

IEEE International Parallel & Distributed Processing Symposium

Workshop PCO'12 Parallel Computing and Optimization

Program Chair:

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PRELIMINARY CALL FOR PAPER

Scope:

In conjunction with IEEE IPDPS 2012, Shanghai China, the workshop on Parallel Computing and Optimization, PCO'12, aims at providing a forum for scientific researchers and engineers on recent advances in the field of parallel or distributed computing for difficult combinatorial optimization problems, like 0-1 multidimensional knapsack problems and cutting stock problems, large scale linear programming problems, nonlinear optimization problems and global optimization problems. Emphasis will be placed on new techniques for the solution of these difficult problems like cooperative methods for integer programming problems and polynomial optimization methods. Aspects related to Combinatorial Scientific Computing (CSC) will also be treated. Finally, the use of new approaches in parallel computing like GPU or hybrid computing, peer to peer computing and cloud computing will be considered. Application to planning, logistics, manufacturing, finance, telecommunications and computational biology will be considered.

Topics:

- * Integer programming, linear programming, nonlinear programming.
- * Global optimization, polynomial optimization.
- * Exact methods, heuristics
- * Parallel algorithms for combinatorial optimization.
- * Parallel metaheuristics.
- * Distributed optimization algorithms.
- * Graph partitioning, preconditioning, Combinatorial Scientific Computing,
- * Hybrid computing and the solution of optimization problems.
- * Peer to peer computing and optimization problems.
- * Applications: planning, logistics, manufacturing, finance, telecommunications, computational biology, combinatorial algorithms in high performance computing.

Submission details:

Prospective authors should submit their papers through workshop PCO'12 submission system, i.e. **EDAS conference management service**. Please, follow the instructions given on the site. Abstract and paper can be uploaded on December 23, 2011. Authors should preferably follow the manuscript specifications of IEEE IPDPS, i.e. submitted manuscripts may not exceed 12 single-spaced double-column pages using 10-point size font on 8.5x11 inch pages (IEEE conference style), including figures, tables and references. Style templates are available at the IPDPS 2012 web page.

Workshop web page: <http://conf.laas.fr/PCO12/index.html>

IEEE IPDPS web page: <http://www.ipdps.org/>

Important dates:

Closing date for submissions: December 23, 2011
Notification of acceptance: February 6, 2012
Camera-ready version: February 20, 2012
Conference: May 25, 2012

Location: Shanghai, China