



Learning and Intelligent Optimization Conference LION 4, Jan 18-22, 2010 Venice, Italy.

The LION conference aims at exploring the boundaries between machine learning, artificial intelligence, mathematical programming and algorithms for hard optimization problems. The main purpose of the event is to bring together experts from all these areas to present and discuss new ideas, new methods, general trends, challenges and opportunities in applications as well as in research aiming at algorithmic advances.

The conference program will consist of plenary presentations, introductory and advanced tutorials, technical presentations, and it will give ample time for discussions.

Relevant Research Areas

LION 4 solicits contributions dealing with all aspects of learning and intelligent optimization. Topics of interest include, but are not limited to:

- Metaheuristics such as tabu search, iterated local search, evolutionary algorithms, memetic algorithms, ant colony optimization, and particle swarm optimization
- Hybridizations of metaheuristics with other techniques for optimization
- Supervised, unsupervised and reinforcement learning applied to heuristic search
- Reactive search optimization
- Self-adaptive algorithms
- Hyperheuristics
- Algorithm portfolios and off-line tuning methods
- Multiscale and multilevel methods
- Algorithms for dynamic, stochastic and multi-objective problems
- Interface(s) between discrete and continuous optimization
- Experimental analysis and modeling of algorithms
- Theoretical foundations
- Parallelization of optimization algorithms
- Memory-based optimization

High-quality scientific contributions to these topics are solicited, in addition to advanced case studies from interesting, high-impact application areas. We also welcome proposals for advanced tutorial presentations.

As in recent years, the post-conference proceedings are planned to be published as a volume of Springer's Lecture Notes in Computer Science (LNCS) series. Confirmation will be announced on the conference website.

Conference Chair: Roberto Battiti, Università di Trento (Italy)

Local Organization Chair: Marcello Pelillo, Università Ca' Foscari di Venezia (Italy)

Technical Program Committee Chair: Christian Blum, Universitat Politècnica de Catalunya (Spain)

Technical Program Committee: pls. see web site

(Strict) submissions deadline: October 16, 2009

Notification of acceptance: November 27, 2009

Conference: January 18-22, 2010

Camera ready for post-proceedings: February 19, 2010

For full and up-to-date information see: <http://www.intelligent-optimization.org/LION4>