IEEE eScience Workshop on High-Performance Computing in the Life Sciences

Call for Papers:

There are a variety of parallel and distributed high-performance computing platforms, including multicore architectures, GPGPUs/GPUs, clusters, grids, and clouds, that together with new programming paradigms such as MapReduce and Many Task Computing offer a wide range of possibilities for solving compute- and data-intensive problems in an efficient manner. The purpose of this workshop is to provide the opportunity for participants to discuss and share the latest research in parallel and distributed high performance computing systems applied to problems in the Life Sciences, i.e. all fields of science that involve the scientific study of living organisms, such as biology, biochemistry, biophysics, food science, medicine, medical imaging, neuroscience, pharmacology, physiology and systems biology.

Topics of interests include (but are not limited to):

* Multicore/manycore architectures in life science applications

* GPU support for life science applications

* Cluster, Grid and Cloud Computing in the life sciences

* Security of high-performance computing environments for the life sciences

* Privacy in high-performance computing environments for the life sciences

* Parallelization of compute- or data-intensive tasks in the life sciences

* Data handling, integration and visualization in the life sciences

* Distributed infrastructures for life science applications

* Programming paradigms for high-performance computing in the life sciences

* Tools and programming environments supporting high-performance computing in the life sciences

* Scheduling in high-performance computing environments for life science applications

* Workflow management and remote collaboration in the life sciences

* System level support for high-performance computing in the life sciences

* Fault-tolerance of distributed life science applications

* Scalability of infrastructures and applications in life science applications

Organizers

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Important Dates

Papers Submission Due: 15th of September 2010

Author Notifications: 7th of October 2010

Final manuscripts: 14th of October 2010

Presentation: 7th of December 2010

Submission Guidelines

Authors are invited to submit papers with unpublished, original work of not more than 6 pages of double column text using single spaced 10 point size on 8.5 x 11 inch pages, as per IEEE 8.5 x 11 manuscript guidelines.

Templates are available from here:
http://www.ieee.org/web/publications/pubservices/confpub/AuthorTools/conferenceTemplates.html.

Authors should submit a PDF or PostScript (level 2) file that will print on a PostScript printer.

It is expected that the proceedings will be published by the IEEE CS Press, USA and will be made available online through the IEEE Digital Library.

It is a requirement that at least one author of each accepted paper attend the workshop.

Papers should be submitted to:
https://cmt2.research.microsoft.com/HPC4LS2010/

Workshop URL:
http://www.dcsec.uni-hannover.de/hpc4ls.html

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