

Workshop on Railway Optimization 2022

ROW 2022 Day-1

3 June 2022: Scheduling, Routing, and Speed Control

10:00 – 10:04 Brief introduction (Prof. Andrea D’Ariano, Roma Tre University)

10:04 – 10:42 Lecture on “*Tutorial on railway planning and train timetabling*” (Prof. Taku Fujiyama, University College London)

10:42 – 11:20 Lecture on “*Advanced topics on the train timetabling problem*” (Prof. Valentina Cacchiani, University of Bologna)

11:20 – 11:40 Lecture on “*Energy-efficient train operation with steep track and speed limits*” (Peiran Ying, Tongji University, Shanghai; visiting PhD student at Roma Tre University)

11:40 – 12:00 Lecture on “*Solving the train routing selection problem*” (Bianca Pascariu, Roma Tre University; visiting PhD student at Université Gustave Eiffel, Lille)

12:00 – 12:20 Lecture on “*Hyper-heuristics: Introduction and application to the real-time railway traffic management problem*” (Marta Leonina Tessitore, Roma Tre University; visiting PhD student at SINTEF DIGITAL, Oslo)

12:20 – 12:40 Lecture on “*Crew-related train rescheduling with global rerouting in a high-speed rail network due to a complete blocked segment*” (Weining Hao, Beijing Jiaotong University; visiting PhD student at Delft University of Technology)

12:40 – 13:00 Lecture on “*A branch-and-price algorithm for the train makeup problem*” (Bojian Zhang, Southwest Jiaotong University, Chengdu; visiting PhD student at Roma Tre University)

Where: Roma Tre University, Department of Engineering, via della vasca navale 79, Room N8

How to reach us: <https://ingegneria.uniroma3.it/en/dipartimento/dove-siamo/>

Contact Person: Prof. Andrea D’Ariano andrea.dariano@uniroma3.it

The ROW 2022 will be performed both in person and online (via *Microsoft Teams*).

Workshop on Railway Optimization 2022

ROW 2022 Day-2

7 June 2022: Urban Rail Transit, Rolling Stock Circulation

10:00 – 10:04 Brief introduction (Prof. Andrea D’Ariano, Roma Tre University)

10:04 – 11:00 Lecture on “An overview on train scheduling problems for metro lines” (Prof. Yihui Wang, Beijing Jiaotong University)

11:00 – 11:20 Lecture on “Cooperative train control problem during the fault of traction power supply system” (Xuekai Wang, Beijing Jiaotong University; visiting PhD student at Roma Tre University)

11:20 – 11:40 Lecture on “Scheduling of through trains based on flexible (de)coupling: A passenger demand-oriented approach” (Simin Chai, Beijing Jiaotong University; potential visiting PhD student at Roma Tre University)

11:40 – 12:00 Lecture on “Passenger-oriented train timetabling and heterogeneous rolling stock circulating for an urban rail transit line” (Yuhua Yang, Southwest Jiaotong University, Chengdu; former visiting PhD student at Roma Tre University)

12:00 – 12:20 Lecture on “Joint rolling stock rotation planning and depot deadhead scheduling in urban rail transit lines” (Dian Wang, Southwest Jiaotong University, Chengdu; potential visiting PhD student at Roma Tre University)

12:20 – 12:40 Lecture on “A simulation-optimization framework for the rolling stock circulation problem with maintenance constraints - Part 1” (Tommaso Bosi, Roma Tre University; former visiting PhD student at University of Luxembourg)

12:40 – 13:00 Lecture on “A simulation-optimization framework for the rolling stock circulation problem with maintenance constraints - Part 2” (Federico Bigi, University of Luxembourg; former Master student at Roma Tre University)

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