ParCo 2011 - PARALLEL COMPUTING 2011

30 August – 2 September 2011

Ghent, Belgium

CALL FOR PAPERS

Parallel computing, for many years the enabling technology of high end machines, is now the standard way of computing.
ParCo2011 continues the tradition of the international conferences on parallel computing that started in Berlin, Germany in 1983. This makes it one of the longest running international conferences on parallel computing. Over the years the conference established itself as the foremost platform for exchanging know-how on the newest parallel computing strategies, technologies, methods and tools. The high scientific standard of the conference presentations and the refereed proceedings have become the hall-mark of ParCo. As with all previous conferences in this series ParCo2011 will, through its informal nature, give delegates excellent opportunities to meet and interact with fellow researchers.

AIMS AND SCOPE

The aim of the conference is to give an overview of the state-of-the-art of the developments, applications and future trends in parallel computing for all platforms. The conference addresses all aspects of parallel computing, including applications, hardware and software technologies as well as languages and development environments.

Special emphasis will be placed on the:

- The role of high performance processing to solve real-life problems in all areas, including scientific, engineering and multidisciplinary applications.

- Innovative directions in high speed and large scale computing, strategies, experiences and conclusions.

- The impact of parallelism on client computing.

TOPIC AREAS

Section 1: Applications

The application of parallel processing to solve all types of business, industrial, scientific and engineering

problems using high performance computing technologies, in particular:

- Applications of high-end machines including exascale

- Applications of multicores

- GPU-based applications

- Cloud computing applications.

The parallel processing algorithms and paradigms used should be discussed.

Section 2: Algorithms

Design, analysis and implementation of parallel algorithms in science and engineering, focusing on issues such as:

- Scalability and speedup

- Efficient utilization of the memory hierarchy

- Communication and synchronization

- Power consumption.

The parallel computing aspects should be emphasized.

Section 3: Software and Architectures

Software engineering for developing and maintaining parallel software, including

- Parallel programming languages, compilers and environments

- Tools and techniques for generating reliable and efficient parallel code

- Testing and debugging techniques and tools

- Best practices of parallel computing on multicore, manycore and stream processors.

Software, architectures and operating systems for all types of parallel computers may be considered, including multicores, GPU accelerators, FPGA reconfigurable systems, high-end machines and cloud computing.

PROGRAM

The scientific program consists of invited and contributed papers as well as mini-symposia covering special topics.

Papers are presented in parallel sessions with 20 minutes available per presentation, with an additional five minutes for discussion.

An industrial session and an exhibition of equipment are planned.

CONTRIBUTIONS

Papers:

Contributed papers in English are called for. Extended abstracts of at least two pages should be submitted in electronic form by HF March 2011. Proposals are to be submitted in .pdf-format.

Abstracts should clearly describe the contents of the proposed paper. The relevance and originality of the contribution must be described and the most important references included. At most five relevant keywords must be supplied. Also indicate the preferred topic area (section 1, 2 or 3) from the list given above.

Please use the conference registration system to register as an author at http://www.conftool.net/parco2011/. Once registered you can submit your proposal.

Mini-Symposia:

Proposals for organising a mini-symposium are called for. Such proposals should give:

- The proposed title of the symposium

- The name and affiliation(s) of the organiser(s)

- A short outline of the contents

- The planned number of papers.

Proposals for organising a mini-symposium can be submitted by **31 March 2011** to:

- Gerhard Joubert: joubert [at] informatik.tu-clausthal.de

- Frans Peters: fpeters [at] iae.nl

DEADLINES

Extended Abstracts of Papers:	**31 March 2011**
Proposals for Mini-Symposia:	**31 March 2011**
Notification of Acceptance of Papers for Presentation at Conference:	**1 June 2011**
Submission of Full Papers:	**31 July 2011**

PROCEEDINGS

The conference proceedings will be published after the conference.

An invitation to (an) author(s) to present a paper at the conference is based on an extended abstract or draft paper. Thus the presentation of a paper at the conference does not imply an automatic acceptance of the presented paper for publication in the conference proceedings. All papers presented at the conference will be refereed at and/or after the conference. Only accepted papers will be published.

All papers presented as part of Mini-Symposia will be considered for publication in the proceedings. This will be done in liaison with the organiser(s) of the respective symposium.

CONFERENCE ORGANISATION

ParCo2011 is organised by the non-profit foundation ParCo Conferences in cooperation with Ghent University, Belgium.

CONTACT

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