

OLA'2024 Int. Conf. on Optimization & Learning
Dubrovnik, Croatia
May 13–15, 2024



May 13-15, 2023
Dubrovnik, Croatia



Program

OLA'2024 is organized by

- RIT (Croatia) and University of Lille (France)

Conference chair

- Dr. Martin Zagar (RIT, Croatia)

Conference program chair

- Prof. Amir Nakib (University of Paris Est, France)

Workshops / Invited sessions chair

- Dr. Grégoire Danoy (University of Luxembourg, Luxembourg)

Conference steering committee chair

- Prof. El-Ghazali Talbi (University Lille & INRIA, France)

Finance chairs

- Prof. Amir Nakib (University of Paris Est, France)
- Prof. Rachid Ellaia (EMI, Mohamed V University in Rabat, Morocco)

Proceedings chair

- Prof. Bernabé Dorronsoro (University of Cadiz, Spain)

Organization committee

- Mrs. Ivona Labas (RIT, Croatia)
- Mrs. Barbara Perić (RIT, Croatia)
- Dr. Kristina Šorić (RIT, Croatia)
- Prof. R. Ellaia (EMI, Mohamed V Univ. in Rabat, Morocco)

Publicity chair

- Dr. Juan J. Durillo (Leibniz Supercomputing Center)
- Dr. Grégoire Danoy (Univ. Luxembourg, Luxembourg)
- Dr. Javier Ferrer (University of malaga, Spain)

Program committee

- Lionel Amodeo (Université de Technologie de Troyes, UTT, France)
- Taha Arbaoui (Université de Technologie de Troyes, UTT, France)
- Mehmet-Emin Aydin (University of Bedfordshire, UK)
- Mathieu Balesdent (ONERA, France)
- A. A-H. Benyamina (University of Oran, Algeria)
- Pascal Bouvry (University of Luxembourg, Luxembourg)
- Claudia Cavallaro (University of Catania, Italy)
- Francisco Chicano (University of Malaga, Spain)
- Christian Cintrano (University of Malaga)
- Zakaria Dahi (University of Malaga, Spain)
- Grégoire Danoy (Universiy of Luxembourg, Luxembourg)
- Javier del Ser (TECNALIA, Spain)
- Patrick De Causmaecker (KU Leuven, Belgium)
- Krisana Chinnasarn (Burapha University, Thailand)
- Rachid Ellaia (EMI, Univ. of Rabat, Morocco)
- Eneko Osaba Icedo (Tecnalia, Spain)
- Gonzalo Mejia Delgadillo (Pontificia Universidad Católica de Valparaíso, Chile)
- Bernabe Dorronsoro (Universidad de Cadiz, Spain)
- Teodoro Macias Escobar, Technological Institute of Ciudad Madero (Mexico)
- Bogdan Filipic (Jožef Stefan Institute, Slovenia)

- Hamamache Kheddouci (Univ. Lyon, France)
- Peter Korosec (Jožef Stefan Institute Ljubljana, Slovenia)
- Andrew Lewis (Griffith University, Australia)
- Gabriel Luque (University of Malaga, Spain)
- Francisco Luna (University of Malaga, Spain)
- Roberto Magán-Carrión, University of Cádiz (Spain)
- Renzo Massobrio, University of the Republic (Uruguay)
- Nouredine Melab (University Lille, France)
- Edmondo Minisci (University of Strathclyde, UK)
- José Ángel Morell (University of Malaga, Spain)
- Amir Nakib (University of Paris Est Créteil, France)
- Antonio J. Nebro, University of Málaga (Spain)
- José Manuel García-Nieto, University of Málaga (Spain)
- Sergio Nesmachnow, University of the Republic (Uruguay)
- Gregor Papa (Jožef Stefan Institute, Slovenia)
- Mario Pavone (University of Catania, Italy)
- Helena Ramalinho (Universitat Pompeu Fabra, Barcelona, Spain)
- Rubén Saborido (University of Malaga, Spain)
- Roberto Santana (University of the Basque Country, Spain)
- Alejandro Santiago, Polytechnic University of Altamira (Mexico)
- Nadiya Schvai (Cyclope.ai, France)
- Andrei Tchernykh (CICESE, Mexico)
- Jamal Toutouh (University of Malaga, Spain)
- Alice Yalaoui (Université de Technologie de Troyes, UTT, France)
- Farouk Yalaoui (UTT, Troyes, France)
- Xin-She Yang (Middlesex University London, UK)

Program at a glance

Monday, May 13rd

9h00	Room "1" Registration	
9h30	Room "11" Opening (I. Labas & E-G. Talbi)	
9h40	Room "11" Session Deep Learning (chair: A. Nakib)	Room "15" Session Evolutionary and Swarm Algorithms (chair: B. Dorronsoro)
11h00	Coffee Break & Poster presentations Room "1"	
11h30	Room "11" Session Reinforcement Learning & Game Theory (chair: F. Perotto)	Room "15" Session Applications of Machine Learning (chair: E. Monfroy)

Tuesday, May 14th

9h30	Room "11" Session Multi-objective Optimization (chair: B. Filipic)	Room "15" Session Applications of Machine Learning (chair: R. Ellaia)
10h50	Coffee break & Poster presentations Room "1"	
11h30	Room "11" Session Parallel Optimization (chair: N. Melab)	
12h50		
	Free time	
19h00	Banquet – 7 pm	

Wednesday, May 15th

9h50	Room "11" Session Logistics and Transportation (chair: H. Kheddouci)	
10h50	Coffee break & Poster presentations Room "1"	
11h30	Room "11" Session Learning for Optimization (chair: A. Quilliot)	
12h30	Conference closing	

Detailed program: Monday, May 13rd

9h00 - 9h30 Registration

9h30 - 9h40 Opening Session Room "11"

Mrs. Ivona Labas (Croatia) & Prof. El-Ghazali Talbi (France)

9h40 – 11h00 Room "11"

Session Deep learning (chair: A. Nakib)

- Neural Architecture Tuning: A BO-Powered NAS Tool
Housseem Ouertatani, Cristian Maxim, Smail Niar, El-Ghazali Talbi
 - NeuroLGP-SM: A Surrogate-assisted Neuroevolution Approach using Linear Genetic Programming
Fergal Stapleton, Brendan Cody-Kenny, Edgar Galvan
 - A Benchmark for Missing Data Imputation Techniques: development perspectives and comparative of performance
Juan-Francisco Cabrera-Sánchez, Carlos Cruz-Corona, Andrés Yáñez Escolano, Esther-Lydia Silva-Ramírez
 - Through Optimal Vision Transformer architectures based on metaheuristics
Amir Nakib
-

9h40 – 11h00 Room "15"

Session Evolutionary and swarm algorithms (chair: B. Dorronsoro)

- Automatic Software Performance Optimization using Genetic Algorithms
Jose Miguel Aragon-Jurado, Juan Carlos de la Torre, Patricia Ruiz, Bernabe Dorronsoro
 - Biologically-Inspired Algorithms for Adaptive Non-Player Character Behavior in Video Games
Sina Alizadeh, Malek Mouhoub
 - A Proposal of Evolutionary Hyperheuristics Ecosystem
Masaharu Munetomo, Haruki Shimizu, Rui Zhong
 - Nature-Inspired Techniques for Combinatorial Reverse Auctions in Electricity Consumption
Sifat Jahan, Malek Mouhoub, Mehdi Sadeghilalimi
-

11h00 – 11h30 – Coffee break & poster presentation – Room "1"

Session Reinforcement learning & game theory (chair: F. Perotto)

- Approaching Single-Episode Survival Reinforcement Learning with Safety-Threshold Q-Learning
Filipo Perotto, Melvine Nargeot, Aymane Ouahbi
- Tabu Tenure Policy with Deep Reinforcement Learning
Anna Konovalenko, Lars Magnus Hvattum, Swati Aggarwal
- Evidence on the regularisation properties of Maximum-Entropy RL
Rémy Hosseinkhan Boucher, Onofrio Semeraro, Lionel Mathelin
- Optimisation-based classification tree: A game theoretic approach to group fairness
Georgios I. Liapis, Lazaros G. Papageorgiou
- Learning Estimators for Energy Management
Alain Quilliot

Session Applications of machine learning (chair: E. Monfroy)

- Optimizing Object Detection Training Over Diverse Datasets
Pramit Dutta, Edgar Galvan, John McDonald
- Feature Selection Based on Membrane Clustering
Sharmin Sultana Sheuly, Johannes Deivard, Tiberiu Seceleanu, Ning Xiong
- Patient Visits Forecasting in the Post-Pandemic Era at Emergency Departments
Nicolas HAXAIRE, Farah Mourad-Chehade, Alice Yalaoui
- Robust Models for Learning Languages
Tomasz Jastrzb, Frdric Lardeux, Eric Monfroy

Detailed program: Tuesday, May 14th

9h30 - 10h50 Room "11"

Session **Multi-objective optimization** (chair: B. Filipic)

- A Bayesian Optimization Approach to Algorithm Parameter Tuning in Constrained Multiobjective Optimization
Jordan Cork, Bogdan Filipic
- Battery Management Strategies Optimization for Urban Plug-in Hybrid Buses
Patricia Ruiz, Jose Miguel Aragon-Jurado, Juan Francisco Cabrera, Juan Carlos de la Torre, Bernabe Dorronsoro
- A Multi-objective Clustering Algorithm Integrating Intra-clustering and Inter-clustering Measures
Beatriz Flámia Azevedo, Ana Maria A. C. Rocha, Ana I. Pereira
- A Multi-Objective Metaheuristic Applied to the Airborne Wind Energy Farm Layout Problem
Rui Carvalho da Costa, Luís A.C. Roque, Luís Tiago Paiva, Manuel C.R.M. Fernandes, Dalila B.M.M. Fontes, Fernando A.C.C. Fontes

9h30 - 10h50 Room "15"

Session **Applications of machine learning** (chair: R. Ellaia)

- S3EA: A Self-Supervised Stacked Ensemble Framework for Robust Anomaly Detection to Reduce False Alarms
Sarala M Naidu, Ning Xiong
- Machine Learning Applications in road safety: A Comprehensive Review
Ilyas Modni, Zoubida Chorfi, ABDELAZIZ BERRADO
- HOTS : A containers resource allocation hybrid method using machine learning and optimization.
Etienne Leclercq, Jonathan Rivalan
- JaxDecompiler: Redefining Gradient-Informed Software Design
Pierrick Pochelu

10h50 – 11h30 Coffee break & poster presentation – Room "1"

Session **Parallel Optimization** (chair: N. Melab)

- A Parallel Surrogate Approach for High-Dimensional Constrained Optimization with Discrete Variables
Rommel Regis
- Parallel Strategies for Iterative Kriging-Based Surrogate Model Optimization: Bayesian Inference in Engineering Simulations
Yunus Emre Sunay, Nilay Sezer-Uzol
- A Parallel Genetic Algorithm for Qubit Mapping on Noisy Intermediate-Scale Quantum Machines
Jérôme Rouzé, Melab Nouredine, Daniel Tuytens
- GPU Computing in Chapel: Application to Tree-Search Algorithms
Guillaume Helbecque, Ezhilmathi Krishnasamy, Nouredine Melab, Pascal Bouvry

Detailed program: Wednesday, May 15th

9h50 - 10h50 Room "11"

Session **Logistics and transportation** (chair: H. Kheddouci)

- The Capacitated Vehicle Routing Problem with Pickup and Delivery using Suppliers for single and multiple commodities
Damien Blanchard, Hamamache Kheddouci
- Solving a shareable-setup time prize collection VRP applied to an electrical maintenance sector
Roberto Tavares, Arineia Nogueira, Mario Batalha, Roberto Martins, Herick Morales, Rafael Seeberger, Gustavo Mendonca, Mauro Goncalves
- A Constraint Programming Approach for the Preference Tourist Trip Design Problem
Stephanie Riff, Carlos Castro, Eric Monfroy

10h50 – 11h30 – Coffee break and poster presentations – Room "1"

11h30 - 12h30 Room "11"

Session **Learning for optimization** (chair: A. Quilliot)

- An hybrid approach based on Graph Attention Network for the Team Orienteering Problem
Iván Guillermo Peña-Arenas, Rym Nesrine Guibadj, Cyril Fonlupt
- Learning Insertion Patterns to Enhance Operational Efficiency in Large-Scale Dial-a-Ride Systems
Chijia LIU, Alain Quilliot, Hélène Toussaint, Dominique Feillet
- Selecting the Most Relevant Objectives Using Data Mining: A Real-World Case Study
António Gaspar-Cunha, Wagner Galuppo, Miguel Nóbrega, Francisco Monaco, Alexandre Delbem

Video presentations

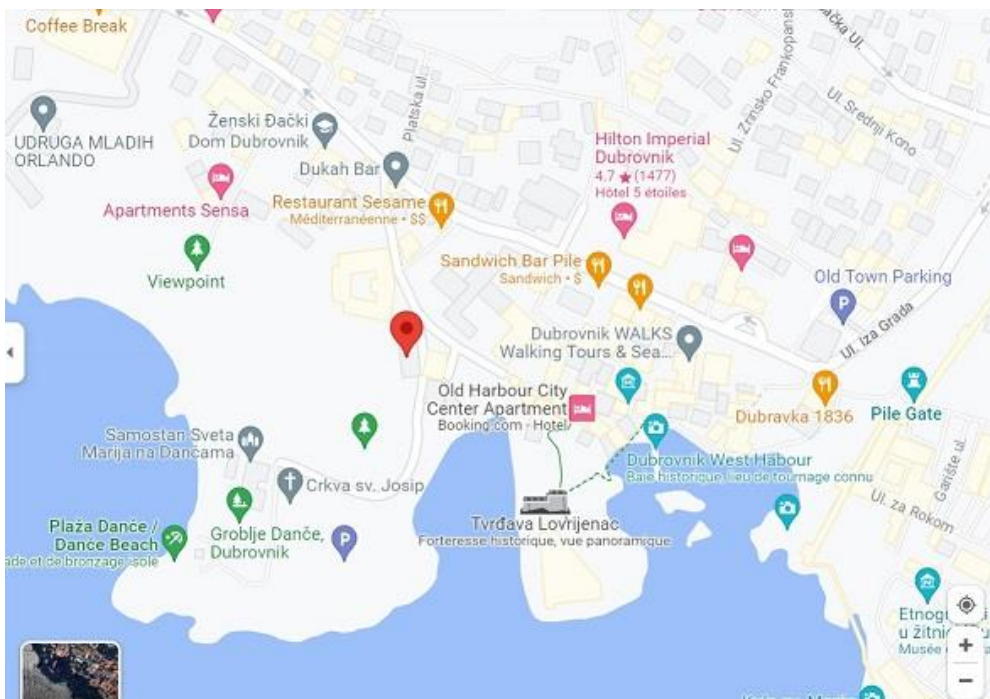
- Adapted Q-learning for the Blocking Job Shop Scheduling Problem
Rihane Karima, Dabah Adel, AitZai Abdelhakim
- On the Organization Network Analysis
Mohammed LALOU, KHEDDOUCI Hamamache
- Benchmarking the operational efficiency of major container ports using machine learning and bootstrap DEA
Jose Humberto Ablanado-Rosas
- How is the objective function of the Feature Selection problem formulated?
Felipe Cisternas-Caneo, José Barrera, Broderick Crawford, Ricardo Soto, Mariam Gómez Sánchez, José Gomez-Pulido, Alberto Garces
- Adaptive greedy heuristic algorithm for rubber tyred gantry crane scheduling problem at container terminal
Saber ben Zina
- Optimization of Hydro Generation and Load Forecasting Based on LSTNet
Xingbang Du, Enzhi Zhang
- Flexible Routing Strategies Based on Heuristic Approaches for Optimizing Last-Mile Delivery
Mohamed-Ali Ejjanfi, Jamal Benhra
- Contribution to Forecasting Demand and Occupancy for Smart Lockers in the Context of Last-Mile Delivery
Mohamed-Ali Ejjanfi, Jamal Benhra, Hamza El kassimi El alaoui
- Fractal Decomposition Algorithm with Bipartite Binarization
Marcelo Becerra-Rozas, Javier Peña, Thomas Firmin, Broderick Crawford, Ricardo Soto, El-Ghazali Talbi, Giovanni Giachetti

Poster presentations (A1 format)

- Collaborative Smart Agriculture: Leveraging Technology and Community Partnerships to Improve Crop Yields and Sustainability- A Case Study
Dua Weraikat, Martin Zagar, Kristina Soric
- Data-driven Learning for the Nurse Scheduling Problem
Aymen Ben Said, Malek Mouhoub
- Advancing Road Safety Metrics: Exploring Index construction
EL KHALAI IBTISSAM, Zoubida Chorfi, ABDELAZIZ BERRADO
- A Multi-Objective Approach for Assessing Environmental Responsibility in the Textile and Clothing Industry Supply Chain
Eric Papain MEZATIO, Mohammad Mohsen AGHELINJAD, Lionel Amodeo, Isabelle Ferreira

Conference location

Don Frana Bulića 6, 20 000 Dubrovnik, Croatia



Banquet

Restaurnt Dubravka

Brsalje no. 1, 20 000 Dubrovnik, Croatia



