2013 IEEE 27th International Symposium on Parallel & Distributed Processing Workshops and PhD Forum

Advances in Parallel and Distributed Computing Models – APDCM

Workshop Theme

The past twenty years have seen a flurry of activity in the are of parallel and distributed computing. In recent years, novel parallel and distributed computational models have been proposed in the literature, reflecting advances in new computational devices and environments such as optical interconnects, programmable logic arrays, networks of workstations, radio communications, mobile computing, DNA computing, quantum computing, sensor networks etc. It is very encouraging to note that the advent of these new models has lead to significant advances in the resolution of various difficult problems of practical interest.

The main goal of this workshop is to provide a timely forum for the exchange and dissemination of new ideas, techniques and research in the field of the parallel and distributed computational models. The workshop is meant to bring together researchers and practitioners interested in all aspects of parallel and distributed computing taken in an inclusive, rather than exclusive, sense. We are convinced that the workshop atmosphere will be conducive to open and mutually beneficial exchanges of ideas between the participants.

Topics of interest include, but are not limited to

- Models of Parallel and Distributed Computing: Radio communication models, Mobile computing models, Sensor network models, Hardware-specific models, FPGA models, Systolic arrays and cellular automata, peer-to-peer models, Biologically-based computing models, Quantum models, Reconfigurable models, Optical models, CUDA, BSP and LogP models

- Algorithms and Applications: Geometric and graph algorithms, Combinatorial algorithms, Randomized and approximation techniques, Numerical algorithms, Network algorithms, Localized algorithms, Distributed algorithms, Image processing, High-performance computing, GPU applications, MapReduce

- Practical Aspects: Architectural and implementation issues, Performance analysis and simulation, PVM/MPI, Multi-core processors, Programmable logic arrays, GPGPU, Design of network protocols, Embedded systems, Cloud computing, Cluster Computing, Development tools, Fault tolerance, Security Issues

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