

Vienna Workshop on Computational Optimization

University of Vienna, December 17-19, 2018

Venue: Sky Lounge, 12th floor, University of Vienna, Oskar-Morgenstern-Platz 1, 1090 Vienna, Austria

Plenary speakers

- H. Bauschke, University of British Columbia
- S. P. Boyd, Stanford University
- P. Gritzmann, Technical University of Munich
- H. Raecke, Technical University of Munich
- A. Schoebel, University of Goettingen
- S. J. Wright, University of Wisconsin

Program (preliminary version)

Monday, December 17, 2018

Morning session

8:30-9:00 Registration/opening

9:00-10:00 S. Wright: Optimization in Data Analysis: Some Recent Developments

10:00-10:30 **M. Avolio, A. Fuduli**: Proximal support vector machine variants for binary multiple instance learning

10:30-11:00 **Coffee break**

11:00-11:30 **S. Banert, A. Ringh, J. Adler, J. Karlsson, O. "Oktem**: Data-driven nonsmooth optimization

11:30 12:00 **A. Astorino, A. M. Bagirov, A. Fuduli**: A piecewise linear support vector machines approach

12:00-12:30 **C. Bertocchi, M.-C. Corbineau, E. Chouzenoux, J.-C. Pesquet, M. Prato**: A novel proximal interior point neural network approach for image recovery

Afternoon Session

14:00-15:00 **A. Brieden, P. Gritzmann, F. Klemm**: Diagrams and democracy: electoral district design via constrained clustering

15:00-15:30 **M. Staudigl, P. Mertikopoulos, I. Bomze, W. Schachinger**: On the convergence of projection free Hessian barrier gradient algorithms

15:30-16:00 **Coffee break**

16:00- 16:30 **M. Labbé, F. Plein, M. Schmidt**: Characterisation of feasible bookings in tree-like steady-state gas networks

16:30-16:50 **A. Böhm, R. I. Bot**: A variable smoothing algorithm for convex optimization problems using stochastic gradients

16:50-17:10 **C. Geiersbach, E. Loayza, K. Welker**: Shape Optimization for Interface Identification under Uncertainty

17:10-17:30 **R.I. Bot, E.R. Csetnek, D.-K. Nguyen**: A proximal minimization algorithm for structured nonconvex and nonsmooth problems

17:30-17:50 **M. Kimiaei, A. Neumaier**: Efficient global unconstrained black box optimization

Tuesday, December 18, 2018

Morning Session

9:00-10:00 S. Boyd: Convex optimization

10:00-10:30 D. Ghilli, K. Kunisch: Theory and numerical practice for optimization problems involving p -functionals, with $p \in [0, 1)$

10:30-11:00 Coffee break

11:00-11:30 F. Mannel, A. Rund: Quasi-Newton methods in structured nonsmooth optimization a hybrid approach

11:30-12:00 J. Vidal-Nunez, R. Herzog, S. Schmidt, M. Herrmann: Variational mesh denoising and surface fairing using the total variation of the normal

12:00-12:30 A. Viorel: Optimization algorithms based on operator splitting and energy-preserving numerical integrator

Afternoon Session

14:00-15:00 H. Raecke: Polylogarithmic guarantees for generalized reordering buffer management

15:00-15:30 V. Kolmogorov: Valued constraint satisfaction problems

15:30-16:00 Coffee break

16:00-16:30 C. Kümmerle, C. M. Verdun: Denoising and Completion of Structured Low-Rank Matrices via Iteratively Reweighted Least Squares

16:30-17:00 A. Masone, A. Sforza, C. Sterle, A. Ushakov, I. Vasilyev: A p -median based exact method for the large-scale optimal diversity management problem

17:00 Walk to Christmas market in AKH

Wednesday, December 19, 2018

Morning Session

9:00-10:00 H. Bauschke: On the displacement of compositions and convex combinations of nonexpansive operators

10:00-10:30 Y. Malitsky: Bilevel composite minimization problems

10:30-11:00 Coffee break

11:00-11:30 S. C. Laszlo: Convergence rates for an inertial algorithm of gradient type associated to a smooth nonconvex minimization

11:30-12:00 S. Rebegoldi, S. Bonettini, V. Ruggiero: A variable metric approach for the inexact inertial forwardbackward method

12:00-12:30 S.-M. Grad, O. Wilfer: Solving nonlinear minmax location problems with minimal time functions by means of conjugate duality and proximal point methods

Afternoon Session

14:00-15:00 A. Schoebel: New concepts in robust optimization

15:00-15:30 B. Rudloff, G. Kovacova, Z. Feinstein: Dynamic Multivariate Programming

15:30-16:00 Coffee break

16:00- 16:30 D. Mohseni-Taheri, S. Nadarajah, A. Trivella: A dual reoptimization scheme for solving large-scale stochastic optimization problems

16:30 -17:00 G. Bigi, S. Sagratella: Robustness and semi-infinite programming via Nash games

17:00-17:30 A. Timonina-Farkas, G. Pflug: Managing floods and droughts in Austria via accurate and efficient multi-stage stochastic optimization

17:30-18:00 L. Altangerel: Gap functions for quasi-variational inequality via duality