

| Day                 | Start | End  | Session  |   | Chair                      | Lecture Title  |  |  |
|---------------------|-------|--|--|---|----------------------------|--|--|--|
| Monday<br>Feb. 9    | 8:15  | 9:20   | REGISTRATION   |   |                            |  |  |  |
|                     | 9:20  | 9:30   | PH.D. SCHOOL OPENING   |   |                            |  |  |  |
|                     | 9:30  | 11:00  | MATTEO FISCHETTI   |   | Alice Raffaele             | Benders and Bilevel Optimization   |  |  |
|                     | 11:00 | 11:30  | COFFEE BREAK   |   |                            |  |  |  |
|                     | 11:30 | 13:00  | MARCO DI SUMMA   |   | Anthony Palmieri           | Comparing branch-and-bound, cutting planes, and branch-and-cut               |  |  |
|                     | 13:00 | 14:30  | LUNCH BREAK  |   |                            |  |  |  |
|                     | 14:30 | 16:00  | FRANCESCO RINALDI  |   | Matteo Pernini             | Frank-Wolfe and friends: a journey into projection-free optimization methods |  |  |
|                     | 16:00 | 16:30  | COFFEE BREAK   |   |                            |  |  |  |
| 16:30               | 18:00 | DOMENICO SALVAGNIN                             |  | Francesco Cavaliere                     | Computational Research 101 |  |  |  |
| Day                 | Start | End  | Session  | Session Title                           | Chair                      | Start Time   | Name   | Title  |
| Tuesday,<br>Feb. 10 | 8:30  | 9:00   | REGISTRATION   |   |                            |  |  |  |
|                     | 9:00  | 9:20   | WORKSHOP OPENING   |   | 10AYW organizing committee |  |  |  |
|                     | 9:20  | 11:00  | 1  | Transportation and Logistics I          | Francesco Cavaliere        | 9:20   | Abdelouhab Moubane   | Modeling and Optimization of Truck and Robot Routing without Robot-Depots  |
|                     |       |  |  |   |                            | 9:40   | Fabio Buffoli  | Beating Highway Gridlock: Iterative User Equilibrium with Local Congestion Caps  |
|                     |       |  |  |   |                            | 10:00  | Antonino A. Carè   | Last-mile Delivery with Autonomous Robots and Public Transport Line  |
|                     |       |  |  |   |                            | 10:20  | Pierre Vendé   | The Electric Vehicle Fleet Composition Problem with temperature considerations   |
|                     |       |  |  |   |                            | 10:40  | Khaoula Kharfati   | A Two-Stage Decomposition Method for the Electric Traveling Salesman Problem with Time Windows                         |
|                     | 11:00 | 11:30  | COFFEE BREAK   |   |                            |  |  |  |
|                     | 11:30 | 11:40  | INSTITUTIONAL GREETINGS BY BRUNO CHIARELLOTTO, HEAD OF THE DEPARTMENT OF MATHEMATICS OF THE UNIVERSITY OF PADOVA |   |                            |  |  |  |
|                     | 11:40 | 12:40  | PLENARY TALK – WOLFRAM WIESEMANN   |   | Anthony Palmieri           | Large-Scale and Data-Driven Markov Decision Processes                        |  |  |
|                     | 12:40 | 14:00  | LUNCH BREAK  |   |                            |  |  |  |
|                     | 14:00 | 14:40  | 2  | Optimization under Uncertainty I        | Lorenzo Perinello          | 14:00  | Federica Donnini   | Heuristics for two-stage stochastic $K$ -adaptability  |
|                     |       |  |  |   |                            | 14:20  | Hubert Villuendas  | First-Order Methods for Distributionally Robust Mixed-Integer Optimization   |
|                     | 14:40 | 16:00  | 3  | Energy and Environmental Applications I | Alessandro Druetto         | 14:40  | Andrea Spinelli  | A Stochastic Electric Vehicle Routing Problem under Uncertain Energy Consumption                                       |
|                     |       |  |  |   |                            | 15:00  | Pietro Girardis  | A Three-Stage Lexicographic Constraint Programming Approach for an Energy-Efficient Scheduling Problem                 |
|                     |       |  |  |   | 15:20                      | Leena Aizdi  | Energy-Aware Sequencing and Routing in GreenWarehouses by Integrating Energy Management Systems and Renewable Energy |  |
|                     |       |  |  |   | 15:40                      | Katarzyna Gdowska  | Optimal Sectorization in Municipal Waste Collection Systems  |  |
| 16:00               | 16:30 | COFFEE BREAK                                   |  |   |                            |  |  |  |
| 16:30               | 17:30 | 4  | Advances in Mathematical Programming I   | Matteo Pernini                          | 16:30                      | Diego Scuppa   | A gradient method with momentum for Riemannian manifolds   |  |
|                     |       |  |  |   | 16:50                      | Elisa Trasatti   | Manifold optimization methods for the XY random field  |  |
|                     |       |  |  |   | 17:10                      | Riccardo Tomassini   | Combining discretization and exact penalty techniques in semi-infinite programming                                   |  |
| 17:30               | 18:30 | 5  | Scheduling and Timetabling I   | Martina Galeazzo                        | 17:30                      | Annalisa Castelletti   | Batch Scheduling with Compatible Families and Setups: Enhanced MILP Formulations                                     |  |
|                     |       |  |  |   | 17:50                      | Lorenzo Tomasetti  | A Comprehensive Hybrid Flow Shop Scheduling Model for Steelmaking and Ingot Casting                                  |  |
|                     |       |  |  |   | 18:10                      | Marco Zunino   | University Timetabling with Professor Preferences: Exact and Heuristic Methods                                       |  |
| Wedn.,<br>Feb. 11   | 8:30  | 9:00   | REGISTRATION   |   |                            |  |  |  |
|                     | 9:00  | 10:00  | 6  | Network Optimization I                  | Matteo Cosmi               | 9:00   | Eleonora Bellesso  | Analysis of a general regularized continuous formulation for the maximum $s$ -plex problem                             |
|                     |       |  |  |   |                            | 9:20   | Roberto Ronco  | On the Spectrum of Path-Length Density Matrices of Unrooted Binary Trees   |
|                     |       |  |  |   |                            | 9:40   | Stefano Ardizzoni  | Shortest Path Problem with Functional Edge Costs   |
|                     | 10:00 | 10:30  | COFFEE BREAK SPONSORED BY HEXALY   |   |                            |  |  |  |
|                     | 10:30 | 11:30  | PLENARY TALK – STEFAN RØPKE  |   | Francesco Cavaliere        | Vehicle Routing Problems   |  |  |
|                     | 11:30 | 12:30  | 7  | Scheduling and Timetabling II           | Martina Doneda             | 11:30  | Alice Daldossi   | Building a fair and efficient surgical unit: insights from academic vascular surgery                                   |
|                     |       |  |  |   |                            | 11:50  | Sara Cambiaghi   | A Column-Generation Approach to Joint Master Surgical Scheduling and Case Assignment under Bed Capacity Constraints    |
|                     |       |  |  |   |                            | 12:10  | Martina Doneda   | An ILP approach to urgent patient management in an orthopedic department   |
|                     | 12:30 | 14:00  | LUNCH BREAK  |   |                            |  |  |  |
|                     | 14:00 | 15:00  | 8  | Transportation and Logistics II         | Gabriele Sanguin           | 14:00  | Cevat Enes Karahmetoglu  | Multiobjective Route Planning for Multi-Truck Multi-UAV Operations: Multi-Visit Sorties and Flexible Rendezvous Points |
|                     |       |  |  |   | 14:20                      | Paolo Beatrice   | A Benders decomposition approach for a green bi-objective stochastic fleet size and mix vehicle routing problem      |  |
|                     |       |  |  |   | 14:40                      | Veronica Mosca   | Multi-Quality Multi-Objective Green VRP with Air-Conditioning Systems  |  |
| 15:00               | 16:00 | 9  | Heuristics and Metaheuristics  | Marta L. Tessoro                        | 15:00                      | Elisa Savio  | A Tabu Search for the Three-Dimensional Block Relocation Problem with Item Families                                  |  |
|                     |       |  |  |   | 15:20                      | Seyyedeh Reihaneh Naghib Hosseini  | Minimizing the Energy Consumption of Terminal Vehicles for Stowage Planning  |  |
|                     |       |  |  |   | 15:40                      | Enrico Brambilla   | Relax-and-Explore Kernel Search for Multidimensional Multiple-Choice Knapsack Problems                               |  |
| 16:00               | 17:00 | 10   | Optimization under Uncertainty II  | Martina Galeazzo                        | 16:00                      | Arianna Freda  | Cost-Aware Scheduling under Uncertainty: An Optimization Model for Heart Donor Management                            |  |
|                     |       |  |  |   | 16:20                      | Giovanni Spisso  | The Maximum Clique Problem under Adversarial Uncertainty: a min-max approach   |  |
|                     |       |  |  |   | 16:40                      | Yasmany Fernández Fernández  | Hybrid Strategy in the Robust Evacuation Problem Considering Network Complexities                                    |  |
| 17:00               | 19:30 | SOCIAL EVENT AT PALAZZO BO SPONSORED BY HEXALY |  |   |                            |  |  |  |

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|--------------------------------|-------|---|--|---|---------------------|---------------------|--|---|
| Thursday,<br>Feb. 12           | 8:30  | 9:00  | REGISTRATION                                   |   |                     |                     |  |   |
|                                | 9:00  | 10:00   | 11   | <b>Network Optimization II</b>                  | Anthony Palmieri    | 9:00                | Luca Pirolo  | Optimal location of e-bike chargers ontouristic cycleway networks   |
|                                |       |   |  |   |                     | 9:20                | Fabio Ciccarelli   | Branch-and-price strikes back for the k-vertex cut problem  |
|                                |       |   |  |   |                     | 9:40                | Nikola Kovačević   | Network design and material flow simulationfor wood value chains  |
|                                | 10:00 | 10:30   | COFFEE BREAK                                   |   |                     |                     |  |   |
|                                | 10:30 | 11:30   | PLENARY TALK – MARTINE LABBÉ                   |   |                     |                     |  |   |
|                                |       |   |  | Matteo Pernini                                  |                     |                     |  | Solving Chance-Constrained (mixed integer) Linear Optimization Problems with Branch-and Cut                             |
|                                | 11:30 | 12:30   | 12   | <b>Transportation and Logistics III</b>         | Sara Stoia          | 11:30               | Alessia Ciacco   | Steiner Traveling Salesman Problem withTime Windows and Pickup–Delivery:integrating classical and quantumoptimization   |
|                                |       |   |  |   |                     | 11:50               | Carlo Maria Aloe   | Bi-Objective Programming for Time–Energy AS/RS Cycle Planning in Single-Deep Racking                                    |
|                                |       |   |  |   |                     | 12:10               | Sara Stoia   | Crowdshipping and Locker Solutions forDynamic Last-Mile Delivery  |
|                                | 12:30 | 14:00   | LUNCH BREAK                                    |   |                     |                     |  |   |
|                                | 14:00 | 14:30   | SPONSOR SESSION – Hexaly, Mosek                |   |                     |                     |  |   |
|                                |       |   |  |   | Lorenzo Perinello   |                     |  |   |
|                                | 14:30 | 15:30   | 13   | <b>Decision Support Systems I</b>               | Serena Fugaro       | 14:30               | Martina Luzzi  | Human resources management in SMEs: an optimized and innovativeframework  |
|                                |       |   |  |   |                     | 14:50               | Silvia Iuliano   | A Global Optimization-based Methodology for Providing Grid Ancillary Services by Electric Vehicles Scheduling           |
|                                |       |   |  |   |                     | 15:10               | Serena Fugaro  | A Soft-Constrained Multi-Objective FacilityLocation approach to design a HouseholdWaste Recycling Centres network in UK |
| 15:30                          | 16:50 | 14  | <b>Learning-based Optimization</b>             | Martina Doneda                                  | 15:30               | Alessandro Minoli   | A Data-Driven State Exploration Policy inDynamic Programming for RCESPP                              |   |
|                                |       |   |  |   | 15:50               | Angjelo Zojzi       | An optimal dispatching method for incoming alarms in security operations centers                     |   |
|                                |       |   |  |   | 16:10               | Chiara Faccio       | Fast and Simple Multiclass Data Segmentation: An Eigendecomposition and Projection-Free Approach     |   |
|                                |       |   |  |   | 16:30               | Virginia Marcelli   | Tailored Heuristics for Margin OptimalRegression Tree  |   |
| 16:50                          | 17:20 | COFFEE BREAK + GROUP PICTURE  |  |   |                     |                     |  |   |
| 17:20                          | 18:30 | AIROYOUNG ROUNDTABLE  |  |   |                     |                     |  |   |
|                                |       |   |  | Alice Raffaele, AIROYOUNG board                 |                     |                     |  |   |
| 20:00                          | 23:00 | SOCIAL DINNER AT OSTERIA ANTICO BROLO, WITH APERITIFS AND AFTER-DINNER DRINKS OFFERED BY DISTILLERIA BRUNELLO |  |   |                     |                     |  |   |
| Friday,<br>Feb. 13             | 8:30  | 9:00  | REGISTRATION                                   |   |                     |                     |  |   |
|                                | 9:00  | 10:00   | 15   | <b>Energy and Environmental Applications II</b> | Francesco Cavaliere | 9:00                | Gianluca Sabbatini   | A Rolling Horizon Multi-Stage OptimizationFramework for Local Flexibility Procurement                                   |
|                                |       |   |  |   |                     | 9:20                | Giovanni Micheli   | Multi-horizon optimization for domestic renewableenergy system design under uncertainty                                 |
|                                |       |   |  |   |                     | 9:40                | Silvia Anna Cordieri   | An Energy-Efficient OptimizationStrategy for Multi-Carrier EnergySystems  |
|                                | 10:00 | 10:30   | COFFEE BREAK                                   |   |                     |                     |  |   |
|                                | 10:30 | 11:30   | PLENARY TALK – HANDE YAMAN PATERNOTTE          |   |                     |                     |  |   |
|                                |       |   |  |   | Lorenzo Perinello   |                     |  | Partitioning a Graph into Connected Components  |
|                                | 11:30 | 12:30   | 16   | <b>Scheduling and Timetabling III</b>           | Gabriele Sanguin    | 11:30               | Alex Fabián Barrales Araneda   | Heuristic Approaches for Timetabling andVehicle Scheduling with Electric Buses  |
|                                |       |   |  |   |                     | 11:50               | Lingyuan Shi   | Integrated optimization of train rescheduling and speed management during partial blockages:A decomposition approach    |
|                                |       |   |  |   |                     | 12:10               | Marco Dottor   | Efficient methods for large-scale cricketfarming  |
|                                | 12:30 | 14:00   | LUNCH BREAK                                    |   |                     |                     |  |   |
|                                | 14:00 | 14:40   | SPONSOR SESSION – FICO, CNR-IASI, CNR-IAC      |   |                     |                     |  |   |
|                                |       |   |  | Matteo Pernini                                  |                     |                     |  |   |
| 14:40                          | 16:00 | 17  | <b>Transportation and Logistics IV</b>         | Anthony Palmieri                                | 14:40               | Luca Dalla Costa    | A Constrained Shortest Path Algorithm forDynamic Airspace Configuration                              |   |
|                                |       |   |  |   | 15:00               | Filippo Magi        | Tactical Deconfliction with Speed and PathModifications for Urban Air Mobility                       |   |
|                                |       |   |  |   | 15:20               | Yingzhi Wang        | Airport subsidy for air-HSR intermodal service in a multi-airport system: Direct amount vs. discount |   |
|                                |       |   |  |   | 15:40               | Federico Michelotto | A Novel Decomposition Scheme for theCVRP   |   |
| 16:00                          | 16:30 | COFFEE BREAK  |  |   |                     |                     |  |   |
| 16:30                          | 17:30 | 18  | <b>Advances in Mathematical Programming II</b> | Martina Galeazzo                                | 16:30               | Edoardo Cesaroni    | Derivative-Free Bilevel Optimization withInexact Lower-Level Solutions                               |   |
|                                |       |   |  |   | 16:50               | Matteo Zanella      | MIP Formulations for Delete-Free AIPlanning  |   |
|                                |       |   |  |   | 17:10               | Mariagrazia Cairo   | On the Lagrangian Relaxation in aBi-Objective Branch and Bound algorithm                             |   |
| 17:30                          | 18:00 | CLOSING   |  |   |                     |                     |  |   |
|                                |       |   |  | 10AYW organizing committee                      |                     |                     |  |   |
| Last update: February 05, 2026 |       |   |  |   |                     |                     |  |   |