



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



ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ
REGION OF CRETE



ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ
REGION OF CRETE
REGIONAL UNIT OF CHANIA

13th LION LEARNING & INTELLIGENT OPTIMIZATION CONFERENCE

May 27-31, 2019
Chania, Crete, Greece

Conference Program

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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. Chair Christian Kloimüller	
	<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 <u>Flora Sakketou</u> 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 <u>Nikolaus Frohner</u> and Günther Raidl
	<i>13:30-13:50</i>	Assessing simulated annealing with variable neighborhoods Eduardo Lalla-Ruiz¹, Leonard Heilig, and <u>Stefan Voss</u>
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	