Special Session on Efficient Algorithms for Problems with Matrix and Tensor Decompositions

Topics

There are many applications in computational practice, which are based on the processing of huge data sets that are organized into large matrices or tensors. Examples include the video sequences, evolution of any two-dimensional, discretized fields in time, etc. Another problem area is numerical solving differential equations, where the discretization leads also to large matrices of special form. The basic algorithmic tools for data reduction are matrix/tensor decompositions (mainly EVD/SVD), which enable to get insight into the inherent structure of a problem and allow to formulate fast and efficient algorithms for their solution.

This special session focuses on efficient algorithms for canonical matrix/tensor decopositions. Consequently, the following (and related) items are of interest:

-- efficient algorithms for the canonical decomposition of large matrices and tensors, their design and analysis

-- implementation of the above algorithms under the MPI/OpenMP paradigm

-- usage of parallel matrix/tensor decompositions for solving problems that arise in various applications.

Session organizers:

Marian Vajtersic (University of Salzburg, Austria) marian@cosy.sbg.ac.at

Gabriel Oksa (Slovak Academy of Sciences, Institute of Mathematics, Slovakia)
Gabriel.Oksa@savba.sk

High quality papers are invited into the workshop. Papers presented during the workshop will be included into the proceedings of PPAM Conference and will be published after the conference by Springer-Verlag in the LNCS series. Papers are not to exceed 10 pages (LNCS style).

Authors should submit papers (as PDF files) by PPAM site (track: Special Session on Efficient Algorithms for Problems with Matrix and Tensor Decompositions). In case of any problems please contact the Special Session organizers.

Dates

Submission of Papers:	~~Apr 26~~, **May 11, 2015**
Notification of Acceptance:	~~June 5~~, **June 20, 2015**
Conference:	September 6-19, 2015
Camera Ready Papers:	Nov 15, 2015