

Minisymposium on High Performance Computing Interval Methods

Two major measures of the quality of high performance computations are numerical precision and efficiency.

Interval methods are a class of algorithms that are precise and even allow to obtain a guaranteed result. They also provide a useful and appropriate tool to describe the uncertainty of parameters, discretization inaccuracy and numerical errors. Nevertheless, they are usually time consuming and memory demanding.

Hence, all attempts to increase their efficiency are required and valuable: parallel implementations, use of new data structures, improved algorithms.

The Minisymposium is going to provide a forum for interval researchers to share their experiences and present possible improvements to the algorithms and successful applications.

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

- parallelization of interval methods, in particular on multi-core architectures, supercomputers, grids or clouds
- the use of GPU computing for interval analysis,
- the use of BLAS, LAPACK, novel data formats and data structures for interval computations
- auto-tuning of interval algorithms
- global optimization/equations solving methods
- linear systems with interval parameters
- ordinary and partial differential equations
- practical applications of interval scientific computing algorithms

The Minisymposium is a part of the [PPAM 2019](#) 13th International Conference on Parallel Processing and Applied Mathematics.

As the **PPAM 2019** Conference, the Minisymposium is going to take place in **Bialystok, Poland, in September 8-11, 2019**.

All rules of the **PPAM 2019** Conference apply, including the deadlines and required format of the abstracts/papers.

Please, send your questions and submissions to Bartłomiej Jacek Kubica -- the preferred address is: bartlomiej.jacek.kubica@gmail.com.

Persons responsible for the Minisymposium organization (in alphabetic order):

- Bartłomiej Jacek Kubica, Warsaw University of Life Sciences, Poland
- Nathalie Revol, Inria - University of Lyon, France
- Pawel Sewastjanow, Czestochowa University of Technology, Poland
- Iwona Skalna, AGH University of Science and Technology, Poland