 1

1. Frank Wang Robo-Advisor in China's Market

The talk by Changle Lin has been cancelled. [cancelled August 7]

Tue.A.5H

Vector Optimization

1. Andreas Loehne A Set-valued Approach to Matrix Games with Vector Payoffs
2. Benjamin Weissing Duality in Polyhedral Projection Problems

The talk by Shashi Kant Mishra has been cancelled. [cancelled July 30]

Tue.D.4A

Optimization Models in Energy

1. Abdulrahman Kalbat Optimal Distributed Control of Power Systems with a High Level of Renewable Energy
2. Javad Lavaei Power System State Estimation with a Limited Number of Measurements

The talk by Marc D Vuffray has been cancelled and, accordingly, the 2nd and 3rd talks have been slid to the 1st and 2nd spots, resp. [cancelled August 7]

Tue.D.5J

Primal-Dual Algorithm for Convex Optimization

1. Peter Richtarik Stochastic Dual Ascent for Solving Linear Systems
2. Antonin Chambolle Remarks on Acceleration for Primal-Dual Algorithms
3. Lin Xiao **Stochastic Primal-Dual Coordinate Method for Regularized Empirical Risk Minimization**

The title of talk by Lin Xiao has been changed. [modified August 8]

Wed.B.1S

Optimization Methods and Its Applications

1. Xin Liu Column-wise Block Coordinate Descent Approach for Orthogonal Constrained Optimization Problems
2. Qingna Li A Quadratically Convergent Regularized Semismooth Newton Method for Nonlinear Equations under Error Bound Conditions

The talk by Bo Jiang has been cancelled and, accordingly, the talk by Qingna Li has been slid to the 2nd speaker-spot [modified July 29]

Wed.B.1A

Optimization Methods for Inverse Problems 2

1. Xiucui Guan Inverse Max+Sum Spanning Tree Problem under Hamming Distance by Modifying the Sum-Cost Vector
2. Bo Wen Linear Convergence of Proximal Gradient Algorithm with Extrapolation for a Class of Non-convex Nonsmooth Minimization Problems
3. Tingting Wu Solving Constrained TV2L1-L2 MRI Signal Reconstruction via an Efficient Alternating Direction Method of Multipliers

The talk by Tingting Wu has been moved from Wed.C.1A to the 3rd speaker-spot of Wed.B.1A on the cancellation of the session Wed.C.1A. [moved July 20]

Wed.B.1C

Derivative-free Optimization Algorithms for Stochastic Problems

1. Matt Menickelly Probabilistically Fully Linear Models in STORM
2. Satyajith Amaran On the Implementation of a Trust Region-based Algorithm for Derivative-free Optimization over Stochastic Simulations

The talk by Youssef M Marzouk, which was scheduled at the 3rd speaker-spot, has been cancelled. [cancelled July 30]

Wed.B.1C

Moments, Positive Polynomials & Optimization: Part IV

1. Jinyan Fan Computing the Distance between the Linear Matrix Pencil and the Completely Positive Cone
2. Georgina Hall DC Decomposition of Nonconvex Polynomials with Algebraic Techniques

The talk by Jean B Lasserre is cancelled and the 2nd and 3rd talks will be slid to the 1st and 2nd spots, resp. [cancelled August 8]

Wed.C.1A

Optimization Methods for Inverse Problems 3 \rightsquigarrow SESSION CANCELLED

The talks by Daren Han and Lingling Xu have been cancelled, while the talk by Tingting Wu has been moved to the 3rd speaker-spot of Wed.B.1A. [modified July 20]

Wed.C.1C

Advances in Derivative-free and Simulation-based Optimization III

1. Francesco Rinaldi A New Derivative-free Method for Integer Programming Problems
2. Jeffrey Larson Asynchronously Parallel Optimization Solver for Finding Multiple Minima
3. **Giuseppe Lancia Compact Extended Formulations for Exponential-Size Linear Programs**

The talk by Giuseppe Lancia, which was originally invited to an LO cluster, has been added to the 3rd speaker-spot of Wed.C.1C. [added July 28]

The abstract of his talk is appended below.

3. Compact extended formulations for exponential-size linear programs

Giuseppe Lancia (giuseppe.lancia@uniud.it) University of Udine, Italy, *Paolo Serafini*

The best formulations for some combinatorial optimization problems are integer linear programs with an exponential number of rows and/or columns, which are solved incrementally by generating missing rows (branch-and-cut) and columns (branch-and-price) only when needed. As an alternative to row/column generation, some of these formulations can be rewritten in a compact extended form, which has only a polynomial number of constraints and of variables. Compact extended formulations can often be solved by state-of-the-art ILP solvers, used as black-boxes, in times comparable to Branch-and-cut/price procedures, which on the other hand require a considerable implementation effort. In this talk we describe a tool to derive compact extended formulations and survey many combinatorial optimization problems to which it can be applied. The tool is based on the possibility of formulating a cutting-plane separation procedure of branch-and-cut by an LP model. By exploiting LP duality the tool can be applied both to formulations with an exponential number of constraints than of variables.

Wed.C.5E

Advances in Robust Optimization III \leadsto *SESSION CANCELLED*

The talk by Rahul Mazumder has been cancelled, while the talk by Bart Van Parys has been moved to the 3rd speaker-spot of Thu.C.5E. [cancelled Aug 2]

Thu.A.5C

Non-convex Vector Optimization and Applications

1. Marius Durea Minimal Time Function with Respect to a Set of Directions and Applications
2. **Radu Strugariu A New Type of Directional Regularity for Multifunctions with Applications to Optimization**

The talk by Radu Strugariu has been moved to Thu.A.5C (2nd speaker-spot) from Thu.C.5C. [moved July 18]

Thu.B.5J

Advances in Nonlinear Optimization II

1. Nimit Nimana A Hybrid Algorithm for Split Hierarchical Optimization Problems with Fixed Point Constraints
2. **Fernando ACC Fontes Optimal Control of Constrained Nonlinear Systems: An Adaptive Time-Grid Refinement Algorithm**

The talk by Ning Zheng has been cancelled and the talk by Fernand ACC Fonte has been slid to the 2nd spot. [cancelled August 10]

Thu.C.5C

Vector Equilibrium Problems and Vector Optimization

1. Gábor Kassay Vector Quasi-Equilibrium Problems for the Sum of Two Multivalued Mappings
2. Dinh T Luc On Equilibrium in Multi-Criteria Transportation Networks

The talk by Radu Strugariu has been moved to Thu.A.5C (2nd speaker-spot) from Thu.C.5C (3rd speaker-spot) and, accordingly, the talk by Dinh The Luc has been slid to the 2nd spot (from the 3rd spot). [moved July 18]

Thu.C.5E

Advances in Robust Optimization VI

1. William B Haskell *Simulation-based Algorithms for Robust Markov Decision Processes*
2. Huan Xu *Learning the Uncertainty in Robust Markov Decision Processes*
3. Bart Van Parys *Stochastic Optimization with Data: Large Deviation Limits*

The talk by Bart Van Parys, which was scheduled at Wed.C.5E, has been moved to the 3rd speaker-spot of Thu.C.5E. [moved Aug 2]

Errata for the Conference Booklet

p.22: *The time of the plenary talk by Jong-Shi Pang is to be corrected as follows:*

Jong-Shi Pang
University of Southern California, USA
Difference-of-Convex Optimization for Statistic Learning
Thursday, August 11, **16:15–17:15**, Soukairou Hall (1S, GRIPS)
Chair: Jie Sun

Room for Thu.C.m3AB

*The room for **Conic and Polynomial Optimization: Copositive Optimization** is to be corrected as Thu.C.m3B. (Namely, Lecture Room A of NACT will not be used.)*