



TECHNICAL UNIVERSITY OF CRETE
SCHOOL OF PRODUCTION
ENGINEERING AND MANAGEMENT
Decision Support Systems Laboratory



ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ
REGION OF CRETE



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REGION OF CRETE
REGIONAL UNIT OF CHANIA

13th LION LEARNING & INTELLIGENT OPTIMIZATION CONFERENCE

May 27-31, 2019
Chania, Crete, Greece

Conference Program

Sponsors



Conference Program

Monday, May 27, 2019

17:30-20:00	REGISTRATION	
18:00-18:30	Welcome – Opening Chair Nikolaos Matsatsinis	
18:30-19:50	Session 1.	
	<i>18:30-18:50</i>	A Novel Approach for Solving Large-Scale Bike Sharing Station Planning Problems Christian Kloimüller and Günther Raidl
	<i>18:50-19:10</i>	A Statistical Test of Heterogeneous Subgraph Densities To Assess Clusterability Pierre Miasnikof, Liudmila Prokhorenkova, Alexander Y. Shestopaloff and Andrei M. Raigorodskii
	<i>19:10-19:30</i>	How to use Boltzmann Machines and Neural Networks for Covering Array Generation Ludwig Kampel, Michael Wagner, Ilias Kotsireas and Dimitris E. Simos
	<i>19:30-19:50</i>	A Similarity Hybrid Harmony Search Algorithm for the Capacitated Team Orienteering Problem Eleftherios Tsakirakis, Magdalene Marinaki, Yannis Marinakis
19:50-21:30	Light Dinner	

Tuesday, May 28, 2019

9:00-17:30	REGISTRATION	
9:00-10:00	Invited plenary talk - Xin-She Yang: Open Problems and Analysis of Nature-Inspired Algorithms	
10:00-10:30	Coffee Break	
10:30-12:10	Session 2. Chair Angelo Sifaleras	
	10:30-10:50	Adaptive GVNS heuristics for solving the Pollution Location Inventory Routing Problem Panagiotis Karakostas, <u>Angelo Sifaleras</u> and Michael Georgiadis
	10:50-11:10	A simple Dual-RAMP for the Capacitated Facility Location Problem Telmo Matos, <u>Óscar Oliveira</u> and Dorabela Gamboa
	11:10-11:30	Landscape-Aware Constraint Handling Applied to Differential Evolution <u>Katherine Malan</u>
	11:30-11:50	Learning Probabilistic Constraints for Surgery Scheduling using a Support Vector Machine <u>Thomas Philip Runarsson</u>
11:50-12:10	Adaptive Sequence-based Heuristic for the Three-Dimensional Bin Packing Problem <u>Oscar Oliveira</u>, Telmo Matos and Dorabela Gamboa	
12:10-14:00	Light Lunch	
14:00-15:40	Session 3. Chair Andreas Klinkert	
	14:00-14:20	Quadratic Unconstrained Binary Optimization (QUBO) with Extremal Optimization Stefan Boettcher
	14:10-14:40	Stochastic efficiency measures for production units with correlated data <u>Chiang Kao</u> and Shiang-Tai Liu
	14:40-15:00	Optimization of Generalized Halton Sequences by Differential Evolution Pavel Kromer, Jan Platos and Vaclav Snasel
	15:00-15:20	A new Mayfly optimization algorithm Konstantinos Zervoudakis and Stelios Tsafarakis
15:20-15:40	Multi-Method Optimization in Large-Scale Airport Staff Scheduling Andreas Klinkert	
15:40-16:10	Coffee Break	
16:10-17:30	Session 4. Chair Mario F. Pavone	
	16:10-16:30	A new hybrid Firefly – Genetic Algorithm for the optimal product line design problem Konstantinos Zervoudakis and Stelios Tsafarakis
	16:30-16:50	A RAMP algorithm for large-scale Single Source Capacitated Facility Location Problems <u>Óscar Oliveira</u>, Telmo Matos and Dorabela Gamboa
	16:50-17:10	A Hybrid Immunological Search for the Weighted Feedback Vertex Set Problem Vincenzo Cutello, Maria Oliva, <u>Mario F. Pavone</u> and Rocco A. Scollo
17:10-17:30	A Hessian Free Neural Networks Training Algorithm with Curvature Scaled Adaptive Momentum Flora Sakketou and Nicholas Ampazis	

Wednesday, May 29, 2019

10:00-11:20	REGISTRATION
10:00-11:20	Session 5. Chair Alexander Kelmanov
	<i>10:00-10:20</i> Model Analysis of Min-Cost Attack-Aware Logical Link Assignment in Software-Defined Networking A. Rosle, <u>S.C. Tan</u>, S. Ali, C.K. Lee, Z. Yusoff, R. Kapsin
	<i>10:20-10:40</i> On polynomial solvability of one quadratic Euclidean clustering problem on a line Alexander Kelmanov and Vladimir Khandeev
	<i>10:40-11:00</i> Exact Algorithm for One Cardinality-Weighted 2-Partitioning Problem of a Sequence Alexander Kelmanov, Sergey Khamidullin and Anna Panasenko
<i>11:00-11:20</i> Asymptotically Optimal Algorithms for the Prize Collecting Traveling Salesman Problem on Random Inputs <u>Edward Kh. Gimadi</u> and Oxana Tsidulko	
12:00-18:00	Excursion to Kournas Lake – Lunch

Thursday, May 30, 2019

9:00-13:30	REGISTRATION	
9:00-10:00	Invited plenary talk – Panos Pardalos: Sustainable interdependent networks	
10:00-10:30	Coffee Break	
10:30-11:50	Session 6. Chair Yannis Marinakis	
	<i>10:30-10:50</i>	On a cooperative VNS parallelization strategy for the capacitated vehicle routing problem Panagiotis Kalatzantonakis, <u>Angelo Sifaleras</u> and Nikolaos Samaras
	<i>10:50-11:10</i>	Irreducible bin packing: complexity, solvability and application to the routing open shop <u>Ilya Chernykh</u> and Artem Pyatkin
	<i>11:10-11:30</i>	An Artificial Bee Colony Algorithm for the Multiobjective Energy Reduction Multi-Depot Vehicle Routing Problem Emmanouela Rapanaki, Iraklis-Dimitrios Psychas, Magdalene Marinaki and Yannis Marinakis
	<i>11:30-11:50</i>	Sonar Inspired Optimization in Energy Problems Related to Load and Emission Dispatch Alexandros Tzanetos and Georgios Dounias
11:50-12:30	Coffee Break	
12:30-13:30	Session 7. Chair Roman Plotnikov	
	<i>12:30-12:50</i>	Metaheuristics for Min-Power Bounded-Hops Symmetric Connectivity Problem Roman Plotnikov and Adil Erzin
	<i>12:50-13:10</i>	Optimizing partially defined black-box functions under unknown constraints via Sequential Model Based Optimization: an application to Pump Scheduling Optimization in Water Distribution Networks <u>Antonio Candelieri</u>, Bruno Galuzzi, Ilaria Giordani, Riccardo Perego and Francesco Archetti
	<i>13:10-13:30</i>	Towards Improving Merging Heuristics for Binary Decision Diagrams Nikolaus Frohner and Günther Raidl
18:00-21:30	Excursion to Therissos Village – Conference Dinner	

Friday, May 31, 2019

9:00-15:20	REGISTRATION	
9:00-10:00	Invited plenary talk- Marco Dorigo: Controlling robot swarms	
10:00-10:30	Coffee Break	
10:30-11:50	Session 8. Chair Edward Kh. Gimadi	
	10:30-10:50	On asymptotically optimal solvability of Euclidean Max m-k-Cycles Cover Problem Edward Kh. Gimadi and Ivan Rykov
	10:50-11:10	A novel solution encoding in the Differential Evolution Algorithm for optimizing Tourist Trip Design Problems Dimitra Trachanatzi, Manousos Rigakis, Andromachi Taxidou, Magdalene Marinaki, Yannis Marinakis, and Nikolaos Matsatsinis
	11:10-11:30	Barrier Covering in 2D Using Mobile Sensors with Circular Coverage Areas Adil Erzin, Natalya Lagutkina and Nika Ioramishvili
	11:30-11:50	Live Soccer Betting Using XGBoost and The Kelly Criterion I. Ilkay Boduroglu
11:50-14:00	Light Lunch	
14:00-15:20	Session 9. Chair Benedikt Klocker	
	14:00-14:20	Evolving Gaussian Process kernels for translation editing effort estimation Ibai Roman, Roberto Santana, Alexander Mendiburu and Jose A. Lozano
	14:20-14:40	Bayesian Optimization approaches for massively multi-modal problems Ibai Roman, Alexander Mendiburu, Roberto Santana and Jose A. Lozano
	14:40-15:00	Predicting the execution time of the interior point method for solving linear programming problems using artificial neural networks Sophia Voulgaropoulou, Nikolaos Ploskas and Nikolaos Samaras
	15:00-15:20	A SAT Approach for Finding Sup-Transition-Minors Benedikt Klocker, Herbert Fleischner and Günther Raidl
15:20-15:45	Closing session	