

09:00 AM - 11:00 AM

OPTSM, Optimization in Public Transport and Shared Mobility III

Chair: Marcella Samà

- 09:00 AM Lorenzo Castelli – A distributed market mechanism for an efficient and equitable resource assignment
- 09:20 AM Valentina Morandi – Optimization models for fair horizontal collaboration in demand-responsive transportation
- 09:40 AM Marta Leonina Tessitore – Identifying Railway Timetable Fragility
- 10:00 AM Marcella Samà – Risk evaluation considering uncertain dwell times of real-time Railway Traffic Management solutions

11:30 AM - 01:00 PM

OPTSM, Optimization in Public Transport and Shared Mobility IV

Chair: Joaquin Rodriguez

- 11:30 AM Federico Naldini – Practical deployment of real-time railway traffic management algorithms: impact of process meta-parameters
- 11:50 AM Giorgio Sartor – Large-scale real-time dispatching in the Greater Oslo area
- 12:10 PM Xiajie Yi – Coordinated perturbation management in railway traffic
- 12:30 PM Joaquin Rodriguez – Train-based instance reformulation in real-time Railway Traffic Management

02:30 PM - 03:30 PM

Plenary Lecture

Chair: Fabio Schoen

- 02:30 PM Dimitris Bertsimas – HAIM: Holistic AI for Medicine

03:40 PM - 05:00 PM

OPTSM, Optimization in Public Transport and Shared Mobility V

Chair: Valentina Cacchiani

- 03:40 PM Matteo Petris – Extracting series-parallel subnetworks in rail infrastructures - benefits and limits
- 04:00 PM Jacob Trepata Borecka – Computational Evaluation of Logic-based Benders Cuts for Railway Scheduling
- 04:20 PM Benedetta Pratelli – A sequential approach for large scale electric vehicle scheduling problems
- 04:40 PM Valentina Cacchiani – Integrated timetabling and electric vehicle scheduling in public transport

05:30 PM - 07:00 PM

Optimization on Graphs I

Chair: Cristina Ondei

- 05:30 PM Carmine Cerrone – A multi period VRP for evaluating distribution strategies
- 05:50 PM Maria Truvolo – Selection of pickup-delivery points in urban areas to reduce emission costs
- 06:10 PM Cristina Ondei – Exact algorithms for the electric travelling salesman problem

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Global Optimization

Chair: Fabio Schoen

- 09:00 AM Filippo Pecci – A global optimization framework for resilient water distribution networks
- 09:20 AM Immanuel Bomze – Fast Cluster Detection in Networks by First Order Optimization
- 09:40 AM Marco Locatelli – Sharp and fast bounds for the Celis-Dennis-Tapia problem
- 10:00 AM Leo Liberti – Random projections for semidefinite programming

11:30 AM - 01:00 PM

Teaching Session

Chair: Daniela Ambrosino

- 11:30 AM Roberto Musmanno – Introduction to Logistics Systems Management with Microsoft Excel and Python Examples
- 11:45 AM Eugenia Taranto – Operations Research at high school: its impact on modelling skills and beyond
- 12:00 PM Claudio Sterle – OPS4Math project: teaching optimization and problem solving at Secondary Schools
- 12:15 PM Alessandro Gobbi – Teaching OR before University: the ROAR Experience (Part II)
- 12:30 PM Daniela Ambrosino – Projects for getting a taste of problem solving and mathematics in high school

03:40 PM - 05:00 PM

Industrial Startup Session I

Chair: Marco Sciandrone

- 03:40 PM Francesco Sambo – Verizon Connect Italy - Industrial presentation
- 04:00 PM Federica Picca Nicolino – Intuendi - Industrial presentation
- 04:20 PM Jacopo Corno – Deix - Industrial presentation
- 04:40 PM Veronica Asta – OPTIMEasy - Industrial presentation

05:30 PM - 07:00 PM

Industrial Startup Session II

Chair: Paola Cappanera

- 05:30 PM Duccio Grandi – M.A.I.O.R. and elite-level sporting events
- 05:50 PM Matteo Pozzi – OPTIT - Industrial presentation
- 06:10 PM Stefano Cappugi – FirLab - Industrial presentation

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EQVA, Equilibria, variational models and applications

Chair: Mauro Passacantando

- 09:00 AM Francesco Caruso – A general method for selecting subgame perfect Nash equilibria in two-player Stackelberg games
- 09:20 AM Giandomenico Mastroeni – A decomposition method for a linear problem with complementarity constraints
- 09:40 AM Annamaria Barbagallo – A general Cournot-Nash equilibrium principle and applications to the COVID-19 pandemic
- 10:00 AM Valerio Giuseppe Sasso – Nonsmooth Hierarchical Multi Portfolio Selection
- 10:20 AM Mauro Passacantando – A finite convergence algorithm for solving network games with strategic complements and bounded strategies

11:30 AM - 01:00 PM

RAVIEP, Recent Advances in Variational Inequalities and Equilibrium Problems I

Chair: Patrizia Daniele

- 11:30 AM Maria Bernadette Donato – Variational inequalities, maximal elements and economic equilibrium problems
- 11:50 AM Daniele Sciacca – Disaster Management with UAVs and 5G technology: a Three-Stage Stochastic network-based Optimization Model
- 12:10 PM Sergio Grammatico – Generalised Nash equilibrium seeking under partial information
- 12:30 PM Jacqueline Morgan – Viscosity solutions in multi-leader-common-follower games

03:40 PM - 05:00 PM

RAVIEP, Recent Advances in Variational Inequalities and Equilibrium Problems II

Chair: Laura Scrimali

- 03:40 PM Sofia Giuffrè – On the equivalence between constrained variational problems
- 04:00 PM Domenico Scopelliti – Quasi-variational problems with non-self map on Banach space
- 04:20 PM Fabio Raciti – A multiclass network international migration model under shared regulations
- 04:40 PM Georgia Fargetta – Time-Dependent Generalized Nash Equilibria in Social Media Platforms

05:30 PM - 07:00 PM

Applications of OR III

Chair: Josep Freixas

- 05:30 PM Jelena J. Stanković – Urban Poverty and Material Deprivation: A Spatial Efficiency Assessment
- 05:50 PM Gabi Hanukov – Postponing Complementary Services
- 06:10 PM Joep Freixas – On the search of an optimal tie-breaking system for sport competitions with a large number of participants

09:00 AM - 11:00 AM
KNAP, Knapsack Problems
Chair: Laura Galli

- 09:00 AM Iskander Aliev – Sparse integer points in knapsack polyhedra and beyond
09:20 AM Adam Letchford – Cutting Planes for the Multiple Knapsack Assignment Problem
09:40 AM Alberto Locatelli – Knapsack problems - An Overview of Recent Advances
10:00 AM Ulrich Pferschy – On a knapsack game
10:20 AM Laura Galli – Bi-dimensional Assignment in 5G Periodic Scheduling

11:30 AM - 01:00 PM
Finance
Chair: Ana Garcia-Bernabeu

- 11:30 AM Adolfo Hilario-Caballero – A preference directions-based approach to integrate sustainability in portfolio selection
11:50 AM Eduardo Picicelli – A mathematical model to locate Services of General Economic Interest
12:10 PM Ana Garcia-Bernabeu – Approaches to ESG - Integration in Portfolio Optimization using MOEAs

03:40 PM - 05:00 PM
Applications
Chair: Sara Ceschia

- 03:40 PM Vladimír Holý – High-Frequency Analysis of Price Clustering and Instantaneous Volatility
04:00 PM Chiara Turbian – A Two-Dimensional Bin Packing Problem with Precedence Constraints in the Sheet Metal Industry
04:20 PM Sara Ceschia – Educational Timetabling: Problems, Benchmarks, and State-of-the-Art Results

05:30 PM - 07:00 PM
Applications of OR IV
Chair: Nicolas Zufferey

- 05:30 PM Fausto Errico – The fragility-constrained vehicle routing problem with time windows
05:50 PM Veronica Asta – Last mile and first mile trucks optimization
06:10 PM Nicolas Zufferey – Reducing the supply-chain nervousity thanks to flexible planning

09:00 AM - 11:00 AM

NODAI, Numerical optimization for data analysis and imaging I

Chair: Simone Rebegoldi

- 09:00 AM Elena Morotti – A new converging approach for learnt optimization with applications to imaging
- 09:20 AM Margherita Porcelli – A spectral PALM algorithm for Dictionary Learning
- 09:40 AM Monica Pragliola – Automatic parameter selection for the TGV regularizer in image restoration under Poisson noise
- 10:00 AM Cesare Molinari – Iterative regularization for convex regularizers
- 10:20 AM Simone Rebegoldi – Stochastic trust-region methods with subsampling for finite-sum minimization problems

11:30 AM - 01:00 PM

NODAI, Numerical optimization for data analysis and imaging II

Chair: Benedetta Morini

- 11:30 AM Ambra Catozzi – Bacterial Colonies Segmentation via Variational Approaches
- 11:50 AM Francesco Colibazzi – Learning regularized Gauss-Newton methods
- 12:10 PM Giorgia Franchini – A line search based proximal stochastic gradient algorithm with dynamical variance reduction for finite-sum optimization problems
- 12:30 PM Marta Lazzaretti – Iterative regularisation and modular-proximal algorithms in $L^{p(\cdot)}$ spaces for imaging problems

03:40 PM - 05:00 PM

Machine Learning I

Chair: Annabella Astorino

- 03:40 PM Michele Barbato – Simultaneous Feature Selection and Outlier Detection: New MILP Formulation and an Experimental Study
- 04:00 PM Paula Brito – Multivariate Discriminant Analysis of Distributional Data
- 04:20 PM Alberto Ceselli – Mathematical Programming and Machine Learning for a Task Allocation Game
- 04:40 PM Annabella Astorino – Spherical and Polyhedral separation approaches for Multiple Instance Learning

05:30 PM - 07:00 PM

NOML, Nonlinear Optimization and Machine Learning I

Chair: Matteo Lapucci

- 05:30 PM Holger Rauhut – Implicit bias of gradient descent for learning linear neural networks
- 05:50 PM Tommaso Aldinucci – Contextual Decision Trees
- 06:10 PM Behzad Pirouz – A Multi-Objective Programming Problem for Sparse Optimization with Application in SVM Feature Selection