

Schedule for IWASEP IX
Napa Valley, CA, USA, June 4—7, 2012

| Monday, June 4 | |
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| 7:30—8:45am | Onsite registration |
| 8:45—9:00am | Jesse Barlow and Jim Demmel <i>Opening Remarks</i> Chair: Beresford Parlett |
| 9:00—9:50am | William Kahan <i>Deflations Preserving Relative Accuracy</i> |
| 9:50—10:15am | Pavel Grinfeld <i>Accurate Computation of Laplace Eigenvalues by an Analytical Level Set Method</i> |
| 10:15—10:45am | Coffee Chair: Danny Sorensen |
| 10:45—11:35am | Marc Van Barel <i>Orthogonal Functions and Inverse Eigenvalue Problems</i> |
| 11:35—12:00am | Alexander Malyshev <i>Spectral Dichotomy for Toeplitz Matrices</i> |
| 12:00—12:25pm | Zvonimir Bujanovic <i>On the Ritz Values of Normal Matrices</i> |
| 12:25—2:00pm | Lunch Chair: Olga Holtz |
| 2:00—2:50pm | Ilse Ipsen <i>Condition Numbers of Randomly Sampled Orthonormal Matrices</i> |
| 2:50—3:15pm | Plamen Koev <i>Computing Jordan Blocks of Irreducible Totally Nonnegative Matrices</i> |
| 3:15—3:40pm | Daeshik Choi and Anne Greenbaum <i>Crouzeix Conjecture and Diagonally Perturbed Jordan Blocks</i> |
| 3:40—4:10pm | Coffee Chair: Marc Van Barel |
| 4:10—5:00pm | Julio Moro <i>The Newton Polygon and Structured Eigenvalue Perturbation</i> |
| 5:00—5:25pm | Nevena Jakovčević Stor , Ivan Slapničar and Jesse Barlow <i>Accurate Eigenvalue Decomposition of Arrowhead Matrices and Applications</i> |
| 5:25—6:40pm | Poster Session <ul style="list-style-type: none"> • John Holodnak <i>Singular Values and Randomized Matrix Multiplication</i> • G. W. Stewart <i>Smooth Local Bases for Perturbed Invariant Subspaces</i> • Zhaojun Bai and Ren-Cang Li <i>Minimization Principle for Linear Response Eigenvalue Problem</i> • Carlos Garcia-Alvarado, Carlos Ordóñez, Naveen Mohanam, Edgar Martínez-Encarnacion and Predrag T. Totic <i>Efficient Linear Algebra Processing Inside a Database Management System</i> • Daniel Szyld and Fei Xue <i>Local Convergence of Inexact Newton-like Methods for Nonlinear Algebraic Eigenvalue Problems</i> • Tim Mitchell, Michael Overton and Josef Sifuentes <i>Comparative Survey of Sparse Eigensolvers and Effect of Initialization on Problems with Low Rank Perturbations of Small Norm</i> • Matthew Nabity <i>Multicore and the Challenges of the Nonsymmetric Eigenvalue Problem</i> • Sheng-Guo Li, Ming Gu and Beresford Parlett <i>A modified dqds algorithm</i> |

| Tuesday, June 5 | |
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| 8:00—9am | Onsite registration |
| | Chair: Jesse Barlow |
| 9:00—9:50am | Danny Sorensen <i>Automating DEIM for Nonlinear Model Reduction</i> |
| 9:50—10:15am | Erin Carson and James Demmel <i>A Residual Replacement Strategy for Improving the Maximum Attainable Accuracy of Communication-Avoiding Methods</i> |
| 10:15—10:45am | Coffee |
| | Chair: Ilse Ipsen |
| 10:45—11:35am | Ming Gu <i>Subspace Iteration with Random Start Matrix</i> |
| 11:35—12:25pm | Olga Holtz <i>Some Direct and Inverse Eigenvalue Problems Arising in Zero Localization of Functions</i> |
| 12:25—2:00pm | Lunch |
| | Chair: Oded Schwartz |
| 2:00—2:50pm | Zlatko Drmač <i>Accurate SVD of Cauchy--type matrices and applications</i> |
| 2:50—3:15pm | Jesse Barlow <i>Reorthogonalization for the Golub--Kahan--Lanczos Bidiagonal Reduction: An Update</i> |
| 3:15—3:40pm | Peter Benner, Ivana Kuzmanovic, Zoran Tomljanovic and Ninoslav Truhar <i>Optimal Parameters for Damping Optimization in Linear Vibrating Systems</i> |
| 3:40—4:10pm | Coffee |
| | Chair: Rafikul Alam |
| 4:10—4:35pm | Grey Ballard, James Demmel, Olga Holtz, Benjamin Lipshitz and Oded Schwartz <i>Stability Issues of Large-Scale Fast Matrix Multiplication</i> |
| 4:35—5:00pm | Grey Ballard , James Demmel and Ioana Dumitriu <i>Communication-Avoiding Non-symmetric Eigensolver using Spectral Divide & Conquer</i> |
| 5pm—5:25pm | Akiko Fukuda , Yusaku Yamamoto, Emiko Ishiwata, Masashi Iwasaki and Yoshimasa Nakamura <i>Accurate Eigenvalues of Totally Nonnegative Matrices by Means of the Discrete Hungry Toda Equation</i> |

| Wednesday, June 6 | |
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| 8:00—9am | Onsite registration Chair: James Demmel |
| 9:00—9:50am | Beresford Parlett <i>dqds and quasiseparable matrices</i> |
| 9:50—10:15am | Kensuke Aishima , Yuji Nakatsukasa and Ichitaro Yamazaki <i>Stability Theorem of the dqds with Aggressive Deflation for Singular Values</i> |
| 10:15—10:45am | Coffee Chair: Zlatko Drmač |
| 10:45—11:10am | Luka Grubisic <i>Error Control for hp-Adaptive Approximations of Semi-Definite Eigenvalue Problems</i> |
| 11:10—11:35am | Sanja Singer and Vedran Novakovic <i>Kogbetliantz-like Method for the Hyperbolic SVD</i> |
| 11:35—12:00pm | Vedran Novakovic and Sanja Singer <i>Towards Multi-GPU Jacobi (H)SVD</i> |
| 12:00—12:25pm | Gary Howell <i>UB_{k+1}V Block Sparse Householder Decomposition</i> |
| 12:25—1:45pm | Lunch |
| 1:45—6:00pm | Excursion |
| 7:00—9:00pm | Conference Dinner William Kahan <i>How Blabber-Mouth German U-boats got themselves Sunk in WW-II</i> |

| Thursday, June 7 | |
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| 8:00—9am | Onsite registration Chair: Esmond G. Ng |
| 9:00—9:50am | Emre Mengi <i>Optimization of Eigenvalues of Hermitian Matrix Functions and Applications</i> |
| 9:50—10:15am | Thomas Mach <i>Eigenvalue Algorithms for Symmetric Hierarchical Matrices</i> |
| 10:15—10:45am | Coffee Chair: Emre Mengi |
| 10:45—11:10am | Terry Haut and Gregory Beylkin <i>Fast and Accurate Con-Eigenvalue Algorithm for Optimal Rational Approximations</i> |
| 11:10—11:35am | Hong Diep Nguyen and James Demmel <i>Reproducible Parallel Floating-Point Computations</i> |
| 11:35—12:00pm | Bilal Chanane and A. Boucherif <i>Numerical Solution of Two-Parameter Differential Eigenvalue Problems</i> |
| 12:00—2:00 | Lunch |