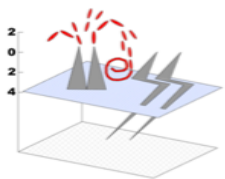


Metaheuristics Summer School
15-18 July 2024 – Catania, Italy

**AUTOMATED DEEP LEARNING
MEETS
HIGH PERFORMANCE COMPUTING**

DIRECTORS:

Salvatore Greco, University of Catania, Italy
Mario Pavone, University of Catania, Italy
Andrea Schaerf, University of Udine, Italy
El-Ghazali Talbi, University of Lille1, France
Daniele Vigo, University of Bologna, Italy



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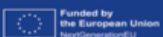


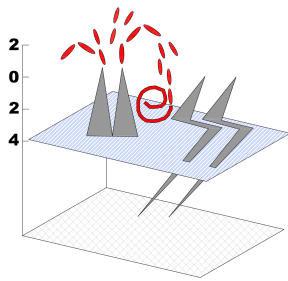
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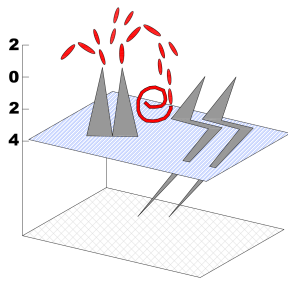
Program

Monday, 15th July

8:30 – 9:00	Registration
9:00 – 9:30	Opening Ceremony
9:30 – 11:00	El-Ghazali Talbi <i>Metaheuristics for neural architecture search and hyperparameter optimization</i>
11:00 – 11:30	Coffee break
11:30 – 13:00	Eric Medvet <i>Metaheuristics for policy search in continuous control</i>
13:00 – 15:00	Free Time for Lunch
15:00 – 16:30	Marco Gori <i>HAMILTONIAN LEARNING: Foundations of Lifelong Learning</i>
16:30 – 17:00	Competition: presentation
17:00 – 18:00	Oral Session #1

Tuesday, 16th July

8:30 – 9:00	Registration
9:00 – 10:30	Aaron Klein <i>Introduction into AutoML: Hyperparameter Optimization</i>
10:30 – 11:00	Coffee Break
11:00 – 12:30	David Salinas <i>Multi-objective optimization</i>
12:30 – 13:15	Competition: discussion & ideas exchanging
13:15 – 15:00	Lunch with Arancino
15:00 – 16:30	El-Ghazali Talbi <i>Parallel and multi-objective metaheuristics for neural architecture search and hyperparameter optimization</i>
16:30 – 17:30	Oral Session #2



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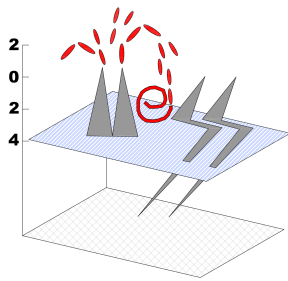
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Wednesday, 17th July

9:30 – 11:00	David Salinas <i>Speeding-up Hyperparameter Optimization with transfer and meta learning</i>
11:00 – 11:30	Coffee Break
11:30 – 13:00	Marco Gori <i>HAMILTONIAN LEARNING: Case studies</i>
13:00 – 15:00	Free Time for Lunch
15:00 – 16:00	Oral Session #3
17:30 – 17:45	Group Photo
17:45 – 23:30	Social Tour & Dinner

Thursday, 18th July

9:30 – 11:00	Aaron Klein <i>Introduction into AutoML: Neural Architecture Search</i>
11:00 – 11:30	Coffee Break
11:30 – 13:00	Eric Medvet <i>Beyond policy search: optimizing body and brain of simulated robotic agents</i>
13:00 – 15:00	Free Time for Lunch
15:00 – 16:30	Competition: presentation proposals
16:30 – 17:00	Closing session and future remarks.



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Oral Presentation Agenda

Monday, 15th July

Oral Presentations Session I – slot:17:00-18:00

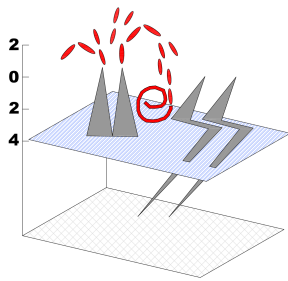
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|---------------|---|
| 17:00 – 17:20 | <i>Optimized tabu search algorithm</i>
Nazgol Niroumandrad, Nadia Lahrichi, Sébastien Le Digabel
Polytechnique Montreal, CIRRELT, GERAD, Canada |
| 17:20 – 17:40 | <i>Enhancing Energy Consumption Forecasting Accuracy through Automated Machine Learning</i>
Francesco Zito
University of Catania, Italy |
| 17:40 – 18:00 | <i>Gasslip: A Multistage Stochastic Linepack Optimization Model under Steady-State Conditions</i>
Siva Sankar Udaya Kumar, Asgeir Tomasgard
Norwegian University of Science and Technology, Norway |

Tuesday, 16th July

Oral Presentations Session II – slot:16:30-17:30

- | | |
|---------------|---|
| 16:30 – 16:50 | <i>DeepRL for Assembly Scheduling Problems</i>
Roxana-Teodora Maftciu-Scai
West University of Timisoara, Romania |
| 16:50 – 17:10 | <i>A Multi-Agent System to Explore Pathfinding Strategies in Maze Navigation Problem</i>
Carolina Crespi
University of Catania, Italy |
| 17:10 – 17:30 | <i>Intelligent Gradient Boosting methods for investigation of object interactiondynamics in Mixed Reality</i>
Adrian Ymeri
University of Prishtina, Kosovo |

Wednesday, 17th July



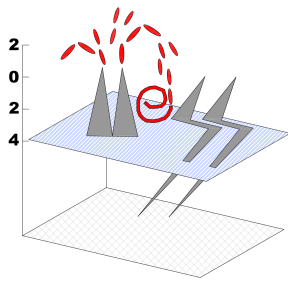
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Oral Presentations Session III – slot:15:00-16:00

- | | |
|---------------|---|
| 15:00 – 15:20 | <i>Comparison of Python Metaheuristic Packages</i>
<i>Vojtěch Vávra</i>
Prague University of Economics and Business, The Czech Republic |
| 15:20 – 15:40 | <i>Efficient Heuristics for Finding Minimal Feedback Arc Sets in Big Data Challenges</i>
<i>Claudia Cavallaro</i>
University of Catania, Italy |
| 15:40 – 16:00 | <i>Dynamic Metaheuristics: Enhancing Real-Time Problem Solving with Machine Learning Integration</i>
<i>Alessio Mezzina</i>
University of Catania, Italy |

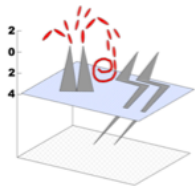


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