# Friday May 4

#### **CS02**

Contributed Session 02 10:45 AM - 11:45 AM WLB208

## TALK CANCELED

10:45-11:15 Positivity
Properties of Some
Non-Negative Matrices
-Isha Garg, National Institute of
Technology, Jalandhar

# CHANGE OF TIME

## 10:45-11:15 Upper and Lower Bounds for Sines of Canonical Angles

Zoran Tomljanovic, J. J. Strossmayer University of Osijek

11:15-11:45 Spectral
Decomposition of Selfadjoint
Matrices in Positive
Semi-Definite Inner Product
Spaces and Its Applications

Pingping Zhang, Chongqing University of Posts and Telecommunications

# Friday May 4

#### MS10 Part II

Generalized Inverses and the Linear Least Squares 3:00 PM - 5:00 PM WLB104

Within this minisymposium we will consider some actual problems of the generalized inverses, generalized invertibility of operators, representations of the Drazin inverse, least squares problem, and computing generalized inverses using gradient neural networks and using database stored procedures. We will develop the relationship between generalized inverses and the linear least squares problem with applications in signal processing.

## Organizers:

Dragana Cvetkovic Ilic, Facuty of Science and Mathematics, University of Nis, dragana@pmf.ni.ac.rs Ken Hayami, Principles of Informatics Research Division, National Institute of Informatics, hayami@nii.ac.jp Yimin Wei, School of Mathematical Sciences, Fudan University, ymwei@fudan.edu.cn

## 3:00-3:30 Randomized Algorithms for Core Problem and TLS Problem

Liping Zhang, Zhejiang University of Technology

3:30-4:00 Condition Numbers of the Multidimensional Total Least Squares Problem

Bing Zheng, Lanzhou University

4:00-4:30 Fast Solution of Nonnegative Matrix Factorization via a Matrix-Based Active Set Method

Ning Zheng, National Institute of Informatics

#### NEW TALK

4:30-5:00 Computing the Inverse and Pseudoinverse of Time-Varying Matrices by the Discretization of Continuous-Time ZNN Models Marko D. Petković, University of Niš

# Friday May 4

#### **CS04**

Contributed Session 04 3:00 PM - 4:30 PM WLB211

3:00-3:30 Log-determinant Non-Negative Matrix Factorization via Successive Trace Approximation Andersen Ang, Université de Mons

### CHANGE OF TIME

3:30-4:00 A Low-Rank Approach to the Solution of Weak Constraint Variational Data Assimilation Problems Daniel L.H. Green, University of Bath

4:00-4:30 Optimization Methods on Problems with Generalized Orthogonality Constraints Hong Zhu, Jiangsu University

# UPDATED INFORMATION CHANGE OF LOCATION

4:30-5:00 Computing the Inverse and Pseudoinverse of Time-Varying Matrices by the Discretization of Continuous-Time ZNN Models

Marko D. Petković, University of Niš Move to Friday May 4, MS10 Part II, 4:30-5:00. WLB104