Call for Papers
2nd International Workshop on
Optical SuperComputing in Bertinoro (OSC09)

November 18-20, Bertinoro, Italy
http://www.cs.bgu.ac.il/∼dolev/OSC09

Dates:

Submission deadline	**July 25, 2009**
Acceptance notification	**August 25, 2009**
Camera-ready copy due	**September 10, 2009**

Program Committee:

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How to submit:
Authors are invited to submit their extended abstracts electronically. A detailed description of the electronic submission procedure will appear on the workshop web-page, as of June 1, 2009. Authors unable to submit electronically should contact the program chair, Shlomi Dolev by email, dolev@cs.bgu.ac.il or by phone, +972-8-6428119 to receive instructions.

SCOPE: OSC, the International Workshop on Optical SuperComputing, is an annual forum for research presentations on all facets of optical computing for solving hard computation tasks. Optical computing devices have the potential to be the very next computing infrastructure. Optical computing presents an alternative to the frequency limitations, cross-talk phenomena and soft-errors of electronic devices. The natural parallelism of optical computing devices, coupled with the advance in fiber optics and optical switches make optical computing commercially viable. Research contributions to the theory, design, specification, analysis, implementation, or application of optical supercomputers are solicited. Topics of interest include, but are not limited to:

- Designs or demonstrations of optical computing devices and systems
- Algorithmics and complexity issues of optical computing
- Computation representation by photons and holograms
- Neural and brain inspired architectures
- Electro-optic devices for interacting with optical computing devices
- Practical implementations
- Analysis of existing devices and case studies
- Optical photonics and laser switching technologies
- Optical and photonic memories
- Optical signal processing subsystems
- Optical networks for high-performance computing
- Optical interconnections
- Quantum optical systems
- Applications and algorithms for optical devices
- Alpha particles, X-Rays and nano-technologies for optical computing

Workshop presentations will have two formats: **Regular presentations** of at least 25 minutes accompanied by papers of up to 15 pages in the proceedings. Additional material may be added in a clearly marked Appendix to be read at the discretion of the Program Committee Members. This form is intended for contributions reporting on original research, submitted exclusively to this workshop. **Brief announcements** of at least 10 minutes accompanied by two page abstracts in the proceedings. This format is a forum for brief communications, which may be published in other workshops. Longer versions expanding the brief announcements will be collected in a web site.

The workshop proceedings will be published by LNCS Springer Verlag. We are also seeking a special issue with a journal.

SUBMISSIONS FORMAT: The cover page should include (1) title, (2) authors and affiliation, (3) postal and e-mail address of the contact author, (4) indication of the format(s) to which the paper is submitted, and (5) a brief abstract describing the work. It is recommended that each submission begin with a succinct statement of the problem, summary of the main results, and a brief explanation of their significance, all suitable for a non-specialist. Technical development of the work, directed to the specialist, should follow. A submission for the **regular presentation** format should be no longer than 4,500 words (10 pages on letter-size paper using at least 11-point font, figures and tables included) excluding references. If the authors believe that more details are essential to substantiate the main claims of the paper, they may include a clearly marked appendix that will be read at the discretion of the program committee. Extended abstracts deviating significantly from these guidelines risk rejection without consideration of their merits. A submission for the **brief announcement** format should be no longer than three pages. Authors of accepted brief announcements will be asked to submit a full version of their work to be placed on a WWW site.

If requested by the authors in the cover letter, an extended abstract that is not selected for a long presentation will also be considered for the brief announcement format. Such a request will not affect consideration of the paper for a long presentation.