



ParCo2009

PARALLEL COMPUTING 2009

1 – 4 September 2009

Lyon, France

CALL FOR PAPERS

Parallel computing is today already the standard computing paradigm in many areas of main stream computing. The evolution from specialised technologies for handling large and complex applications to standard techniques for solving everyday applications on affordable hardware is revolutionising computing strategies in virtually all application areas. The extension of these advanced technologies to networked based systems, such as clusters, grids and clouds, makes parallel computing one of the base technologies for e-science on a global scale.

ParCo2009 continues the tradition of the international conferences on parallel computing started in Berlin, Germany in 1983. This makes it one of the longest running international conferences on high performance 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**.

These conferences are planned such that a maximum opportunity is created for delegates to meet and interact with fellow researchers. The informal nature of the conferences allow for easy interaction of the delegates.

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 high performance 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:

- 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.

TOPIC AREAS

Section 1: Applications

The application of parallel computers to solve computationally challenging problems in the physical and life sciences, engineering, industry and commerce. The treatment of complex multidisciplinary problems occurring in all application areas such as:

- space, geographic, climate, environment and energy systems
- biological, genetic and medical applications
- industrial (manufacturing) and
- business and financial applications

is of special interest. The parallel processing algorithms and paradigms used should be discussed.

Section 2: Algorithms

Design, analysis and implementation of generic parallel algorithms, including their

- scalability, in particular to a large number of processors (MPP),
- portability and
- adaptability.

The parallel computing paradigm and/or the abstract machine model must be described.

Section 3: Software and Architectures

Software engineering for developing and maintaining parallel software, including

- parallel programming models and paradigms
- development environments, compile-time and run-time tools
- testing and debugging techniques and tools
- performance evaluation and benchmarking techniques and tools.

Software, architectures and operating systems for all types of parallel computers may be considered, including heterogeneous reconfigurable systems, e. g. FPGA, GPU, Grids, parallel clouds, exascale systems, etc.

PROGRAM

The scientific program consists of invited and contributed papers as well as a limited number of mini-symposia covering particular 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 **28 February 2009**. Proposals should be submitted in .pdf-format.

Abstracts should clearly describe the contents of the paper. The relevance and originality of the contribution must be clearly spelled out and the most important references included. Also indicate the preferred topic area (section) and give relevant keywords.

Please use the conference registration system to register as an author at <http://www.conftool.net/parco2009/>. Once registered you can submit your proposal

Mini-Symposia:

Proposals for organising a mini-symposium 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 until **31 March 2009** to:

- Gerhard Joubert: joubert@informatik.tu-clausthal.de
- Frans Peters: fpeters@iae.nl

DEADLINES

Abstracts of Papers:	28 February 2009
Proposals for Mini-Symposia:	31 March 2009
Notification of Acceptance of Papers for Presentation at Conference:	15 May 2009
Submission of Full Papers:	15 July 2009
Notification of Acceptance of Full Papers for Proceedings:	25 Sept. 2009

PROCEEDINGS

Paper proposals are accepted for presentation at the conference. This does not automatically imply acceptance for publication in the conference proceedings.

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

CONFERENCE ORGANISATION

ParCo2009 is organised by the non-profit foundation *ParCo Conferences* in cooperation with the French research and teaching institutions ENS, Lyon, INRIA and Genci.

CONTACT

e-Mail: parco09-org@listes.ens-lyon.fr

Website: <http://www.parco.org>

Mail Address:

**ParCo2009
LIP ENS Lyon
46 Allée d'Italie
69364 Lyon Cedex 07
France**