



Technical University of Crete
School of Production Engineering and Management
Decision Support Systems Laboratory
University Campus, 73100
Chania, Crete, Greece

13th LION
Learning and Intelligent OptimizatioN Conference

May 27-31, 2019, Chania, Crete, Greece
<http://www.lion13.pem.tuc.gr>

Conference Program
(Draft)

Monday, May 27, 2019 - Technical University of Crete

10:00-13:30	REGISTRATION	
10:00-10:30	Welcome - Opening	
10:30-12:10	Session 1. Chair Nikolaos Matsatsinis	
	10:30-10:50	Optimizing partially defined black-box functions under unknown constraints via Sequential Model Based Optimization: an application to Pump Scheduling Optimization in Water Distribution Networks Antonio Candelieri, Bruno Galuzzi, Ilaria Giordani, Riccardo Perego and Francesco Archetti
	10:50-11:10	A Novel Approach for Solving Large-Scale Bike Sharing Station Planning Problems Christian Kloimüller and Günther Raidl
	11:10-11:30	A Statistical Test of Heterogeneous Subgraph Densities To Assess Clusterability Pierre Miasnikof, Liudmila Prokhorenkova, Alexander Y. Shestopaloff and Andrei M. Raigorodskii
	11:30-11:50	How to use Boltzmann Machines and Neural Networks for Covering Array Generation Ludwig Kampel, Michael Wagner, Ilias Kotsireas and Dimitris E. Simos
11:50-12:10	A Similarity Hybrid Harmony Search Algorithm for the Capacitated Team Orienteering Problem Eleftherios Tsakirakis, Magdalene Marinaki, Yannis Marinakis	
12:10-13:30	Light Lunch	

Tuesday, May 28, 2019 - Conference Center of Cooperative Bank of Chania

9:00-18:00	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, Angelo Sifaleras and Michael Georgiadis
	10:50-11:10	A simple Dual-RAMP for the Capacitated Facility Location Problem Telmo Matos, Óscar Oliveira and Dorabela Gamboa
	11:10-11:30	Landscape-Aware Constraint Handling Applied to Differential Evolution Katherine Malan
	11:30-11:50	Assessing simulated annealing with variable neighborhoods Eduardo Lalla-Ruiz, Leonard Heilig and Stefan Voß
11:50-12:10	Learning Probabilistic Constraints for Surgery Scheduling using a Support Vector Machine Thomas Philip Runarsson	
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
	14:20-14:40	Customers' exposure at sellers, probabilistic optimization and profit research Miltiadis Chalikias, Panagiota Lalou and Michalis Skordoulis
	14:40-15:00	Multi-Method Optimization in Large-Scale Airport Staff Scheduling Andreas Klinkert
	15:00-15:20	Optimization of Generalized Halton Sequences by Differential Evolution Pavel Kromer, Jan Platos and Vaclav Snasel
15:20-15:40	A new Mayfly optimization algorithm Konstantinos Zervoudakis and Stelios Tsafarakis	
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 Óscar Oliveira, Telmo Matos and Dorabela Gamboa
	16:50-17:10	A Hybrid Immunological Search for the Weighted Feedback Vertex Set Problem Vincenzo Cutello, Maria Oliva, Mario F. Pavone 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- Conference Center of Cooperative Bank of Chania

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

Thursday, May 30, 2019 - Conference Center of Cooperative Bank of Chania

9:00-15:00	REGISTRATION	
9:00-10:00	Invited plenary talk – Panos Pardalos: Sustainable interdependent networks	
10:00-10:30	Coffee Break	
10:30-12:10	Session 6. Chair Yannis Marinakis	
	10:30-10:50	On a cooperative VNS parallelization strategy for the capacitated vehicle routing problem Panagiotis Kalatzantonakis, Angelo Sifaleras and Nikolaos Samaras
	10:50-11:10	PTAS for the Euclidean Capacitated Vehicle Routing Problem with Time Windows Michael Khachay and Yuri Ogorodnikov
	11:10-11:30	Irreducible bin packing: complexity, solvability and application to the routing open shop Ilya Chernykh and Artem Pyatkin
	11:30-11:50	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
11:50-12:10	Sonar Inspired Optimization in Energy Problems Related to Load and Emission Dispatch Alexandros Tzanetos and Georgios Dounias	
12:10-12:40	Coffee Break	
12:40-13:00	Session 7. Chair Roman Plotnikov	
	12:40-13:00	Metaheuristics for Min-Power Bounded-Hops Symmetric Connectivity Problem Roman Plotnikov and Adil Erzin
	13:00-13:20	Metaheuristic algorithms for optimal product line design Stelios Tsafarakis, Andreas Andronikidis, Christina Boutsouki and Aggelos Pantouvakis
13:20-13:40	Towards Improving Merging Heuristics for Binary Decision Diagrams Nikolaus Frohner and Günther Raidl	
14:30-21:00	Excursion to Therrisos Village – Conference Dinner	

Friday, May 31, 2019 - Conference Center of Cooperative Bank of Chania

9:00-18:00	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	Utilizing entropy to handle rank reversals of alternative actions during the extrapolation phase of UTA methods Athanasios Spyridakos and Nikolaos Tsotsolas
	10:50-11:10	On asymptotically optimal solvability of Euclidean Max m-k-Cycles Cover Problem Edward Kh. Gimadi and Ivan Rykov
	11:10-11:30	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
	11:30-11:50	Barrier Covering in 2D Using Mobile Sensors with Circular Coverage Areas Adil Erzin, Natalya Lagutkina and Nika Ioramishvili
12:00-14:00	Light Lunch	
14:00-15:40	Session 9. Chair Benedikt Klocker	
	14:00-14:20	Modeling CBR value using RF and MSP Techniques Praveen Aggarwal and Manju Suthar
	14:20-14:40	Stochastic efficiency measures for production units with correlated data Chiang Kao and Shiang-Tai Liu
	14:40-15:00	A SAT Approach for Finding Sup-Transition-Minors Benedikt Klocker, Herbert Fleischner and Günther Raidl
	15:00-15:20	Adaptive Sequence-based Heuristic for the Three-Dimensional Bin Packing Problem Oscar Oliveira, Telmo Matos and Dorabela Gamboa
	15:20-15:40	Attacking the Traveling Salesman Problem with Reinforcement Learning Based on Gradient Boosted Trees Adil Gursel Karacor and Athanasios Angelakis
15:40-16:10	Coffee Break	
16:10-17:30	Session 10. Chair - Ibai Roman	
	16:10-16:30	Evolving Gaussian Process kernels for translation editing effort estimation Ibai Roman, Roberto Santana, Alexander Mendiburu and Jose A. Lozano
	16:30-16:50	Bayesian Optimization approaches for massively multi-modal problems Ibai Roman, Alexander Mendiburu, Roberto Santana and Jose A. Lozano
	16:50-17:10	Live Soccer Betting Using XGBoost and The Kelly Criterion I. Ilkay Boduroglu
	17:10-17:30	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
17:30-18:00	Closing session	