

OLA'2025 Int. Conf. on Optimization & Learning

April 23-25, 2025, Dubai



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Dubai, UAE



Program

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- Jamal Toutouh (University of Malaga, Spain)
- Farouk Yalaoui (UTT, Troyes, France)
- Xin-She Yang (Middlesex University London, UK)

Program at a glance

Wednesday, April 23rd

9h00	Room "B004" Registration	
9h50	Room "B004" Opening (E-G. Talbi)	
10h00	Room "B004" Session Learning & Optimization (chair: Prof. P. Larranaga)	Room "H002" Session Evolutionary and Swarm Algorithms (chair: B. Dorronsoro)
11h20	Coffee Break	
11h50	Room "B004" Session Quantum optimization (chair: G. Kochenberger)	Room "H002" Session Applications of Machine Learning (chair: D. Weraikat)

Thursday, April 24th

10h	Room “B004” Session Deep Learning and LLMs (chair: A. Nakib)	Room “H002” Session Optimization (chair: M. Wiecek)
11h20	Coffee break	
11h50	Room “B004” Panel discussion “Beyond intelligence – AI, AGI and Optimization J. Turner, F. Glover, G. Kochenberger, C. Ayuso Entanglement Inc., USA	
	Free time	
19h00	Banquet – 6:30 pm	

Friday, April 25th

10h	Room “B004” Session Optimization (chair: G. Danoy)	Room “H002” Session Scheduling, Logistics and transportation (chair: R. Ellaia)
11h20	Coffee break	
11h50	Room “B004” Session Learning and Optimization (chair: E. Monfroy)	Room “H002” Session Application of Machine Learning (chair: S. Mahmoudi)
13h10	Conference closing	

Detailed program: Wednesday, April 23rd

9h00 - 9h50 Registration

9h50 - 10h00 Opening Session Room "B004"

Prof. El-Ghazali Talbi (France)

10h00 – 11h20 Room "B004"

Session **Learning & optimization** (chair: Prof. P. Larranaga)

- Estimation of Gaussian Process Algorithm
Daniel Conde, Pedro Larrañaga, Concha Bielza
 - Gradient Descent as a Metaheuristic: Simulation-Based Shape Optimization Use Case
Rok Hribar, Gregor Papa
 - Generation of Heuristics for the Quadratic Assignment Problem Using Genetic Programming
Julien Canitrot-paradis, Murat Afsar, Jean-Yves Pierron, Chokri Mraidha
 - Enhancing AutoML with Algorithm Selection: A Path to Better Performance
Yinuo Guo, Mustafa MISIR, Zhongyi Hu
-

10h00 – 11h20 Room "H002"

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

- Automatic Generation of Greener Software Program Versions with Genetic Algorithms
Jose Miguel Aragon-Jurado, Juan Carlos de la Torre, Patricia Ruiz, Bernabe Dorronsoro
 - Evolutionary Techniques for Combinatorial Reverse Auctions in Electricity Consumption
Sifat Jahan, Malek Mouhoub
 - Optimal Garbage Collection Routes for Electrified Fleets
David Peña Morales, Bernabe Dorronsoro, Patricia Ruiz
 - Mother Tree Optimization Algorithm for Feature Selection
Wael Korani, Malek Mouhoub
-

11h20 – 11h50 – Coffee break

Session Quantum optimization (chair: G. Kochenberger)

- **HyperIntelligence: A Quantum-Inspired Optimization Framework for Scalable and Efficient AI Training**
Catherine Ayuso
- **Modeling the LABS problem in QUBO**
Eric Monfroy, Philippe Codognet, Salvador Abreu
- **A Genetic algorithm to automatically design quantum circuits**
Rania Bouhadouza, Romaissa Ghib, Faicel Hnaïen, Hasan Murat Afsar, Nabila Djennane, Leila Charabi
- **Exhaustive Search for Quantum Circuit Optimization using ZX Calculus**
Tobias Fischbach, Pierre Talbot, Pascal Bouvry

Session Applications of machine learning (chair: D. Weraikat)

- **Optimizing Supplier Performance: Advanced Analytics and Predictive Modeling Approaches**
Dua Weraikat, Sarah Al Zaied, Faisal Issa, Tala Hassouna
- **Testing artificial neural networks using bootstrap data envelopment analysis to estimate the operational efficiency of container ports**
Jose Humberto Ablanado-Rosas
- **Knowledge Management Methodology for Complex context. The Defence case**
Ioana Filipas-Deniaud, François Marmier, Punita Raj, Bertrand Rose, Valentin Drouillard, Déborah Lejuste
- **Non-Linear Interpretation of Black-Box Models**
Amir Gohari, Mikhail Nediak

Detailed program: Thursday, April 24th

10h00 - 11h20 Room "B004"

Session **Deep learning and LLMs** (chair: A. Nakib)

- Enhancing Academic Advising with AI: Leveraging Large Language Models and Retrieval-Augmented Generation for Smarter Student Support
Abdul-Rahman Mawlood-Yunis
- SFL-ID - Secure Federated Learning: model compression and Inverse Distillation
Xavier Lessage, Saïd Mahmoudi, Mathis Delehouzée, Tanguy Vansnick, Mohammed Benjelloun, Leandro Collier, Michaël Rotulo
- On Hyperparameter Optimization of GAN-based Generative Models in Recommendation Systems: A Comparative Study and Applications
Sanae Filali Zegzouti
- Integrated Deep Learning Approaches for Coral Health Monitoring and Database Development
Dua Weraikat, Febin Antony, Sabrina Albukhari

10h00 - 11h20 Room "H002"

Session **Optimization** (chair: Prof. M. Wiecek)

- Solving the Semivectorial Bilevel Hazmat Network Design Problem by a Deconstructive Heuristic Algorithm
José-Fernando Camacho-Vallejo, José E. Gómez-Rocha
- A multi-objective approach for the green non-permutation flow-shop scheduling with time-of-use energy tariffs
Nesrine Moukebel, Mouna Lebazda, Taha Arbaoui, Malek Masmoudi, Karima Benatchba
- A Hybrid Approach for Pallet Loading in Ceramic Tile Industry
Taccini Marco, Matheus Aguilar de Oliveira, André Gustavo Dos Santos, Thiago Alves De Queiroz, Manuel Iori
- Applying Performance Indicators in Online Multiobjective Optimization
Margaret Wiecek, Kristen Savary Joyce

11h20 – 11h50 Coffee break

11h50 - 13h10 Room "B004"

Panel discussion "Beyond intelligence – AI, AGI and Optimization"
J. Turner, F. Glover, G. Kochenberger, C. Ayuso
Entanglement Inc., USA

Detailed program: Friday, April 25th

10h00 - 11h20 Room "B004"

Session **Optimization** (chair: G. Danoy)

- **Generating Lower-Bound Computation Strategies in a Branch and Bound Algorithm: Application to the Permutation Flowshop Scheduling Problem**
Alisa Vorokhta, Gwen Maudet, Gregoire Danoy
- **Exact versus Bio-Inspired Approximation Methods for Solving Constrained CP-nets**
Malek Mouhoub, Sina Alizadeh, Sifat Jahan
- **Optimizing Retail Promotions with Mixed-Integer Nonlinear Programming and Cross-Elasticity Effects**
Uma G, Srividhya Sethuraman, Sharadha Ramanan
- **Chance Constrained Optimization with Complex Variables**
Raneem Madani, Abdel Lisser

10h00 - 11h20 Room "H002"

Session **Scheduling, Logistics and transportation** (chair: R. Ellaia)

- **A comparative analysis of the algorithm results for designing two-stage supply chains with fixed costs**
Petrica Pop Sitar, Corina Pop Sitar, Adrian Petrovan
- **Solving the Electricity Technician Dispatch Problem**
Haifa Zaidi, Malek Mouhoub
- **Systematic Review of Machine Learning (ML) and Artificial Intelligence (AI) in Pharmaceutical Supply Chain (PSC) Resilience: Identifying Gaps and Future Research Directions**
Dua Weraikat, Shireen Al-Hourani
- **Data-Driven Transportation Forecast: A Real Case Study**
Dua Weraikat, Kristina Soric, Sadeq Damrah

11h20 – 11h50 – Coffee break

11h50 - 13h10 Room "B004"

Session **Learning & optimization** (chair: E. Monfroy)

- **Three Stage Metaheuristic Framework with RL**
Francesca Guerriero, Francesco Paolo Saccomanno
- **KAN-based On-policy PPO Method for Continuous Reinforcement Learning**
Bayeh Ali, Mouhoub Malek, Sadaoui Samira
- **Chaotic Binarization of Tasmanian Devil Optimization for Solving the Knapsack Problem**
Felipe Cisternas-Caneo, José Barrera, Broderick Crawford, Ricardo Soto, Giovanni Giachetti, Eric Monfroy
- **NEVA: A Neuromorphic Evolutionary Algorithm**
El-Ghazali Talbi, Nathan Bouvier

11h50 - 13h10 Room "H002"

Session **Applications of machine learning** (chair: S. Mahmoudi)

- **Almost Linear Time Consistent Mode Estimation and Quick Shift Clustering**
Sajjad Hashmian
- **Overlay_dx - Automating forecasting evaluation**
Long H. Ngo, Mohammed Amine Chamli, Jonathan Rivalan, Thomas Jaillon
- **Optimization-Driven Clustering for Personalized Stroke Recovery Trajectories: A Multi-Algorithm Approach**
Moad Hani, Said Mahmoudi, Mohammed Benjelloun, NACIM BETROUNI, Régis Bordet
- **Modeling Trust Dynamics on a Multi-Agent System**
Angelo Cangelosi, Carolina Crespi, Mario F. Pavone, Marta Romeo

Video presentations

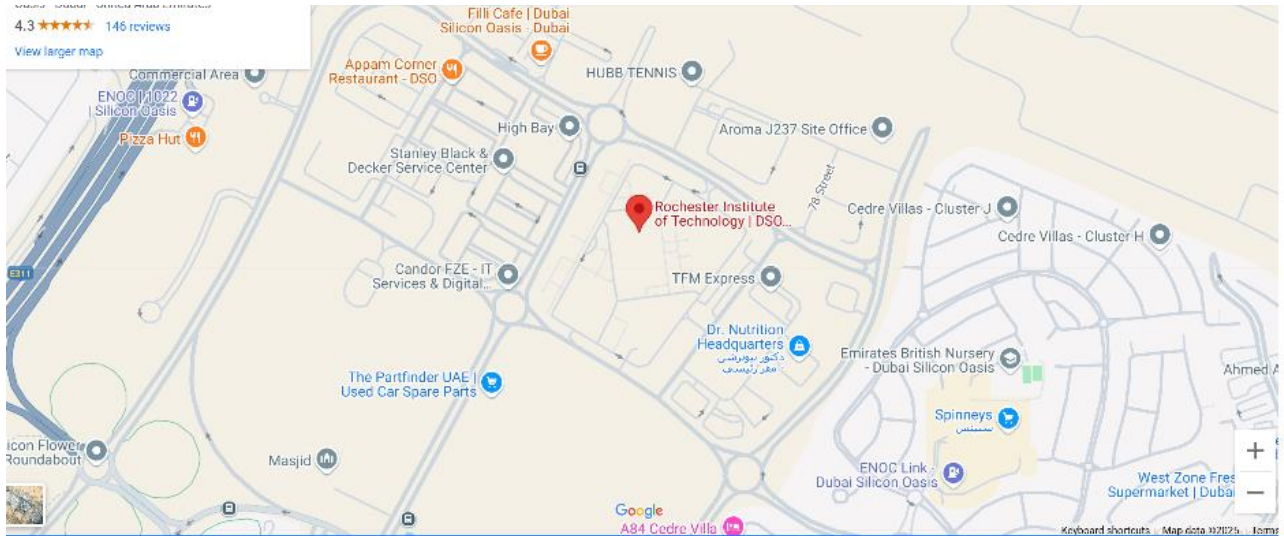
- Application of Video Anomaly Detection to Automatic Incident Detection in Tunnels
Bohdan Ivaniuk-Skulskyi, Nadiya Shvai, Arcadi Llanza, Amir Nakib, El-Ghazali Talbi
- Optimization of mold changeover times in the automotive injection industry using Lean Manufacturing tools to improve production line balancing
Yasmine EL BELGHITI
- Research on Collaborative Optimization of Mobile End-edge System
Yaqi Zhao, Guochen Zhang, Chaoli Sun
- Detecting Quishing Attacks with Machine Learning Techniques Through QR Code Analysis
Fouad Trad, Ali Chehab
- Addressing classic Constraint Satisfaction Problems through Optimisation Modulo Theories
Ignacio Jorquera, Nicolás Gálvez Ramírez, Carlos Castro, Frédéric Saubion, Eric Monfroy
- Bayesian and Partition-Based Optimization for Hyperparameter Optimization of LLM Fine-Tuning
Davouse Nathan, El-Ghazali Talbi
- Multi-Objective Optimization in Sustainable Supply Chain Network Design: A case Study
Yasmine Bouaziz Abdelkefi, Diala Dhouib, Sonda Elloumi
- An Improved NSGA-III Algorithm for Solving High-dimensional Many-objective Flexible Job Shop Scheduling Problem
Jianshang WANG, Ying Tan, Chaoli Sun
- Dependent Task Offloading in Cloud-Edge-End Environments with Communication Heterogeneity
Guochen Zhang, Ya Zhao, Chaoli Sun

Conference location

RIC (Rochester Institute of Technology)

P.O. Box 341055
Dubai Silicon Oasis
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dubai@rit.edu
[043712000](tel:043712000)

The location link: <https://maps.app.goo.gl/tPHxB5AY6iU44b7n6>.



Banquet

Cruise dinner at Dubai Marina

