
Tuesday
May 8

MS04 Part II
Constrained Low-Rank Matrix
and Tensor Approximations

3:00 PM - 5:00 PM

WLB103

Constrained low rank matrix and tensor approximations are extremely useful in large-scale data analytics with applications across data mining, signal processing, statistics, and machine learning. Tensors are multidimensional arrays, or generalizations of matrices to more than two dimensions. The talks in this minisymposium will span various matrix and tensor decompositions and discuss applications and algorithms, as well as available software, with a particular focus on computing solutions that satisfy application-dependent constraints.

Organizers:

Grey Ballard, Wake Forest

University, ballard@wfu.edu

Ramakrishnan Kannan, Oak Ridge

National Laboratory,

kannanr@ornl.gov

Haesun Park, Georgia Institute of

Technology, hpark@cc.gatech.edu

3:00-3:30 Accelerating the
Tucker Decomposition with
Compressed Sparse Tensors

George Karypis, University of
Minnesota

UPDATED INFORMATION

3:30-4:00 Efficient CP-ALS and
Reconstruction from CP Form

Jed Duersch, Sandia National
Laboratories

4:00-4:30 Non-Negative Sparse
Tensor Decomposition on
Distributed Systems

Jiajia Li, Georgia Institute of
Technology

4:30-5:00 Communication-
Optimal Algorithms for CP
Decompositions of Dense
Tensors

Grey Ballard, Wake Forest
University