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- University of Lille (France)

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- Prof. Lionel Amodeo (UTT, France)

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- Alice Yalaoui (Université de Technologie de Troyes, UTT, France)
- Farouk Yalaoui (Université de Technologie de Troyes, UTT, France)
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- Martin Zaefferer (TH Köln University of Applied Sciences, Germany)
- Angel Ruiz Zafra, University of Cádiz (Spain)
- Nicolas Zufferey (Université de Genève, Switzerland)

Invited keynote

1. Machine learning and combinatorial optimization: some possible catalytic effects

Prof. Vittorio Maniezzo (University of Bologna, Italy)

2. Learning and decision making and insect brain inspired computational models

Prof. Paolo Arena (University of Catania, Italy) and Luca Patané (University of Messina, Italy)

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Program at a glance

June 21th

9h15	Opening (Dr. M. Pavone & Prof. E-G. Talbi)
9h30	Session Optimization for learning (chair: Prof. E-G. Talbi)
10h50	Break
11h20	Invited keynote (chair: M. Pavone) Machine learning and combinatorial optimization: some possible catalytic effects Prof. Vittorio Maniezzo (University of Bologna, Italy)
12h20	Lunch
14h00	Session Transportation and routing (chair: T. Arbaoui)
15h20	Break
15h50	Session Engineering applications (chair: R. Ellaia)

June 22th

9h30	Session Deep learning (chair: Dr. A. Nakib)
10h50	Break
11h20	Invited keynote (chair: M. Pavone) Learning and decision making and insect brain inspired computational models Prof. Paolo Arena (University of Catania, Italy) & Luca Patané (University of Messina, Italy)
12h20	Lunch
14h00	Session Learning and optimization (chair: Dr. B. Dorransoro)
15h20	Break
15h50	Session Logistics & planning (chair: L. Amodeo)
17h10	End of Session

June 23th

9h30	Session Learning for optimization (chair: Prof. N. Melab)
10h50	Break
11h20	Session Learning and optimization (chair: Prof. B. Dorronsoro)
12h20	Lunch
14h00	Session Scheduling and constraints (chair: Prof. F. Yalaoui) Recorded presentations (available on web site)
17h10	End of conference

Detailed program: Monday, June 21^t

9h15 - 9h30 [Link](#) Opening Session

Prof. Dr. Mario Pavone (Italy) & Prof. El-Ghazali Talbi (France)

9h30 - 10h50

[Link](#) - Session **Optimization for learning** (chair: Prof. E-G. Talbi)

- Embedding Simulated Annealing within Stochastic Gradient Descent
Matteo Fischetti, Stringher Matteo
- A semi-infinite optimization approach to shape-constrained regression
Jochen Schmid, Martin Kurnatowski, Patrick Link, Lukas Morand, Jan Schwientek
- Comparing local search initialization for k-means and k-medoids clustering in a planar Pareto Front, a computational study
Jiangnan Huang, Chen Zixi, Nicolas Dupin
- A Recommendation System for Efficient PEH Bus Operation Based on Unsupervised Machine Learning
Patricia Ruiz, Juan Carlos de la Torre, Renzo Massobrio, Pablo Moreno, Marcin Seredynski, Bernabe Dorronsoro
- Improved SAT models for NFA learning
Frédéric Lardeux, Eric Monfroy

10h50 - 11h20 – Break

11h20 - 12h20

[Link](#) - Invited Keynote

(chair: Dr. M. Pavone)

Machine learning and combinatorial optimization: some possible catalytic effects

Prof. Vittorio Maniezzo (University of Bologna, Italy)

12h20 - 14h00 **BREAK**

14h00 - 15h20

[Link](#) - Session **Transportation and routing** (chair: Prof. T. Arbaoui)

- Multiple-tour constrained optimization for waste sites inspections
Francesco Nebula, Francesco Gargiulo, Gabriella Gigante, Domenico Pascarella, Luca Cicala
- Solving Inventory Routing Problems
Danny Meier, Benjamin Keller, Markus Kolb, Thomas Hanne
- Iterated Local Search with Neighbourhood Reduction for the Pickups and Deliveries Problem Arising in Retail Industry
Hanyu Gu, Zhang Yefei, Yakov Zinder
- A stochastic and dynamic approach for the one-commodity pickup & delivery travelling salesman problem
Seddik Hadjadj, Hamamache Kheddouci
- Mobile Clinics Routing in Response to Covid-19 Outbreak: An Intelligent Hyperheuristic Approach
Kassem Danach, Jomana Al Haj Hassan, Abbas Tarhini, Shahin Gelareh

15h50 - 16h20 – Break

16h20 - 17h40

[Link](#) - Session **Engineering optimization** (chair: Prof. R. Ellaia)

- Multi-Objective Optimization Model for Sustainable Urban Transportation Ensuring the Quality of Service
David Peña Morales, Patricia Ruiz, Andrei Tchernykh, Bernabe Dorronsoro
- Towards a hybrid positioning approach for IoT-based smart factories
Andrés Millán-Alcaide, Angel Ruiz-Zafra, Guadalupe Ortiz
- An Application of BnB-NSGAll: Initializing NSGAll to Solve 3 Stage Reducer Problem
Ahmed JABER, Pascal LAFON, Rafic YOUNES
- Incorporating User Preferences in Multi-objective Feature Selection in Software Product Lines using Multi-Criteria Decision Analysis
Takfarinas SABER, Anthony Ventresque, Malika Bendeche
- The horizontal linear complementarity problem and robustness of the related matrix classes
Milan Hladík, Miroslav Rada

Detailed program: Tuesday, June 22th

9h30-10h50

[Link](#) - Session **Deep Learning** (chair: Dr. Amir Nakib)

- Robustness of Adversarial Images against Filters
Raluca Chitic, Nathan Derudder, Franck Leprevost, Nicolas Bernard
- Guiding Representation Learning in Deep Generative Models with Policy Gradients
Luca Lach, Timo Korthals, Francesco Ferro, Malte Schilling, Helge Ritter

- FFCNN: Fast FPGA based Acceleration for Convolution neural network inference
Amir Nakib

10h50 – 11h20 – Break

11h20-12h20

[Link](#) - Invited Keynote

(chair: Dr. M. Pavone)

Learning and decision making and insect brain inspired computational models

Prof. Paolo Arena and Luca Patané (University of Catania, Italy)

12h20 - 14h00 **BREAK**

[Link](#) - Session **Learning and optimization** (chair: Dr. B. Dorronsoro)

- Neighborhood Enumeration in Local Search Metaheuristics
Michiel Van Lancker, Greet Vanden Berghe, Tony Wauters
- A Bayesian Optimisation Approach for Multidimensional Knapsack Problem
Hanyu Gu, Alireza Etmanniesfahani, Amir Salehipour
- Bayesian Optimization with deceptive Gaussian Processes : How to maintain efficiency in the optimization process ?
Jérémy Sadet, El-Ghazali Talbi, Franck Massa, Thierry Tison, Isabelle Turpin
- An Exploratory Analysis on a Disinformation Dataset
Matheus Marinho, Anthony Lins, Carmelo Bastos Filho

15h20 - 15h50 – Break

15h50 - 17h10

[Link](#) - Session **Logistics and Planning** (chair: Prof. L. Amodeo)

- A genetic algorithm for the Three-dimensional Open Dimension Packing problem
Cong Tan Trinh Truong, Lionel Amodeo, Farouk Yalaoui
- Formulation of a Layout-Agnostic Order Batching Problem
Johan Oxenstierna, Louis Janse van Rensburg, Volker Krueger, Jacek Malec
- Theoretical analysis of a dynamic pricing problem with linear and isoelastic demand functions
Mourad Terzi, Alice Yalaoui, Yassine Ouazene, Farouk Yalaoui
- Time-indexed formulations for the Order Acceptance Scheduling problem considering energy aspects with sequence-dependent setup-times
Mariam Bouzid, Oussama Masmoudi, Alice Yalaoui
- A multi-objective approach for an energy-efficient buffer allocation
Yasmine Alaouchiche, Farouk Yalaoui, Yassine Ouazene

Detailed program: Wednesday, June 23th

9h30 - 10h30

[Link](#) - Session **Learning for optimization** (chair: Prof. N. Melab)

- Reinforcement Learning for the Pick-up & Delivery Problem
Jacopo Pierotti, Theresia van Essen, Maximilian Kronmuller, Javier Mora, Wendelin Böhmer
- Reinforcement Learning-Based Adaptive Operator Selection
Rafet Durgut, Mehmet Aydin
- A Learning-based Iterated Local Search Algorithm for Solving the Traveling Salesman Problem
Maryam Karimi Mamaghan, Bastien Pasdeloup, Mehrdad Mohammadi, Patrick Meyer
- Space Partitioning with multiple models for Parallel Bayesian Optimization
Maxime Gobert, Jan Gmys, Nouredine Melab, Daniel Tuytens

10h30 – 11h – Break

11h00 - 12h00

[Link](#) - Session **Learning and optimization** (chair: Prof. E-G. Talbi)

- Cryptographic Primitives Optimization Based on the Concepts of the Residue Number System and Finite Ring Neural Network
Andrei Tchernykh, Mikhail Babenko, Bernardo Pulido-Gaytan, Egor Shiryayev, Elena Golimblevskaia, Arutyun Avetisyan, Nguyen Viet Hung, Jorge M. Cortés-Mendoza
- Investigating Overlapped Strategies to Solve Overlapping Problems in a Cooperative Co-evolutionary Framework
Julien Blanchard, Charlotte Beauthier, Timoteo Carletti
- Automatic Synthesis of Boolean Networks from Biological Knowledge and Data
Athénaïs Vaginay, Taha BOUKHOBZA, Malika Smail-Tabbone
- Combination of Machine Learning and Optimization: A Survey of Recent Methods for Large Complex Problems
Oumayma Bahri, Lionel Amodeo

12h20 - 14h00

BREAK

[Link](#) - Session **Scheduling and constraints** (chair: Prof. F. Yalaoui)

- Optimal demand response scheduling of a residential Microgrid
Mohamed Saâd EL HARRAB, Michel NAKHLA
- A Hybrid Approach for Data-based Models Using a Least-squares Regression
Malin Lachmann, Christof Büskens
- Rescheduling in textile industry : an unrelated parallel machines problem with setup times
Alice Berthier, Hicham Chehade, Alice Yalaoui, Farouk Yalaoui, Lionel Amodeo, Christian Bouillot
- Simultaneous Lot Sizing and Scheduling Problem in Tire Industry : Eligibility Constraint Sensitivity Analysis
Cyril Koch, Taha Arbaoui, Yassine Ouazene, Farouk Yalaoui, Humbert De Brunier, Nicolas Jaunet
- Mathematical model and metaheuristics for scheduling production processes in hospital catering
Fatima ABDERRABI, Matthieu Godichaud, Alice Yalaoui, Farouk Yalaoui, Lionel Amodeo, Ardian Qerimi

Recorded available presentations

- Synthesis of scheduling heuristics by composition and recombination
Jan Winkels, Christin Schumacher, Dominik Mäckel
- A comparison of Learnheuristics using different Reward Functions to solve the Set Covering Problem
Broderick Crawford, Ricardo Soto, Felipe Cisternas-Caneo, Diego Tapia, Hanns de la Fuente-Mella, Wenceslao Palma, José Lemus-Romani, Mauricio Castillo, Marcelo Becerra-Rozas
- Deep Reinforcement Learning for Dynamic Pricing of Perishable Products
Vibhati burman, Rajesh Vashishtha, Rajan Kumar, Sharadha Ramanan
- Time Series Prediction of Flow Field around a Two-Dimensional Cylinder Using Autoencoder and LSTM
Yusuke Yamada, Masahiro Kanazaki
- Lift rise spots exploration of a yaw-wise rotational flap by enhanced-Kriging-based efficient global optimization
Kazuhisa CHIBA, Masahiro KANAZAKI
- Solving QAP with Auto-parameterization in Parallel Hybrid Metaheuristics
Jonathan Duque, Danny Munera, Daniel Diaz, Salvador Abreu
- A hybrid FLP-AHP approach for Optimal Product Mix in Pulp and Paper Industry
Meenu Singh, Millie Pant
- The Multi-Objective Team Set Orienteering Problem
Houssemeddine Ben smida, Francisco Chicano, Saoussen Krichen