List of Contributed Sessions

Contributed Session 01
CS01

Choi-Davis-Jensen Type Inequalities Without Convexity
Jadranka Mićić Hot, University of Zagreb

Contractive Maps on Operator Ideals and Norm Inequalities III
Ancha Aggarwal, Sant Longowal Institute of Engineering and Technology

Contractive Maps on Operator Ideals and Norm Inequalities
Yogesh Kapil, Sant Longowal Institute of Engineering and Technology

Contributed Session 02
CS02

Positivity Properties of Some Non-Negative Matrices
Isha Garg, National Institute of Technology, Jalandhar

Upper and Lower Bounds for Sines of Canonical Angles
Zoran Tomljanovic, J. J. Strossmayer University of Osijek

Spectral Decomposition of Selfadjoint Matrices in Positive Semi-Definite Inner Product Spaces and Its Applications
Pingping Zhang, Chongqing University of Posts and Telecommunications

Contributed Session 03
CS03

Eigenvalues of Lévy Covariation Matrices
Gregory Zitelli, University of California, Irvine

An Inverse Eigenvalue Problem for Lower Hessenberg Matrices with Prescribed Entries
Kanae Akaiwa, Kyoto Sangyo University

Exploiting the Structure of the Bethe-Salpeter Eigenvalue Problem
Carolin Penke, Max-Planck-Institute for Dynamics of Complex Technical Systems

FEAST Algorithm for Self Adjoint Eigenvalue Problems
Luka Grubišić, University of Zagreb

Contributed Session 04
CS04

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

Optimization Methods on Problems with Generalized Orthogonality Constraints
Hong Zhu, Jiangsu University

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

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

Contributed Session 05
CS05

GMRES in the ℓ^∞-Norm
Roland Herzog, Technische Universität Chemnitz

Smoothed Variants of Hybrid Bi-CG Methods for Solving Large Sparse Linear Systems
Kensuke Aihara, Tokyo City University

Stabilizing GMRES Using the Normal Equation Approach for Severely Ill-Conditioned Problems
Zeyu Liao, Sokendai

Numerical Stability of s-step Enlarged Conjugate Gradient Methods
Sophie Moufawad, American University of Beirut (AUB)

Contributed Session 06
CS06

Computing the CPD of Unbalanced Tensors by Homotopy Method
Tsung-Lin Lee, National Sun Yat-sen University

A New Perron-Frobenius Theorem for Nonnegative Tensors
Francesco Tudisco, University of Strathclyde, Glasgow

A Modified Newton Iteration for Finding Nonnegative Z-Eigenpairs of a Nonnegative Tensor
Chun-Hua Guo, University of Regina

Algebraic Approach to Generalized Tensor Inversion
Predrag S. Stanimirović, University of Niš

Contributed Session 07
CS07

Spectral Clustering of Signed Graphs
Andrew Knyazev, Mitsubishi Electric Research Laboratories (MERL)

Density of States for Spectral Graph Analysis
Kun Dong, Cornell University

Resistance Characterizations of Resistance Distance Equivalence Graphs
Lizhu Sun, Harbin Engineering University

Numerical Analysis of Dynamic Centrality
Philip A. Knight, University of Strathclyde

Contributed Session 08
CS08

Implicit Hari–Zimmermann Method for the GEVD
Sanja Singer, University of Zagreb

Extended Generalized Fiedler Pencils for Matrix Polynomials and the Recovery of Eigenvectors and Minimal Bases
Ranjan Kumar Das, Indian Institute of Technology Guwahati

Vector Spaces of g-Linearizations for Rectangular Matrix Polynomials
Biswajit Das, Indian Institute of Technology Guwahati

Minimum Rank Problem for the Regular Class of (0,1)-Matrices
Chao Ma, Shanghai Maritime University

Contributed Session 09
CS09

Lowest Complexity, Self Recursive, Radix-2 Discrete Cosine Transform Algorithms
Sirani M. Perera, Embry-Riddle Aeronautical University

Solving 2D Fractional Differential Equations Using Rank-Structured Matrix Equations
Leonardo Robol, ISTI-CNR

Speeding up Sparse Grid Density Estimation with Matrix Factorizations
Kilian Röhner, Technical University of Munich

Recent Advances in the Development of Discrete Empirical Interpolation Method (DEIM)
Zlatko Drmač, University of Zagreb

Contributed Session 10
CS10

An Efficient Adaptive Solution Technique for Periodic Stokes' Flow
Yabin Zhang, Rice University

Algebraic Analysis for Long-Time Instabilities in Wave Simulations on Non-Conforming Grids
Longfei Gao, KAUST

Predicting Frequencies of Interest in Structural Dynamics Problems
Mante Zemaityte, The University of Manchester

Linear Rate-Model Simulations in a Spiking Neural Network Simulator
Jan Hahne, University of Wuppertal

Contributed Session 11
CS11

Preconditioners for the Iterative Solution of Large Linear Least-Squares Problems
Miroslav Tuma, Charles University and the Czech Academy of Sciences

Polynomial Preconditioners Based on GMRES for Solving Multi-Shifted Linear Systems
Xian-Ming Gu, Southwestern University of Finance and Economics

Convergence of the Right Preconditioned Range Restricted MINRES for Singular Systems
Kota Sugihara, National Institute of Informatics

Circulant Preconditioners for Systems Defined by Functions of Toeplitz Matrices
Sean Hon, University of Oxford

Contributed Session 12
CS12

Continuous Analogues of Krylov-Based Methods for Differential Operators
Marc Aurele Gilles, Cornell University

A Distributed Algorithm for Computing Rational Krylov Subspaces
Mikhail Pak, Technical University of Munich

Generalizations of Roth's Criteria for Solvability of Matrix Equations
Klymchuk Tetiana, Taras Shevchenko National University of Kyiv, Universitat Politècnica de Catalunya

Perturbation Analysis of Linear Dynamical Systems with Ill-Conditioned Matrices
Peter Chang-Yi Weng, Institute of Statistical Science, Academia Sinica

Contributed Session 13
CS13

Complex Moment-Based Partial Singular Value Decomposition
Akira Imakura, University of Tsukuba

Condition Number and Equilibration of Factors in the SR Decomposition
Miroslav Rozložník, Czech Academy of Sciences, Prague

Conditionally Negative Definite Functions
Mandeep Singh Rawla, Sant Longowal Institute of Engineering and Technology

Port-Hamiltonian Systems and Various Distances for Control Systems
Punit Sharma, University of Mons

Contributed Session 14
CS14

Convergence of the Complex Cyclic Jacobi Methods and Applications
Erna Begovic, University of Zagreb

Generalized Davidson and Multi-directional-Type Methods for the GSVD
Ian N. Zwaan, Bergische Universität Wuppertal

Inner Deflation and Computation of the Eigenvectors of Symmetric Tridiagonal Matrices
Harold Taeter, University of Bari

Contour Integral Methods for Partial Eigenproblems of Linear Rectangular Matrix Pencils
Keiichi Morikuni, University of Tsukuba

Contributed Session 15
CS15

Fully-Coupled and Block/Schur Complement Based Algebraic MultiGrid-Based Preconditioners for Implicit Continuum Plasma Simulations
Paul Lin, Sandia National Laboratories

Geometric Multigrid for Graphene
Nils Kintscher, University of Wuppertal

Machine Learning in Algebraic Multigrid
Matthias Rottmann, University of Wuppertal

An Eigensolver for the Hermitian Dirac Operator with Multigrid Acceleration
Artur Strebel, Bergische Universitaet Wuppertal

Contributed Session 16
CS16

Partial Solutions to Riccati Equations for Feedback Gains Using the Staircase Form
Eric King-Wah Chu, School of Mathematics, Monash University

A New Solution Method for the Linear Systems of 3-D Radiation Hydrodynamics
Xudeng Hang, Institute of Applied Physics and Computational Mathematics

Closed-Form Projection Method for Regularizing a Function Defined by a Discrete Set of Noisy Data and for Estimating its Derivative and Fractional Derivative
Timothy J. Burns, NIST

Manifold Preserving: An Intrinsic Approach for Distance Metric Learning and Data Retrieval
Yaxin Peng, Shanghai University