



Monday

Opening and keynote lecture: 9:00-10:15

Session 1 OROPA Conference Room chair: Federico Della Croce

9:00-9:15

Opening

9:15-10:15

Alberto Marchetti Spaccamela:
Scheduling DAGs: recent results and challenges

10:20-10:50 coffee break

Parallel sessions: 10:50-12:30

Session 2A OROPA Conference Room chair: Alberto Marchetti Spaccamela

10:50-11:15

Barely Random Algorithms for Online Scheduling with Equal Job Sizes

Neda Abbasi Shahkooh (speaker), Martin Böhm, and Łukasz Jeż

11:15-11:40

Randomized Item Collecting from Weight-Monotone Queues

Marek Chrobak, Łukasz Jeż (speaker), and Jiří Sgall

11:40-12:05

Buffer Minimization with Conflicts on a Line

Felix Höhne and Rob van Stee (speaker)

12:05-12:30

Breaking the Barrier of 2 for the Competitiveness of Longest Queue Drop

Antonios Antoniadis, Matthias Englert, Nicolaos Matsakis, and Pavel Veselý (speaker)



Session 2B DOTTRINA Conference Room chair: Shikha Singh

10:50-11:15

A parametric flow-based algorithm for crew diagramming: a pragmatic large-scale approach at the Swiss railways

Raphael Haemmerli, Alexander Souza (speaker), Denys Trieskunov, and Hsuan-Pin Wu

11:15-11:40

Independent Sampling for the Secretary Problem

José Correa, Andrés Cristi, Laurent Feuilloley, Tim Oosterwijk (speaker), and Alexandros Tsigonias-Dimitriadis

11:40-12:05

Collective schedules: how to find a consensus schedule?

Martin Durand (speaker) and Fanny Pascual

12:05-12:30

Tight Competitive Analyses of Online Car-sharing Problems

Ya-Chun Liang (speaker), Kuan-Yun Lai, Ho-Lin Chen, Kazuo Iwama and Chung-Shou Liao

12:45-13:45 Lunch

MONDAY

Parallel sessions: 15:45-17:00

Session 3A OROPA Conference Room chair: Nicole Megow

15:45-16:10

SPT optimality via linear programming

Woo-Hyung Cho (speaker), David Shmoys, and Shane Henderson

16:10-16:35

Polynomial-Size ILP formulations for the Total Completion Time Problem on a Parallel Batching Machine

Alessandro Druetto (speaker) and Andrea Grosso

16:35-17:00

A Competitive Algorithm for Throughput Maximization on Identical Machines

Benjamin Moseley, Kirk Pruhs (speaker), Clifford Stein and Rudy Zhou

MONDAY

Session 3B DOTTRINA Conference Room chair: Tjark Vredeveld

15:45-16:10

Scheduling with Machine Conflicts

Moritz Buchem (speaker), Linda Kleist, and Daniel Schmidt genannt Waldschmidt

16:10-16:35

Load Balancing: The Long Road from Theory to Practice

Sebastian Berndt, Max A. Deppert (speaker), Klaus Jansen, and Lars Rohwender

16:35-17:00

Rescheduling with new orders under a maximum completion time disruption constraint

Stefan Lendl, Ulrich Pferschy, Elena Renner (speaker), Fabio Salassa, and Vincent T'kindt

17:00-17:30 coffee break

MONDAY

Parallel sessions: 17:30-18:45

Session 4A OROPA Conference Room chair: Frits Spieksma

17:30-17:55

An Exact Algorithm for the Linear Tape Scheduling Problem

Valentin Honoré, Bertrand Simon (speaker), and Frédéric Suter

17:55-18:20

Additive Approximation Schemes for Load Balancing Problems

Moritz Buchem, Lars Rohwedder, Tjark Vredeveld (speaker), and Andreas Wiese

18:20-18:45

A Primal-Dual and Primal-Greedy Approximation Framework for Weighted Covering Problems

Britta Peis, Niklas Rieken, José Verschae (speaker), Andreas Wierz

MONDAY

Session 4B DOTTRINA Conference Room chair: Kevin Schewior

17:30-17:55

On Flow Shop Scheduling with Job-Dependent Storage Requirements

Alexander Kononov (speaker) and Marina Pakulich

17:55-18:20

Flow Time Scheduling and Prefix Beck-Fiala

Nikhil Bansal, Lars Rohwedder (speaker), and Ola Svensson

18:20-18:45

An Inclusion-Exclusion based algorithm for permutation flowshop scheduling with job precedences

Olivier Ploton (speaker) and Vincent T'kindt

TUESDAY

Parallel sessions: 9:00-10:40

Session 5A OROPA Conference Room chair: Lene M. Favrholt

9:00-9:25

Scheduling with Speed Predictions

Eric Balkanski, Tingting Ou, Clifford Stein, and Hao-Ting Wei (speaker)

9:25-9:50

Non-Clairvoyant Scheduling with Predictions Revisited

Alexander Lindermayr (speaker) and Nicole Megow

9:50-10:15

Contract Scheduling with Predictions

Spyros Angelopoulos (speaker) and Shahin Kamali

10:15-10:40

The rectangle covering bound on the extension complexity of small cut polytopes

Wouter Fokkema (speaker) and Matthias Walter

TUESDAY

Session 5B DOTTRINA Conference Room chair: Łukasz Jeż

9:00-9:25

Randomized Cup Game Algorithms Against Strong Adversaries (SODA '21)

Michael A. Bender and William Kuszmaul (speaker)

9:25-9:50

Multi-Purpose Machine Scheduling: An Application to Smart Cosmetic Manufacturing

Michele Barbato (speaker), Antonio Belotti, Alberto Ceselli, and Giovanni Righini

9:50-10:15

Operating rooms scheduling with a shared resource: a red-blue knapsack modeling approach

Federico Della Croce, Andrea Grosso (speaker), and Vincent T'kindt

10:15-10:40

Using Benders' cuts to backtrack in sports timetabling

David Van Bulck (speaker) and Dries Goossens

10:45-11:15 coffee break

TUESDAY

Parallel sessions: 11:15-12:55

Session 6A OROPA Conference Room chair: Alexander Grigoriev

11:15-11:40

Minimizing Tardiness in a Scheduling Environment with Jobs' Dominance Hierarchy

Michal Sinai (speaker) and Tami Tamir

11:40-12:05

Replacement and Repair of Common Components in Systems Subject to Operations Planning

Gabrijela Obradović (speaker), Ann-Briith Strömberg, and Kristian Lundberg

12:05-12:30

Parameterized Complexity of Single-machine Scheduling with Precedence, Release Dates and Deadlines

Claire Hanen, Maher Mallem (speaker), and Alix Munier Kordon

12:30-12:55

Joint replenishment meets scheduling

Tamás Kis (speaker), Péter Györgyi, Tímea Tamási, József Békési

TUESDAY

Session 6B DOTTRINA Conference Room chair: Franziska Eberle

11:15-11:40

The High-Dimensional Cow-Path Problem

Antonios Antoniadis, Ruben Hoeksma, Sándor Kisfaludi-Bak, and Kevin Schewior (speaker)

11:40-12:05

Probabilistic Real-Time Scheduling

Georg von der Brüggen (speaker), Sergey Bozhko, Kuan-Hsun Chen, Jian-Jia Chen, and Björn B. Brandenburg

12:05-12:30

Restricted Adaptivity in Stochastic Scheduling

Guillaume Sagnol and Daniel Schmidt genannt Waldschmidt (speaker)

12:30-12:55

Data transfer scheduling for deep space exploration

Emmanuel Hebrard (speaker), Christian Artigues, Pierre Lopez, Arnaud Lusson, Steve Chien, Adrien Maillard, and Gregg Rabideau

TUESDAY

Keynote lecture: 16:00-17:00

Session 7 OROPA Conference Room chair: Kirk Pruhs

16:00-17:00

Alessandro Agnetis:
Scheduling machines subject to unrecoverable failures and other related stochastic sequencing problems

17:00-17:30 coffee break

TUESDAY

Parallel sessions: 17:30-18:45

Session 8A OROPA Conference Room chair: Alessandro Agnetis

17:30-17:55

Better Algorithms for Online Bin Stretching via Computer Search

Matej Lieskovský

17:55-18:20

A Multi-Phase Algorithm for Bin Stretching with Stretching Factor below 1.5

Martin Böhm, Matej Lieskovský, Sören Schmitt (speaker), Jiří Sgall, and Rob van Stee

18:20-18:45

Resource Optimization for Program Committee Members: A Subreview Article

Michael A. Bender, Samuel McCauley, Bertrand Simon, Shikha Singh (speaker), and Frédéric Vivien

TUESDAY

Session 8B DOTTRINA Conference Room chair: Alexander Kononov

17:30-17:55

Orthogonal schedules in Round Robin competitions

Roel Lambers (speaker), Jop Briët, Viresh Patel, Frits Spieksma, and Mehmet Akif Yıldız

17:55-18:20

Faster Matchings via Learned Duals

Michael Dinitz, Sungjin Im, Thomas Lavastida, Benjamin Moseley (speaker), and Sergei Vassilvitskii

18:20-18:45

The Power of Amortized Recourse on Online Graph Problems

Hsiang-Hsuan Liu and Jonathan Toole-Charignon (speaker)

WEDNESDAY

Parallel sessions: 9:00-10:40

Session 9A OROPA Conference Room chair: Lars Rohwedder

9:00-9:25

On Hop-Constrained Steiner Trees in Tree-Like Metrics

Martin Böhm, Ruben Hoeksma (speaker), Nicole Megow, Lukas Nölke, and Bertrand Simon

9:25-9:50

On the Extended TSP Problem

Julián Mestre (speaker), Sergey Pupyrev, and Seeun William Umboh

9:50-10:15

Arc-retraversing Solutions to the Traveling Salesman Problem with Drones

Nicola Morandi (speaker), Roel Leus, Hande Yaman

10:15-10:40

Solving a real-life assembly problem with lobster precedence and workforce constraint

Mauro Dell'Amico and Dario Bezzi (speaker)

WEDNESDAY

Session 9B DOTTRINA Conference Room chair: Tami Tamir

9:00-9:25

A $12/7$ -approximation algorithm for the discrete Bamboo Garden Trimming problem

Martijn van Ee

9:25-9:50

On the bamboo garden trimming problem

Felix Höhne (speaker) and Rob van Stee

9:50-10:15

Bamboo Trimming Revisited: Simple Algorithms Can Do Well Too

John Kuszmaul

10:15-10:40

An approximation algorithm for sequencing unreliable jobs on parallel machines with job duplication

Ben Hermans (speaker), Alessandro Agnetis, Mario Benini, Paolo Detti, and Marco Pranzo

WEDNESDAY

Parallel sessions: 11:15-12:55

Session 10A OROPA Conference Room chair: José Verschae

11:15-11:40

Complexity of partitioned scheduling for periodic tasks

Pontus Ekberg (speaker) and Sanjoy Baruah

11:40-12:05

Periodic scheduling with shared resources

Vít Koštejn (speaker) and Jiří Sgall

12:05-12:30

Exact Polynomial Time Algorithm for the Response Time Analysis of Harmonic Tasks

Thi Huyen Chau Nguyen, Werner Grass, and Klaus Jansen (speaker)

12:30-12:55

The Periodic Lock Scheduling Problem

Julian Golak (speaker), Alexander Grigoriev, Freija van Lent, and Tom van der Zanden

WEDNESDAY

Session 10B DOTTRINA Conference Room chair: Michael A. Bender

11:15-11:40

Makespan minimization in tree data gathering networks with memory limits

Joanna Berlińska

11:40-12:05

Static schedules for fault-tolerant transmission

Kunal Agrawal (speaker), Sanjoy Baruah, Alan Burns, Jeremy Fineman, and Zhe Wang

12:05-12:30

Scheduling Messages towards Detecting Monochromatic Pattern on a Bounded Degree Network

Bala Kalyanasundaram (speaker) and Mahe Velauthapillai

12:30-12:55

Data-driven scheduling in serverless computing to reduce response time

Bartłomiej Przybylski, Paweł Żuk (speaker), and Krzysztof Rządca



THURSDAY

Parallel sessions: 9:00-9:50

Session 11A OROPA Conference Room chair: Marcin Bienkowski

9:00-9:25

Paging and the Address-Translation Problem

Michael A. Bender, Abhishek Bhattarcharjee, Alex Conway, Martín Farach-Colton (speaker), Rob Johnson, Sudarsun Kannan, William Kuszmaul, Nirjhar Mukherjee, Don Porter, Guido Tagliavini, Janet Vorobyeva, and Evan West

9:25-9:50

Tight Bounds for Parallel Paging and Green Paging

Kunal Agrawal, Michael A. Bender (speaker), Rathish Das, William Kuszmaul, Enoch Peserico, and Michele Squizzato

THURSDAY

Session 11B DOTTRINA Conference Room chair: Klaus Jansen

9:00-9:25

Filling a Theater During the COVID-19 Pandemic

Danny Blom, Rudi Pendavingh, and Frits Spieksma (speaker)

9:25-9:50

Queuing safely for elevator systems amidst a pandemic

Sai Mali Ananthanarayanan, Charles Branas, Adam N. Elmachtoub, Clifford Stein (speaker), and Yeqing Zhou



THURSDAY

Keynote lecture: 9:55-10:55

Session 15 OROPA Conference Room chair: Jiří Sgall

10:55-11:25

Lene M. Favrholt: Paging and Packing with Possibly Precise Predictions

10:55-11:25 coffee break

THURSDAY

Parallel sessions: 11:25-13:05

Session 12A OROPA Conference Room chair: Sven Jäger

11:25-11:50

Learning-Augmented Dynamic Power Management with Multiple States via New Ski Rental Bounds

Antonios Antoniadis (speaker), Christian Coester, Marek Eliáš, Adam Polak, and Bertrand Simon

11:50-12:15

Speed-Robust Scheduling: Sand, Bricks, and Rocks

Franziska Eberle (speaker), Ruben Hoeksma, Nicole Megow, Lukas Nölke, Kevin Schewior, and Bertrand Simon

12:15-12:40

Balancing Flow Time and Energy Consumption

Sami Davies, Samir Khuller, and Shirley Zhang (speaker)

12:40-13:05

Speed Scaling with Explorable Uncertainty

Evrpidis Bampis, Konstantinos Dogeas, Alexander Kononov, Giorgio Lucarelli (speaker), and Fanny Pascual

THURSDAY

Session 12B DOTTRINA Conference Room chair: Tamás Kis

11:25-11:50

Automatic HBM Management: Models and Algorithms

Daniel DeLayo (speaker), Kenny Zhang, Kunal Agrawal, Michael A. Bender, Jonathan W. Berry, Rathish Das, Ben Moseley, and Cynthia A. Phillips

11:50-12:15

Allocation and pricing of planetarium seats

Freija van Lent (speaker), Julian Golak, and Alexander Grigoriev

12:15-12:40

Scheduling Games With Rank-Based Utilities

Shaul Rosner (speaker) and Tami Tamir

12:40-13:05

Scheduling Games with Machine-Dependent Priority Lists

Vipin Ravindran Vijayalakshmi, Marc Schroder (speaker), and Tami Tamir

THURSDAY

Keynote lecture: 16:00-17:00

Session 13 OROPA Conference Room chair: Clifford Stein

16:00-17:00

Thomas Erlebach:
Explorable Uncertainty and Untrusted Predictions

17:00-17:30 coffee break

Parallel sessions: 17:30-18:45

Session 14A OROPA Conference Room chair: Péter Györgyi

17:30-17:55

Scheduling Parallel Jobs in Two-processor Systems with Energy Constraint

Yulia Zakharova (speaker) and Alexander Kononov

17:55-18:20

The parallel AGV Scheduling Problem with battery constraints: exact and heuristic approaches

Adriano Masone (speaker), Maurizio Boccia, Andrea Mancuso, Claudio Sterle

18:20-18:45

A hybrid local search algorithm for the Continuous Energy-Constrained Scheduling Problem

Roel Brouwer (speaker), Marjan van den Akker, and Han Hoogeveen

THURSDAY

Session 14B DOTTRINA Conference Room chair: Thomas Erlebach

17:30-17:55

Graph burning and non-uniform k -centers for small treewidth

Matej Lieskovský and Jiří Sgall (speaker)

17:55-18:20

Methods for Planning the Search of Infected Nodes in Uncertain Graphs

Benjamín Rubio Orellana (speaker), José Baboun, Isabelle Beaudry, Mauricio Castro, Alejandro Jara, José Verschae

18:20-18:45

Robustification of Online Graph Exploration Methods

Franziska Eberle, Alexander Lindermayr, Nicole Megow, Lukas Nölke, and Jens Schlöter (speaker)