



May 08-10, 2025
Marrakech, Morocco



Program

ECCO'2025 is organized and sponsored by

- University of Lille (France), EURO, Hexaly (France), and EMI (Rabat, Morocco)

Conference chair:

- Prof. El-Ghazali Talbi (Univ. Lille, France)

Organization committee

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- **Program committee**

- Prof. Jacek Blazewicz, Poznań University of Technology, Poland
- Prof. Bo Chen, University of Warwick, UK
- Prof. Van-Dat Cung, Université Grenoble Alpes, France
- Prof. Alain Hertz, Polytechnique Montréal, Canada
- Prof. Silvano Martello, Università di Bologna, Italy
- Prof. El-Ghazali Talbi (chair), University of Lille, France
- Prof. Greet Vanden Berghe, KU Leuven, Belgium
- Prof. Paolo Toth, Università di Bologna, Italy

Program at a glance

Thursday, May 08

08:30	Registration
08h50	Opening : El-Ghazali TALBI & Silvano MARTELLO
9h00	Room "1" Session Packing & Covering (chair: Alberto Locatelli)
10h40	Coffee break
11h10	Keynote Prof. Juan-Jose Salazar-Gonzalez (Universidad de La Laguna, Tenerife, Spain) Travelling Salesman Problems with Time Consistency Chair : Jacek Blazewicz
12h10	
14h30	Room "1" Session Applications (chair: Jacek Blazewicz)
15h50	Coffee break
16h20	Room "1" Keynote Dr. Julien DARLAY (Hexaly, France) Hexaly, a new kind of global optimization solver Chair : El-Ghazali Talbi
17h20	Room "1" Session Networks (Chair: Bo Chen)

Friday, May 09

9h00	Room "1" Session Routing (chair: Said Dabia)	Room "2" Session Scheduling & Planning (chair: Jurgen Zimmermann)
10h40	Coffee break	
11h10	Room "1" Session Matching and flows (chair: Van Dat Cung)	Room "2" Session Cutting (chair: Franklin Djeumou Fomeni)
12h30		
14:30	Room "1" Session Metaheuristics (chair: Jin-Kao Hao)	Room "2" Session Bioinformatics (chair: Marta Szachniuk)
16:10	Coffee Break	
16:40	Keynote Prof. Suresh Sethi (University of Texas, Dallas, USA) Integer Programming Approaches to Forecast Horizons in Dynamic Lot-Size Problems and Extensions Chair : Silvano Martello	
19h30	Banquet	

Saturday, May 10

9h30	Room "1" Session Location & Assignment (chair: Greet Vanden Berghe)
11h10	Coffee break
11h40	Keynote Prof. Luis Gouveia (Department of Statistics and Operations Research, Faculty of Sciences of the University of Lisbon, Centre of Mathematical Studies of the University of Lisbon CEMS-UL) Models for the Hamiltonian p-Median Problem Chair : Pablo Toth
12h40	Closing of the conference

Detailed program: Thursday, May 08

08h30 - 09h00 Registration

08h50 - 09h00 **Opening Session Room "1"** El-ghazali Talbi & Silvano Martello

09h00 – 10h40 Room "1"

Session **Packing & Covering** (chair: Alberto Locatelli)

- Mathematical formulations for the robust bin packing problem with fragile objects
Alberto Locatelli, Heloisa Vasques da Silva, Silvio Alexandre de Araujo, Manuel Lori
 - Highly effective exact algorithms for solving two-dimensional packing problems
Roberto Baldacci, Sunkanghong Wang, Fabio Furini, Lijun Wei, Qiang Liu
 - An open-source heuristic for the 2D irregular strip packing problem: reproducible, robust & resounding performance
Jeroen Gardeyn, Tony Wauters
 - Variable fixation on an extension of the vertex cover problem
Juanjo Peiro, Juan F. Correcher, Mercedes Landete, Hande Yaman
 - Mathematical formulations for the robust bin packing problem with fragile objects
Alberto Locatelli
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10h40 – 11h10 – Coffee break

11h10 – 12h10 Room "1"

Keynote Prof. Juan-Jose Salazar-Gonzalez (Universidad de La Laguna, Tenerife, Spain)

Travelling Salesman Problems with Time Consistency

Chair : Jacek Blazewicz

Detailed program: Thursday, May 08

14h30 - 15h50 Room "1"

Session **Applications** (chair: Jacek Blazewicz)

- A column generation approach for the routing of electricity technicians
Elise Bangerter, David Schindl, Meritxell Pacheco Paneque
- Memory-based ruin-and-recreate heuristics for the fixed charge transportation problem
Gavin Le Roux, Stephan Visagie
- Towards a sustainable textile industry: An optimization model for integrated supply chains
Mohammad Aghelinejad, Eric Papain, Lionel Amodeo
- Satellite image selection problem and some exact solutions
Jedrzej Musial, Sylwester Swat, Tomasz Zok, Maciej Antczak, Jacek Blazewicz

15h50 – 16h20 – Coffee break

16h20 – 17h20 Room "1"

Keynote Dr. Julien DARLAY (Hexaly, France)

Hexaly, a new kind of global optimization solver

Chair : El-Ghazali Talbi

17h20 – 18h00 Room "1"

Session **Algorithms** (chair: Bo. Chen)

- Sequential Voting and the Condorcet Jury Theorem
Bo Chen
- Polynomial-time approximation schemes for locally checkable problems on planar graphs
Carolina Gonzalez

Detailed program: Friday, May 09

9h00 – 10h40 Room “1”

Session **Routing** (chair: Said Dabia)

- MILP and branch and bound approaches to the load-dependent hazardous materials vehicle routing problem
Rajan Batta, Rahul Bharadwaj Ravishankar
- An exact algorithm for the vehicle routing problem with private fleet and common carrier
Said Dabia
- Formulation for the traveling salesman problem with time windows: Solving most of the symmetric test instances to optimality with an optimizer
Gozde Onder Uzun, Imdat Kara, Baris Kececi
- On integration of the extended mathematical programming formulations for the travelling salesman and vehicle routing problems
Konstantin Pavlikov
- From simulation to reality; safe and efficient urban air mobility operations for Istanbul city
Abdullah Osman, Murat Ermis

09h00 – 10h40 Room “2”

Session **Scheduling and planning** (chair: Jurgen Zimmermann)

- Do UEFA and FIFA minimize travel distances? An optimization approach to schedule their main tournaments
Mario Guajardo
- A branch-and-bound procedure for maximizing the projects net present value under fixed earliness penalties
Lena Wohler, Jurgen Zimmermann
- Maximizing phylogenetic diversity under time pressure: Planning with imminent extinctions
Jannik Schestag, Mark Jones
- A distributionally robust optimization approach for multi-level and multi-period disassembly planning under lead time uncertainty
Ilhem Slama, Zied Jemai, Evren Sahin
- Stochastic Quay Partitioning Problem
Maciej Drozdowski, Jakub Wawrzyniak, Eric Sanlaville

10h40 – 11h10 – Coffee break

Detailed program: Friday, May 09

11h10 - 12h30 Room "1"

Session **Matching and flows** (chair: Van Dat Cung)

- Solving a domestic waste collection problem using a 2-commodity flow relocation model
Van-Dat Cung, José Luis Figueroa Gonzalez
- Characteristics of a generous maximum matching
Elad Shufan, Hugai Ilani, Lior Aronshtam
- The wildfire safety paths problem
Marta Pascoal, Filipe Alvelos
- Balancing environmental and economic goals in intermodal network design: Insights from variable neighborhood search
Mustapha Oudani

11h10 - 12h30 Room "2"

Session **Cutting** (chair: Franklin Djeumou Fomeni)

- Approximating the strength of higher level RLT inequalities in the first level RLT space for polynomial 0-1 programs
Franklin Djeumou Fomeni
- A branch-price-and-cut algorithm for the kidney exchange problem
Claudia Archetti, Diego Cattaruzza, Maxime Ogier, Matteo Petris, Frédéric Semet
- A branch-and-cut algorithm for the quadratic knapsack problem
Eliass Fennich, Willem-Jan van Hoeve, Leandro Coelho, Franklin Djeumou Fomeni
- Cutting planes, column generation and decomposition with interior point methods
Jacek Gondzio

Detailed program: Friday, May 09

14h30 – 16h10 Room “1”

Session **Metaheuristics** (chair: Jin-Kao Hao)

- Q-learning enhanced particle swarm optimization for dynamic parameter adaptation: Application to the multidimensional knapsack problem
Fakhita Eddaoudi, Halima Lakhbab, Mohamed Naimi
- Hyperparameter optimization for machine learning in Python
[Vojtěch Vávra](#)
- Robust multi-objective optimization for bicycle rebalancing in shared mobility systems
Diego Daniel Pedroza-Perez, Jamel Toutouh, Gabriel Luque, Sergio Nesmachnow
- A multi-population hybrid genetic algorithm for the capacitated location routing problem
Jin-Kao Hao, Pengfei He, Qinghua Wu
- Comparative study of routing methods in internet networks with QoS
Nawal Bourquia

14h30 – 16h10 Room “2”

Session **Bioinformatics** (chair: Marta Szachniuk)

- Analysis and classification of multiple junctions in RNA structures
Marta Maćkowiak
- Enumerating Valid RNA Pseudoknot Order Assignments: A Constraint Programming Approach
Tomasz Żok
- GrassSV – hybrid method to detect structural variants
Aleksandra Swiercz, Dominik Witczak, Jacek Blazewicz
- RNA 3D structure inference powered by graphs
Marta Szachniuk, Maciej Antczak, Marek Justyna
- Optimizing RNA 3D Structure Assessment with Graph Neural Networks
Bartosz Adamczyk

16h10 – 16h40 – Coffee break

16h40 – 17h40 Room “1”

Keynote Prof. Suresh Sethi (University of Texas, Dallas, USA)

Integer Programming Approaches to Forecast Horizons in Dynamic Lot-Size Problems and Extensions

Chair : Silvano Martello

Detailed program: Saturday, May 10

9h30 – 11h10 Room “1”

Session **Location & Assignment** (chair: Greet Vanden Berghe)

- Optimal charging station placement and network expansion within European low-voltage distribution networks
Bryan Coulier, Hatice Calik, Thijs Becker, Greet Vanden Berghe
- Multi-objective optimisation of electric ground support equipment assignment with partial charging: Applied case study
Alexandre Dupauquis, Ronan Guivarch, Sandrine Mouysset, Daniel Ruiz, Frédéric Bouilhaguet
- Mathematical formulation for bicycle sharing systems with heterogeneous rebalancing vehicles
Ipek Damla Akpınar, Baris Kececi
- Optimal design of hybrid multigeneration systems via stochastic programming
Patrizia Beraldi, Angelo Algieri, Nazmi Sener
- A Benders decomposition approach for the clustered hierarchical hub location problems
Yerlan Kuzbakov, Laurent Alfandari

11h10 – 11h40 – Coffee break

11h40 – 12h40 Room “1”

Keynote Prof. Luis Gouveia (Department of Statistics and Operations Research, Faculty of Sciences of the University of Lisbon, Centre of Mathematical Studies of the University of Lisbon CEMS-UL)

Models for the Hamiltonian p-Median Problem

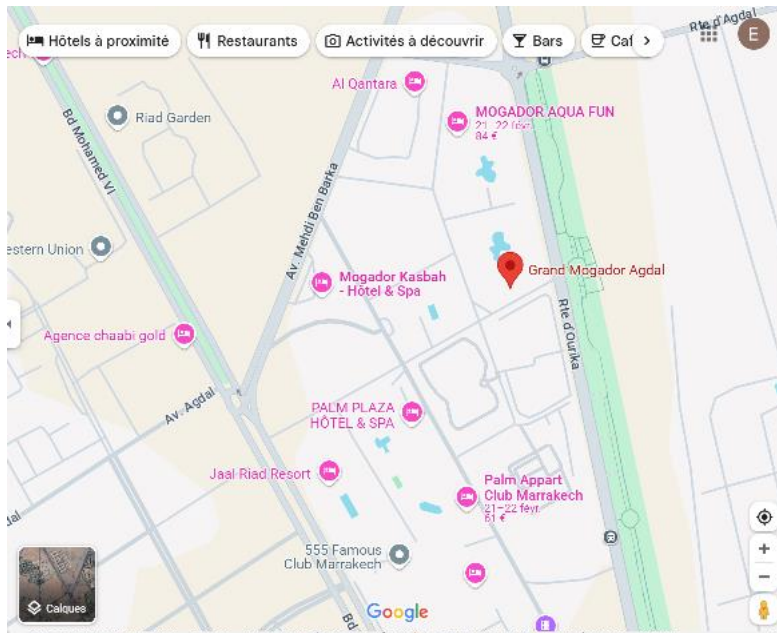
Chair : Paolo Toth

12h40 – 13h00 Room “1”

Closing of the conference

Conference location

Hotel Grand Mogador Agdal



Banquet

Chez Ali Restaurent

Experience an evening of Moroccan hospitality with a dinner show in Berber tents at a restaurant on the outskirts of Marrakech.

You will have a meal of Moroccan cuisine. Then the entertainment begins with performances by belly dancers, acrobats, and more, complete with fireworks and traditional folk music.

