



# Parallel Bio-Computing 2009

Workshop on Parallel Computational Biology, Wroclaw (Breslau), Poland  
September 13–16, 2009

Bioinformatics is the science of managing, mining, and extracting knowledge from biological sequences and structures. Since the last PBC workshop in 2007 the field has witnessed two revolutions: the multi-core revolution and the DNA sequencing revolution due to new sequencing machines such as the 454 or Solexa. Because of the new data flood in combination with the multi-core revolution, the application of HPC techniques to solve bioinformatics problems has become crucial to the success of the field.

The goal of this Workshop is to present the latest research in high-performance computing applied to bioinformatics. We are especially interested in parallel and distributed algorithms, memory efficient algorithms, and design of high-performance software for clusters, massively parallel systems and grids. Submission of articles dealing with parallelization of applications on multi-/many-core as well as accelerator architectures are specifically encouraged. Topics of interest include but are not limited to:

- Bioinformatics databases
- Computational genomics and proteomics
- DNA assembly, clustering, and mapping
- Gene expression and microarrays
- Gene identification and annotation
- Molecular sequence analysis
- Phylogeny reconstruction algorithms
- Protein structure prediction and modelling
- Parallel algorithms for biological analysis
- Parallel architectures for biological applications
- System tools that support large scale high-performance bio-computing

The PBC Workshop will be held in conjunction with the Eighth International Conference on Parallel Processing and Applied Mathematics PPAM 2009, Wroclaw (Breslau), Poland, September 13–16, 2009 (<http://www.ppam.pl>).

## PAPER SUBMISSION AND PUBLICATION

The workshop will consist of dedicated sessions containing selected papers. Papers will be refereed and accepted on the basis of their originality, scientific merit and relevance to the Workshop topics. Papers presented during the workshop will be included into the proceedings of PPAM and published after the conference by Springer-Verlag in the LNCS series.

The only allowed paper format is Springer L<sup>A</sup>T<sub>E</sub>X style. To ensure reasonable quality and consistency of preparation, please be sure to adhere closely to the LNCS Author and Volume Editor Instructions. All papers should be prepared as a PDF or PS file, and should be submitted using the Paper Submission link. Papers should not exceed 10 pages.

## IMPORTANT DATES

Submission of Papers: April 30, 2009 (23:59 CET) [previously April 10]  
Notification of Acceptance: May 31, 2009  
Camera-Ready Papers: October 31, 2009

## PROGRAMME COMMITTEE

David A. Bader, Georgia Tech, USA – *workshop chair*  
Denis Trystram, LIG, France – *workshop chair*

Alexandros Stamatakis, TU München, Germany – *programme co-chair*  
Jaroslaw Zola, Iowa State Univ., USA – *programme co-chair*

Dmitry Afonikov, Inst. of Cytology and Genetics, Russia  
Srinivas Aluru, Iowa State Univ., USA  
Wenguang Chen, Tsinghua Univ., China  
Scott Emrich, Univ. of Notre Dame, USA  
Wu-chun Feng, Virginia Tech, USA  
Ananth Kalyanaraman, Washington State Univ., USA  
Bernard Moret, EPF Lausanne, Switzerland  
Pierre Peterlongo, INRIA, France  
Jacques Rougemont, EPF Lausanne, Switzerland  
Bertil Schmidt, Nanyang Tech. University, Singapore  
Evrpidis Sotiriadis, Tech. Univ. of Crete, Greece  
Craig Stewart, Indiana University, USA

## WORKSHOP OFFICE

Jaroslaw Zola  
Iowa State University  
Department of Electrical & Computer Engineering  
1126 Coover Hall  
Ames, Iowa 50011, USA

Email: zola@iastate.edu Phone: +1 515 294-5498 Fax: +1 515 294-8432