

# World Congress on Global Optimization 2021

## CONFERENCE PROGRAM JULY 7-10, 2021

Wednesday, July 7, 2021

| Time                                      |   |
|---|---|
| 15:45 p.m. Athens time<br>(8:45 a.m. EDT) | Opening Remarks: WCGO 2021 General Chair -Panos M. Pardalos<br>Opening Remarks: <a href="http://www.globaloptimization.org/">International Society of Global Optimization</a><br>President Yaroslav D. Sergeyev <a href="http://www.globaloptimization.org/">http://www.globaloptimization.org/</a> |
| <b>16:00 – 19:00</b>                      | <b>Session 1</b> Chair: Pierre Miasnikof  |
| 16:00 p.m. Athens time                    | <b>Yaroslav Sergeyev</b> - Lipschitz Global Optimization  |
| 16:30 p.m. Athens time                    | <b>Maria Chiara Nasso</b> - Lipschitz and Hölder global optimization using space-filling curves   |
| 17:00 p.m. Athens time                    | <b>Christian Füllner, Peter Kirst, Hendrik Otto and Steffen Rebennack</b> - Feasibility verification and upper bound determination in global minimization   |
| 17:30 p.m. Athens time                    | <b>Oleg Khamisov and Mikhail Posypkin</b> - Univariate global optimization methods based on generalized convexity properties  |
| 18:00 p.m. Athens time                    | <b>Yanlin Zha and Benoit Chachuat</b> - A Sparse Set Arithmetic using Interval-valued Chebyshev Polynomials   |
| 18:30 p.m. Athens time                    | <b>Dillard Robertson, Joseph Scott and Pengfei Cheng</b> - Convergence Order Analysis for Decomposition Methods for Global Nonconvex Stochastic Optimization  |
| 19:00 p.m. Athens time                    | Break   |
| <b>19:15 – 22:45</b>                      | <b>Session 2</b> Chair: Varun Ojha  |
| 19:15 p.m. Athens time                    | <b>Konstantinos Parsopoulos, Vasileios Tatsis, Ilias Kotsireas and Panos Pardalos</b> - Parallel Algorithm Portfolios with Adaptive Resource-Allocation Strategy  |
| 19:45 p.m. Athens time                    | <b>Dominik Bongartz, Samuel J. Smucny, Linus Netze, Jaromil Najman, Artur M. Schweidtmann and Alexander Mitsos</b> - Parallel Computing for Deterministic Global Optimization   |
| 20:15 p.m. Athens time                    | <b>Saulius Tautvaisas and Julius Žilinskas</b> - Scalable Bayesian Optimization with Generalized Product of Experts   |
| 20:45 p.m. Athens time                    | <b>Jan Kronqvist, Ruth Misener and Calvin Tsay</b> - A Hierarchy of Relaxations between big-M and Convex Hull Formulations  |
| 21:15 p.m. Athens time                    | <b>Jason Ye and Joseph Scott</b> - Improved Convex Relaxations with Dynamic Cuts for Global Dynamic Optimization  |
| 21:45 p.m. Athens time                    | <b>Hoang Phuc Hau Luu, Hoai An Le Thi and Tao Pham Dinh</b> - Acceleration techniques in DC programming   |
| 22:15 p.m. Athens time                    | <b>Nevena Mijajlovic and Milošica Jacimovic</b> - Continuous extra-gradient method for quasi-variational inequalities   |

Thursday, July 8, 2021

| Time                                      |  |
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| <b>16:00 – 19:00</b>                      | <b>Session 3</b> Chair: Yaroslav Sergeyev  |
| 16:00 p.m. Athens time<br>(9:00 a.m. EDT) | <b>Sergiy Butenko, Mykyta Makovenko and Miltiades Pardalos</b> - A Hierarchy of Standard Polynomial Programming Formulations for the Maximum Clique Problem  |
| 16:30 p.m. Athens time                    | <b>Tanuj Karia, Claire Adjiman and Benoit Chachuat</b> - Global Optimization of Mixed-Integer Polynomial Programs via Quadratic Reformulation: Impact of Pre-processing Strategies                                 |
| 17:00 p.m. Athens time                    | <b>Oleg Prokopyev, Xueyu Shi and Ted Ralphs</b> - Mixed Integer Bilevel Optimization with k-optimal Follower: A Hierarchy of Bounds  |
| 17:30 p.m. Athens time                    | <b>Ovanes Petrosian, Anna Zholobova, Violetta Kochomanova, Mariya Peglivanova and Yefim Zholobov</b> - Industry Maintenance Planning Optimization Problem using MINLP  |
| 18:00 p.m. Athens time                    | <b>Hu Chaoming, Cheng Hao, Qian Xiaofei, Liu Xinbao and Panos M Pardalos</b> - Joint production and maintenance scheduling with maintenance resource constraints   |
| 18:30 p.m. Athens time                    | <b>Carlos Jose Nohra Khouri, Arvind U Raghunathan and David Bergman</b> - Minimum Linearization of Multilinear Programs  |
| 19:00 p.m. Athens time                    | Break  |
| <b>19:15 – 22:45</b>                      | <b>Session 4</b> Chair: Saulius Tautvaisas   |
| 19:15 p.m. Athens time                    | <b>Ashkan Fakhri, Antonios Fragkogios and Georgios K.D. Saharidis</b> - An Accelerated Benders Decomposition Algorithm for Solving a Double-type Double-standard Maximal Covering Location Problem                 |
| 19:45 p.m. Athens time                    | <b>Pierre Miasnikof, Mohammad Bagherbeik and Ali Sheikholeslami</b> - Graph Clustering with a Permutational Boltzmann Machine  |
| 20:15 p.m. Athens time                    | <b>Joelle Ferzly, Martin Vohralik, Soleiman Yousef and Ibtihel Ben Gharbia</b> - Semismooth and smoothing Newton methods for nonlinear systems with complementarity constraints: adaptivity and inexact resolution |
| 20:45 p.m. Athens time                    | <b>Muhammad Munir Butt</b> - 3D multigrid solver for stationary Navier-Stokes control problems   |
| 21:15 p.m. Athens time                    | <b>Michael Wagner, Charles J. Colbourn and Dimitris E. Simos</b> - In-Parameter-Order strategies for covering perfect hash families  |
| 21:45 p.m. Athens time                    | <b>Alexei Kaltchenko</b> - Computational complexity of qubit preparation and compiling in quantum computing  |
| 22:15 p.m. Athens time                    | <b>Martin Bohner, Giuseppe Caristi, Shapour Heidarkhani and Amjad Salari</b> - Critical point approaches to nonlinear square root Laplacian equations  |

Friday, July 9, 2021

| Time                                      |  |
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| <b>16:00 – 19:00</b>                      | <b>Session 5</b> Chair: Maxim Sakharov   |
| 16:00 p.m. Athens time<br>(9:00 a.m. EDT) | <b>Alla Kammerdiner, Alexander Semenov and Eduardo Pasillao</b> - Landscape-theoretic properties of the metaheuristics using very large-scale search for the multi-dimensional assignment problem                                  |
| 16:30 p.m. Athens time                    | <b>Maxim Sakharov, Kamila Koledina, Irek Gubaydullin and Anatoly Karpenko</b> - Parallel Memetic Global Optimization Algorithm for Optimal Control of Gasoline's Catalytic Reforming   |
| 17:00 p.m. Athens time                    | <b>Thomas Hübner, Marcel Sinske and Steffen Rebennack</b> - Global optimization of nonconvex and nonsmooth separable programming problems with application to the economic dispatch of power plants                                |
| 17:30 p.m. Athens time                    | <b>Julius Žilinskas, Algirdas Lančinskas, Pascual Fernández and Blas Pelegrin</b> - Competitive facility location with uncertainty in customer behavior  |
| 18:00 p.m. Athens time                    | <b>Algirdas Lančinskas, Julius Žilinskas, Pascual Fernández and Blas Pelegrin</b> - Population-based algorithm for facility location with ranking of location candidates   |
| 18:30 p.m. Athens time                    | <b>Martin Buisson, Mélina Ribaud, Céline Helbert, Stéphane Aubert and Manuel Henner</b> - Fan design using a low-fidelity turbomachinery model and cokriging-based optimization with multi-point infill sampling                   |
| 19:00 p.m. Athens time                    | Break  |
| <b>19:15 – 22:45</b>                      | <b>Session 6</b> Chair: Maude Josee Blondin  |
| 19:15 p.m. Athens time                    | <b>Sokoufeh Naderi, Maude Josee Blondin and Behrooz Rezaie</b> - Optimizing an Adaptive Interval Type-2 Fuzzy Logic Controller of a Three Degree-of-Freedom Helicopter through a Modified PSO Algorithm                            |
| 19:45 p.m. Athens time                    | <b>Kaining Shao, Wenjuan Fan, Shaowen Lan, Zishu Yang and Shanlin Yang</b> - A general variable neighborhood search algorithm for a PET/CT examination scheduling problem considering multi-stage process and deteriorating effect |
| 20:15 p.m. Athens time                    | <b>Varun Ojha, Bartolomeo Panto and Giuseppe Nicosia</b> - Global Optimization Algorithms for Incremental Static Analysis of Structures with Geometric Nonlinearity  |
| 20:45 p.m. Athens time                    | <b>Nader Kanzi, Giuseppe Caristi and David Barilla</b> - Necessary Conditions for Optimality of Nonsmooth Multiobjective Generalized Semi-Infinite Programming Problems  |
| 21:15 p.m. Athens time                    | <b>Ioannis Demetriou and Demetrius Davos</b> - The least squares convex - concave approximation method applied to COVID-19 data  |
| 21:45 p.m. Athens time                    | <b>Anastasia Markelova, Ovanes Petrosian, Pavel Kudin and Vitalii Novgorodtcev</b> - Optimizing Energy Demand-side Strategies for Energy Storage System Control using Linear Programming   |
| 22:15 p.m. Athens time                    | <b>Linas Stripinis and Remigijus Paulavicius</b> - Implementation of the first DIRECT-type toolbox (DGO) and an extensive experimental study of DGO and various partitioning and selection techniques                              |

**Saturday, July 10, 2021**

| Time                                       |   |
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|  | Chair: Panos M. Pardalos  |
| 16:00 p.m. Athens time<br>(9:00 a.m. EDT)  | Caratheodory lecture<br>Caratheodory lecture<br>Young investigator lecture  |
| 19:00 p.m. Athens time                     | Meeting of the International Society of Global Optimization<br>Business issues regarding ISOGO  |
| 19:30 p.m. Athens time<br>(12:30 p.m. EDT) | Closing Remarks:<br>WCGO 2021 General Chair - Panos M. Pardalos<br>WCGO 2021 Program Committee Chair - Julius Žilinskas<br>WCGO 2021 Local Chair – Ilias S. Kotsireas |