

OLA'2018 is organized by

- Université Lille, France
- University of Miguel Hernandez, Elche, Spain
- Jozef Stefan Institute, Slovenia
- ZTours and DSTI
- INRIA Lille Nord Europe, France

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- Prof. Peter Korosec (Jozef Stefan Institute, Slovenia)

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- Martin Zaeferrer (TH Köln University of Applied Sciences, Germany)
- Nicolas Zufferey (Université de Genève, Switzerland)

Invited tutorials

1. **Evolutionary multi-objective optimization with surrogate models**, Bogdan Filipic (JSI, Slovenia)
2. **Overview of Multidisciplinary Design Analysis and Optimization (MDAO) techniques and their application on aerospace vehicle design**, M. Balesdent, L. Brevault (ONERA, France)

Special sessions

1. **"Image and signal processing using learning-optimization"**, by Dr Amir Nakib (University Paris Est, France), email: nakib@u-pec.fr
2. **"Control parameters adaptation"**, by Dr. Gregor Papa (IJS, Slovenia), Dr. Janez Brest (University of Maribor, Slovenia), email: gregor.papa@ijs.si
3. **"Surrogate model-based optimization"**, by Dr. Mathieu Balesdent (ONERA, France), Dr. Loic Brevault (ONERA, France), email: mathieu.balesdent@onera.fr, loic.brevault@onera.fr
4. **"Heterogeneous parallel programming for optimization and learning"**, by Dr. Omar Abdelkafi (University of Lille, INRIA Lille Nord Europe, France), email: omar.abdelkafi@univ-lille1.fr
5. **"Electric vehicle routing problems"**, by Dalila Boudebous & Jaouad Boukachour (Normandy University).email dalila.boudebous@univ-lehavre.fr, jaouad.boukachour@univ-lehavre.fr
6. **"Parallel and distributed metaheuristics and machine learning"**, by Jan Gyms (Univ. Mons, Belgium), Nouredine Melab (Univ. Lille & INRIA, France), Peter Korosec (Jozef Stefan Institute, Slovenia), Boris Naujoks (TH Koln, Germany), email: jan.gmys@umons.ac.be, nouredine.melab@univ-lille1.fr, peter.korosec@ijs.si, boris.naujoks@th-koeln.de
7. **"Optimization of production, logistics, and services: application to real cases"**, by H. Chehade (OPTA, France, F. Yalaloui, L. Amodeo (UTT, France). email chehade@opta-lp.com
8. **"Localization problem and computing in wireless sensor networks"**, by F. Chehade (ICD, Troyes, France). email farah.chehade@utt.fr

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Conference Place: Hotel Porta Maris - Alicante 18

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Program at glance

Salon Mediterraneo

Feb 26

8h00	Registration and Opening (chair: E-G. Talbi)
9h10	Session Learning for optimization (chair: G. Danoy)
10h30	Coffee Break
11h00	Session Surrogate-based and stochastic optimization (chair: M. Balesdent)
12h20	
14h30	Session Learning for optimization (chair: B. Filipic)
15h50	Coffee Break
16h20	Session Continuous and multi-objective optimization (chair: A. Nakib)

Feb 27

9h00	Session Parallel optimization and learning (chair: N. Melab)
10h40	Coffee Break
11h10	Invited Tutorial Evolutionary multi-objective optimization with surrogate models Bogdan Filipic (JSI, Slovenia)
12h00	Session Learning for optimization (chair: G. Domingo)
13h20	
20h30	Banquet @ <u>Restaurer Darsena</u>

Feb 28

9h00	Session Production, transportation and planning (chair: F. Yalaoui)
10h40	Coffee Break
11h10	Invited Tutorial Overview of Multidisciplinary Design Analysis and Optimization (MDAO) techniques and their application on aerospace vehicle design M. Balesdent, L. Brevault (ONERA, France)
12h00	Session Energy-aware optimization (chair: L. Amodeo)
13h00	

Detailed program: Monday, Feb 26

8h00 – 9h10 Registration & Opening Session – Prof. El-Ghazali Talbi

9h10-10h30

Session **Learning for optimization** (chair: Gregoire Danoy)

- Bayesian optimization to enhance coverage performance of a swarm of UAV with chaotic dynamics, Emmanuel Kieffer, Martin Rosalie, Grégoire Danoy, Pascal Bouvry
- Deep Neural Networks for Constraint Satisfaction Problems: An Initial Investigation for the N-Queens, Andrea Galassi, Michele Lombardi, Paola Mello, Michela Milano
- Learnheuristics: Combining Metaheuristics with Machine Learning for Optimizing Systems with Dynamic Inputs, Angel Juan, Laura Calvet, David Masip, Jessica de Armas
- Automatic program generation: Virtual Savant for the knapsack problem, Renzo Massobrio, Bernabe Dorronsoro, Sergio Nesmachnow, Francisco Palomo-Lozano

10h30 – 11h00 – Coffee break

11h00 - 12h20

Session **Surrogate-based and stochastic optimization** (chair: Mathieu Balesdent)

- Multi-Disciplinary Design Multi-Objective Optimization of Aerospace Vehicles using Surrogate Models, Ali Hebbal, Mathieu Balesdent, Loïc Brevault, Talbi El-ghazali, Melab Nouredine
- Automatic selection and aggregation of surrogate models for surrogate-based optimization, Charlotte Beauthier, Caroline Sainvitu
- Multidisciplinary optimization based on Kriging surrogate models, Sylvain Dubreuil, Nathalie Bartoli, Thierry Lefebvre, Christian Gogu
- Integrating stochastic optimization with simulation: management of scarce water resources under risk and uncertainty, Alexei Gaivoronski, Giovanni Sechi, Jacopo Napolitano, Paola Zuddas

Session Learning for optimization (chair: Bogdan Filipic)

- Application of Multi-label Classification to the Generation of Sub-problems in Combinatorial Optimization, Luca Mossina, Emmanuel Rachelson
- Generation and Optimization of SMT Strategies, Eric Monfroy, Frédéric Saubion, Carlos Castro, Nicolas Galvez
- Obtaining the coefficients of a Vector Autoregression Model through minimization of parameter criteria, Alfonso Castaño, Javier Cuenca, Domingo Giménez, Jose Juan López Espín, Alberto Pérez
- A Hyper-Matheuristic Approach to solve Mixed-Integer Optimization Problems using a Discrete Variable Decomposition, Martin Gonzalez, Jose Juan López Espín, Juan Aparicio Baeza, El-Ghazali Talbi

15h50 – 16h20 – Coffee break

16h20-17h40

Session Continuous and multi-objective optimization (chair: Amir Nakib)

- Generalization of Lipschitzian global optimization algorithms to the multi-objective case, Albertas Gimbutas, Antanas Žilinskas
- Graph based adaptive evolutionary algorithm for continuous optimization, Asmaa Ghoumari, Amir Nakib, Patrick Siarry
- Sector-based division for continuous heliostat field optimization, N. Cruz, J. Redondo, J. Alvarez, M. Berenguel, P. Ortigosa
- Improving the performance of a preference-based optimization algorithm applied to a food processing problem, Miriam Ruiz Ferrández, Juana López Redondo, Benjamin Ivorra, Pilar Martínez Ortigosa, Ángel R

Detailed program: Tuesday, Feb 27

9h00-10h40

Session **Parallel optimization and learning** (chair: Nouredine Melab)

- Convolutional Deep Learning (cuDNN) on NVIDIA GPUs, Marc Jorda, Pedro Valero-Lara, Antonio Peña
 - Parallel surrogate-assisted optimization based on q-merit functions, José Carlos García García, Ricardo García-Ródenas, Esteve Codina
 - Exactly solving permutation-based optimization problems on heterogeneous CPU/GPU clusters, Jan Gmys, Mohand Mezmas, Nouredine Melab, Daniel Tuytens
 - The determination of new stable zeolite frameworks using a parallel hybrid genetic algorithm, Omar ABDELKAFI, Lhassane Idoumghar, Julien Lepagnot, Jean-louis Paillaud
 - ECG Simulator Tuning: A Parallel Multiobjective Optimization Approach, Filipič, B., Depolli, M., Zupančič, J., Gmys, J., Gobert, M., Melab, N., Tuytens, D.
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10h40 – 11h10 – Coffee break

11h10 - 12h00

Invited Tutorial **Evolutionary multi-objective optimization with surrogate models**

Bogdan Filipic (JSI, Slovenia)

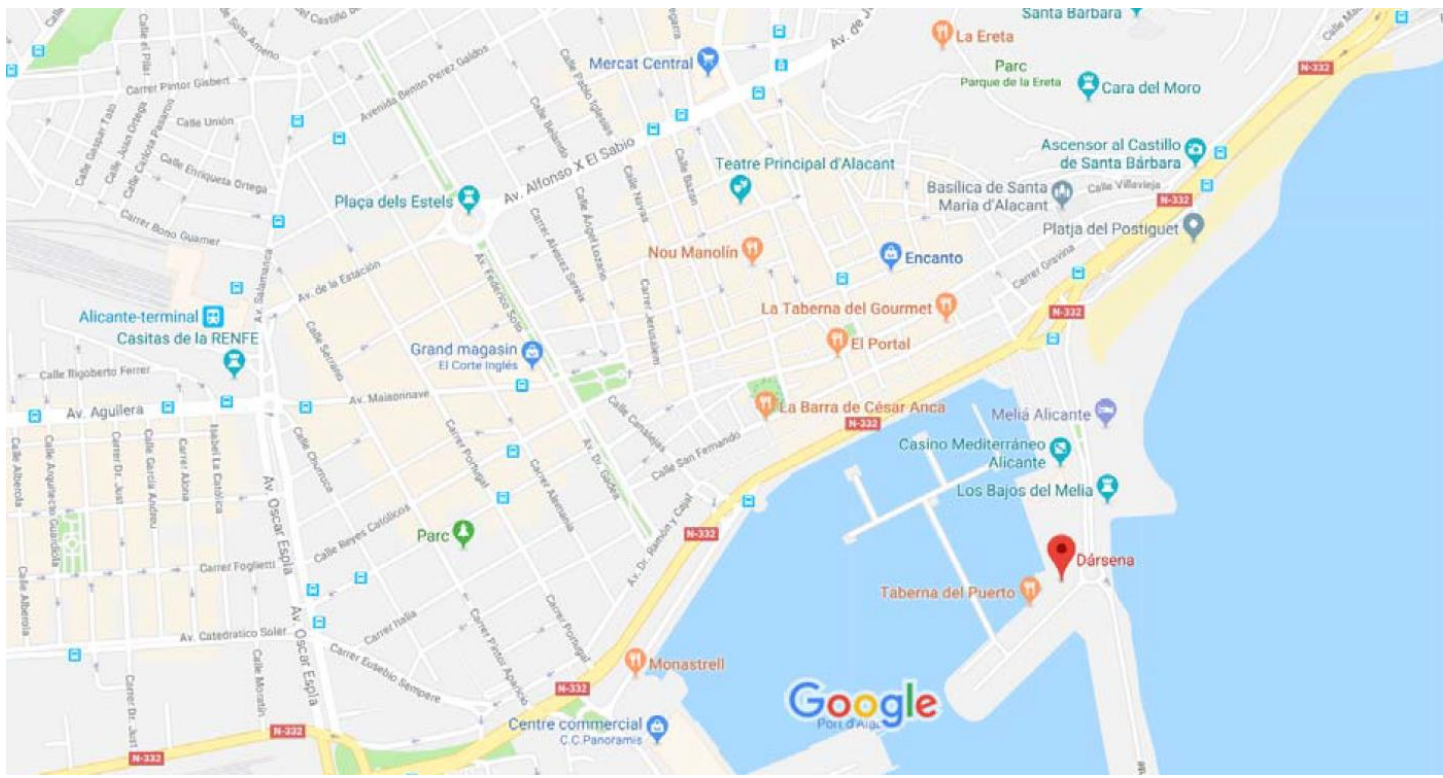
12h00 - 13h20

Session **Learning for optimization** (chair: Gimenez Domingo)

- Nature-Inspired Minimal Trees in Polygonal Maps, Victor Parque, Nestor Salcedo, Satoshi Miura, Tomoyuki Miyashita
- Virtual screening in molecular shape by using an evolutionary algorithm, S. Puertas-Martín, J. L. Redondo, H. Pérez-Sánchez, P. M. Ortigosa
- Fleet size and mix pickup and delivery problem with Time windows, Moïse Aimé Noubissi Tchoupo, Alice Yalaoui, Lionel Amodeo, Farouk Yalaoui, Pauline Flori
- Landscape Analysis for the Improvement of Hyperheuristics over Parameterized Metaheuristics, Giménez Domingo, José Cecilia, José-Matías Cutillas-Lozano, Baldomero Imbernón

20h30 BANQUET

Restaurant Darsena



Detailed program: Wednesday, Feb 28

9h00-10h40

Session **Production, Transportation and Planning** (chair: Farouk Yalaoui)

- Flow Shop Scheduling with Alternative Resources, Sequence-dependent Setup Times and Blocking, Frank Benda, Roland Braune, Karl Doerner, Richard Hartl
- An exact method for a cost and resource constrained assembly line balancing problem, Fabián Díaz-Núñez, Jordi Pereira, Óscar Vásquez
- A Maturity Model for Assessing the Digital Readiness of Enterprises, Jonathan Oesterle, Farouk Yalaoui, Russell Kelly, Hicham Chehade, Lionel Amodeo
- Data-driven Path Planning with Compounded Fair Curves, Victor Parque, Nestor Salcedo, Masakazu Kobayashi, Masatake Higashi
- The Generalized Team Orienteering Problem: Multiple-scored attractions and multiple-day itineraries, Adolfo Urrutia, Gregorio Tirado, Alfonso Mateos Caballero

10h40 – 11h10 – Coffee break

Posters

Improved Particle Swarm Optimization of Gradient Algorithm for Exchange Rate Speculation, Zineb Bousbaa, Omar Bencharef

Novel method for user profile construction using unsupervised learning approach, Oumayma Banouar, Said Raghay

11h10 - 12h00

Invited Tutorial **Overview of Multidisciplinary Design Analysis and Optimization (MDAO) techniques and their application on aerospace vehicle design**

M. Balesdent, L. Brevault (ONERA, France)

12h00 - 13h00

Session **Energy-aware optimization** (chair: Lionel Amodeo)

- Energy-efficient scheduling of a multi-states single machine system, Mohsen Aghelinejad, Yassine Ouazene, Alice Yalaoui
- The energy consumption of an electric vehicle: Simulation modelling and application to seaport logistics problems, Abdelaziz Benantar, Mohamed Yassine Samiri, Jaouad Boukachour, Dalila Boudebous
- Solving The Single Item Lot Sizing Problem Under a Flow Shop Configuration With Multiple Energy Sources, Melek Rodoplu, Taha Arbaoui, Alice Yalaoui

Conference Place: Hotel Porta Maris - Alicante



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