

## CALL FOR PAPERS

### Minisymposium on GPU Computing

Held with PPAM 2017 – 12th International Conference on Parallel Processing and Applied Mathematics

Lublin, Poland,  
September 10-13, 2017  
<http://ppam.pl>

#### Overview:

GPU programming has evolved into a full ecosystem that includes programming languages (CUDA, OpenCL), libraries (e.g., cuBLAS, cuSPARSE, cuFFT, cuSOLVER, AmgX, MAGMA), high level interfaces (e.g., thrust, OCCA, RAJA, Kokkos), annotation-based programming models (e.g., OpenACC, OpenMP), GPU support in mathematical software (e.g., Parallel Computing Toolbox in Matlab, CUDALink in Mathematica), GPU script languages (e.g., PyOpenCL, Bohrium), and new data parallel languages (e.g., Copperhead). Altogether, these languages, tools, and APIs help bring GPU programming to the next level.

A major decision for libraries and high level programming tools is the positioning within the triangle performance, coding comfort, and specialization. The spectrum ranges from high performance building blocks for common numeric or discrete transformations, to application domain specific libraries facilitating the solution of a certain class of problems, to general high level abstractions increasing the programmer's productivity.

By sharing their experiences on GPU programming we hope that the participants of the workshop will gain a better understanding about which tools are good for which type of problem and the trade-offs between performance, coding comfort, and specialization. This workshop invites, in particular, submissions that deal with practical applications that have successfully employed GPU libraries or high level programming tools. The focus may lie both on the development of the libraries or utilization of existing tools. Workshop topics include, but are not limited to:

- GPU applications coded with high level programming tools
- GPU library development and application
- Comparison of different programming abstractions on the same/similar applications
- Comparison of the same/similar programming abstractions on different applications
- Performance and coding effort of high level tools against hand-coded approaches on the GPU
- Performance and coding effort on multi-core CPUs against GPUs utilizing programming abstractions
- Classification of different programming abstractions with respect to their best application area

#### Submissions:

The rules of PPAM conference apply. In particular:

- Papers will be refereed and accepted on the basis of their scientific merit and relevance to the conference topics.
- Regular papers are not to exceed 10 pages (LNCS style).
- Abstracts of accepted papers will be available during the conference in form of a brochure.
- Only papers presented at PPAM 2017 will be included into the proceedings, which is planned to be published after the conference by Springer in the LNCS series.

#### Important dates:

Submission of Papers:	<del>April 21, 2017</del>	<b>May 5, 2017</b>
Notification of Acceptance:	<del>May 31, 2017</del>	<b>June 16, 2017</b>
Camera-Ready Papers:	Nov. 15, 2017	

#### Organizers:

Jose R. Herrero	Universitat Politecnica de Catalunya, Spain
Enrique S. Quintana-Orti	Universidad Jaime I, Spain
Robert Strzodka	University of Heidelberg, Germany

**Program Committee:**

Juan Acebron	Instituto Universitario de Lisboa, Portugal
Paolo Bientinesi	RWTH Aachen, Germany
Ramon Doallo	University of A Coruna, Spain
Dominik Goeddeke	University of Stuttgart, Germany
Francisco D. Igual	Universidad Complutense de Madrid, Spain
Jose M. Mantas Ruiz	Universidad de Granada, Spain