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Ilias S. Kotsireas · Panos M. Pardalos (Eds.)

Learning and Intelligent Optimization

14th International Conference, LION 14
Athens, Greece, May 24–28, 2020
Revised Selected Papers

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Guest Editorial

The 14th International Conference on Learning and Intelligent Optimization (LION 2020) was scheduled to be held in Athens, Greece, May 24–28, 2020, but regrettably it was canceled, due to travel restrictions imposed world-wide by the COVID-19 pandemic. However, we felt it was important to publish the proceedings of the conference, in order to minimize disruption to the participant's careers and especially the potentially devastating effects in the careers of PhD students, post-doctoral fellows, and young scholars. An additional reason for us to undertake the publication of these LNCS proceedings, was to ensure the continuity of the LION conference series.

LION 2020 originally featured two invited talks and a tutorial talk:

- "UberAir: Optimization Problems in the Sky," by Youssef Hamadi, Uber AI, France
- "Combinatorial Methods and Optimization Algorithms for Testing and Explainable AI," by Dimitris E. Simos, SBA Research, Austria (joint work with Rick Kuhn (NIST, USA) and Raghu Kacker (NIST, USA))
- "A Tutorial in Robust Machine Learning and AI with Applications," by Theodore B. Trafalis, University of Oklahoma, USA

We wish to express our heartfelt thanks to the organizers of the eight LION 2020 special sessions:

- Automatic Solver Configuration
- Massively Parallel Methods for Search and Optimization
- DC Learning: Theory, Algorithms and Applications
- Intractable Problems of Combinatorial Optimization, Computational Geometry, and Machine Learning: Algorithms and Theoretical Bounds
- Intelligent Optimization in Health, e-Health, Bioinformatics, Biomedicine and Neurosciences
- Scientific Models, Machine Learning and Optimization Methods in Tourism and Hospitality
- Nature Inspired Algorithms for Combinatorial Optimization Problems
- Intractable problems of combinatorial optimization, computational geometry, and machine learning: algorithms and theoretical bounds

We would like to thank the authors for contributing their work and the reviewers whose tireless efforts resulted in keeping the quality of the contributions at the highest standards. A special thank you goes to the Technical Program Committee Chair, Professor Roberto Battiti, Director of the LION Lab (machine Learning and Intelligent OptimizatioN) for prescriptive analytics.

The editors express their gratitude to the organizers and sponsors of the LION 2020 international conference:

- Center for Applied Optimization at the University of Florida University of Florida, USA
- CARGO Lab, Wilfrid Laurier University, Canada
- APM Institute for the Advancement of Physics and Mathematics

Even though organization of all physical conferences is currently on hiatus, we are very pleased to be able to deliver this LNCS proceedings volume for LION 2020, in keeping with the tradition of the two most recent LION conferences [1] and [2]. We sincerely hope we will be able to reconnect with the members of the vibrant LION community next year.

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June 2020

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