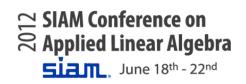




# Wednesday, June 20 Room: Plenary Room

9:00–9:45	IP 6	PDE-constrained optimization
		Roland Herzog (Chair: Valeria Simoncini)
10:10–10:55	IP 7	Hierarchical tensor decomposition and approximati-
		on
		Lars Grasedyck (Chair: Peter Benner)
11:00–12:40	MS 36	Hybrid solvers for sparse linear equations
		Organizer: lain S. Duff and Luc Giraud
	11:00–11:25	The augmented block-Cimmino distributed method
	44.05 44.50	Mohamed Zenadi
	11:25–11:50	On a parallel hierarchical algebraic domain decomposition method
		for a large scale sparse linear solver Luc Giraud
	11:50–12:15	A two-level Schwarz method for systems with high contrasts
		Nicole Spillane
	12:15–12:40	A 3-level parallel hybrid preconditioner for sparse linear systems
		Erik Boman
14:10–14:55	IP 8	Improving performance and robustness of incomple-
		te factorization preconditioners
		Anshul Gupta (Chair: Iain S. Duff)
15:00–16:40	MS 43	Challenges for the solution and preconditioning of
		multiple linear systems - Part II of II
		Organizer: Eric de Sturler and Daniel B. Szyld
	15:00–15:25	Low-rank techniques for parameter-dependent linear systems and
		eigenvalue problems
	15:25–15:50	Christine Tobler Recycling Krylov subspace information in sequences of linear
	10.20-10.00	systems
		Nemanja Bozovic
	15:50–16:15	Efficiently updating preconditioners in quantum Monte Carlo
		simulations
	40:45 40:40	Arielle Grim McNally
	16:15–16:40	A domain decomposition preconditioned recycling GMRES for
		stochastic parabolic PDE Xiao-Chuan Cai
17:00–18:40	CP 26	Eigenvalue problems III
	17:00–17:25	Eigenvalues of matrices with prescribed entries
	17.00 17.20	Gloria Cravo
	17:25–17:50	Characterizing and bounding eigenvalues of interval matrices
		Milan Hladik
	17:50–18:15	Lifted polytopes methods for the computation of joint spectral
		characteristics of matrices
		Raphael M. Jungers





#### Wednesday, June 20 Room: B

17:00–18:40	CP 29 17:00–17:25	Miscellaneous IV  Modified Structure exploited algorithm for solving palindromic quadratic eigenvalue problems Linzhang Lu
	17:25–17:50	A spectral multi-level approach for eigenvalue problems in first- principles materials science calculations Andrew Canning
	17:50–18:15	Spectrum of Sylvester operators on triangular spaces of matrices A. R. Sourour  CANCELED
	18:15–18:40	Modulus-based successive overrelaxation method for pricing american options Jun-Feng Yin

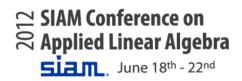




# Wednesday, June 20 Room: A

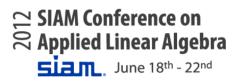
11:00–12:40	MS 40	Different perspectives on conditioning and numerical stability - Part I of II Organizer: Froilán M. Dopico and Ilse C.F. Ipsen
	11:00–11:25	Highly accurate numerical linear algebra via rank revealing decompositions Froilán M. Dopico
	11:25–11:50	Stability of numerical algorithms with quasiseparable matrices Pavel Zhlobich
	11:50–12:15	Gram-Schmidt orthogonalization with standard and non-standard inner product: rounding error analysis Miroslav Rozloznik
	12:15–12:40	Backward stability of iterations for computing the polar decomposition Nicholas J. Higham
15:00–16:40	MS 44	Different perspectives on conditioning and numerical stability - Part II of II Organizer: Froilán M. Dopico and Ilse C.F. Ipsen
	15:00–15:25	Accuracy and sensitivity of Monte Carlo matrix multiplication algorithms John T. Holodnak
	15:25–15:50	Hyperdeterminant and the condition number of a multilinear system Lek-Heng Lim
	15:50–16:15	Condition numbers and backward errors in functional setting Agnieszka Miedlar
	16:15–16:40	Orthogonality and stability in large-sparse-matrix iterative algorithms Chris Paige
17:00-18:40	CP 30	Iterative methods II
	17:00–17:25	On convergence of MSOR-Newton method for nonsmooth equations Li Wang
	17:25–17:50	A framework for deflated BiCG and related solvers  Martin H. Gutknecht
	17:50–18:15	Prescribing the behavior of the GMRES method and the Arnoldi method simultaneously Jurjen Duintjer Tebbens
	18:15–18:40	Efficient error bounds for linear systems and rational matrix functions Andreas Frommer





14.00 -10-10	110 6-	
11:00–12:40	MS 37	Optimization methods for tensor decomposition Organizer: Hans De Sterck
	11:00–11:25	Efficient algorithms for tensor decompositions Laurent Sorber
	11:25–11:50	Symmetric tensor decomposition via a power method for the generalized tensor eigenproblem Jackson R. Mayo
	11:50–12:15	All-at-once optimization for coupled matrix and tensor factorizations  Evrim Acar
	12:15–12:40	An algebraic multigrid optimization method for low-rank canonical tensor decomposition Killian Miller
15:00–16:40	MS 46	Structured solution of nonlinear matrix equations and applications - Part II of II Organizer: Eric King-wah Chu and Wen-Wei Lin
	15:00–15:25	A large-scale nonsymmetric algebraic Riccati equation from transport theory Hung-Yuan Fan  Moved from
	15:25–15:50	Structure-preserving Arnoldi-type algorithm for solving eigenvalue problems in leaky surface wave propagation Tsung-Ming Huang
	15:50–16:15	Structure-preserving curve for symplectic pairs Yueh-Cheng Kuo
	16:15–16:40	A doubling algorithm with shift for solving a nonsymmetric algebraic Riccati equation Chun-Yueh Chiang
17:00-18:40	CP 25	Tensors and multilinear algebra
	17:00–17:25	Decomposition of semi-nonnegative semi-symmetric three-way tensors based on LU matrix factorization Lu Wang
	17:25–17:50	Random matrices and tensor rank probabilities Goran Bergqvist
	17:50–18:15	A new truncation strategy for the higher-order singular value decomposition of tensors  Nick Vannieuwenhoven
	18:15–18:40	Probabilistic matrix approximation Birkan Tunç





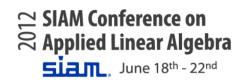
#### Wednesday, June 20 Room: 2.9

11:00–12:40	MS 39  11:00–11:25  11:25–11:50  11:50–12:15	Challenges for the solution and preconditioning of multiple linear systems - Part I of II Organizer: Eric de Sturler and Daniel B. Szyld Preconditioners for sequences of shifted linear systems Martin B. van Gijzen Krylov subspace recycling for faster model reputation algorithms Peter Benner Krylov subspace recycling for families of shifted linear systems Kirk M. Soodhalter
	12:15–12:40	Solving sequences of linear systems with application reduction  Kapil Ahuja
15:00–16:40	MS 45	Recent advances in model reduction - Part II of II Organizer: Athanasios C. Antoulas and Serkan Gugercin
	15:00–15:25	Automating DEIM for nonlinear model reduction Danny Sorensen
	15:25–15:50	Model reduction for optimal control problems in field-flow fractionation Tatjana Stykel
	15:50–16:15	Numerical implementation of the iterative rational Krylov algorithm for optimal H_2 model order reduction Zlatko Drmac
	16:15–16:40	Low rank deflative/iterative solutions of Lur'e equations Timo Reis
17:00–18:40	CP 28	Structured matrices II
	17:00–17:25	Structured matrices and inverse problems for discrete Dirac systems with rectangular matrix potentials Alexander Sakhnovich
	17:25–17:50	Applications of companion matrices Aaron Melman
	17:50–18:15	On factorization of structured matrices and GCD evaluation Skander Belhaj
	18:15–18:40	An anti-triangular factorization of symmetric matrices Paul Van Dooren



11:00–12:40	MS 42	Structured solution of nonlinear matrix equations and applications - Part I of II Organizer: Eric King-wah Chu and Wen-Wei Lin
	11:00–11:25	Structured solution of large-scale algebraic Riccati and nonlinear matrix equations Eric King-wah Chu
	11:25–11:50	Accurate solutions of nonlinear matrix equations in queueing models Qiang Ye
	11:50–12:15	A numerical approach for solving nonlinear matrix equations in economic dynamics Matthew M. Lin
	12:15–12:40	A structure-preserving doubling algorithm for quadratic eigenvalue problems arising from time-delay systems Tiexiang Li
15:00–16:40	MS 49	Analysis and computation on matrix manifold Organizer: Bruno lannazzo
	15:00–15:25	Best low multilinear rank approximation of symmetric tensors by Jacobi rotations  Mariya Ishteva  SPEAKER  NEW SPEAKER
	15:25–15:50	Differential geometry for tensors with fixed hierarchical Tucker rank Bart Vandereycken
	15:50–16:15	Deterministic approaches to the Karcher mean of positive definite matrices  Yongdo Lim
	16:15–16:40	The Karcher mean: first and second order optimization techniques on matrix manifolds Ben Jeuris
17:00-18:40	CP 33	Matrices and graphs
	17:00–17:25	Complex networks metrics for software systems Caterina Fenu
	17:25–17:50	On Euclidean distance matrices of graphs Jolanda Modic
	17:50–18:15	Evaluating matrix functions by resummations on graphs: the method of path-sums Pierre-Louis Giscard
	18:15–18:40	An estimation of general interdependence in an open linear structure Roland Lantner



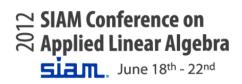


11:00–12:40	MS 38 11:00–11:25 11:25–11:50	Generalized inverses and applications - Part I of II Organizer: Dragana S. Cvetkovic-Ilic, Néstor Thome and Yimin Wei The group inverse of additively modified matrices Nieves Castro González The Moore-Penrose inverse of a linear combination of commuting generalized and hypergeneralized projectors Dragana S. Cvetkovic-Ilic Generalized inverses of operators on Hilbert C*-modules
	12:15–12:40	Dragan S. Djordjevic Some results on the reverse order law Dijana Mosic
15:00–16:40	MS 47	Generalized inverses and applications - Part II of II Organizer: Dragana S. Cvetkovic-Ilic, Néstor Thome and Yimin Wei
	15:00–15:25	On a partial order defined on certain matrices Néstor Thome
	15:25–15:50	Generalized inverses and path products Pedro Patrício
	15:50–16:15	On structured condition numbers for a linear functional of Tikhonov regularized solution Yimin Wei
	16:15–16:40	Explicit characterization of the Drazin index Qingxiang Xu
17:00–18:40	CP 27	Multigrid I
	17:00–17:25	Algebraic multigrid for solution of discrete adjoint Reynolds- averaged Navier-Stokes (RANS) equations in compressible aerodynamics Anna Naumovich
	17:25–17:50	Symmetric multigrid theory for deflation methods H. Rittich
	17:50–18:15	Aggregation-based multilevel methods for lattice QCD Matthias Rottmann
	18:15–18:40	Adaptive algebraic multigrid methods for Markov chains Sonja Sokolovic



11:00–12:40	MS 35	Nonlinear eigenvalue problems
		Organizer: K. Meerbergen, W. Michiels and C. Lecomte
	11:00–11:25	Computable error bounds for nonlinear eigenvalue problems
		allowing for a minimax characterization
	44.05 44.50	Heinrich Voss
	11:25–11:50	A restarting technique for the infinite Arnoldi method Elias Jarlebring
	11:50–12:15	Robust successive computation of eigenpairs for nonlinear
		eigenvalue problems
		Cedric Effenberger
	12:15–12:40	Triangularization of matrix polynomials
		Leo Taslaman
15:00–16:40	MS 50	Advanced methods for large eigenvalue problems
		and their applications
		Organizer: Tetsuya Sakurai and Nahid Emad
	15:00–15:25	DQDS with aggressive early deflation for computing singular values Kensuke Aishima
	15:25–15:50	A scalable parallel method for large scale nonlinear eigenvalue problems Kazuma Yamamoto
	15:50–16:15	Application of the Sakurai-Sugiura method in the field of density functional theory on highly parallel systems Georg Huhs
	16:15–16:40	MERAM for neutron physics applications using YML environment
		on post petascale heterogeneous architecture Christophe Calvin
17:00–18:40	CP 31	Direct methods
	17:00–17:25	On sparse threaded deterministic lock-free Cholesky and LDL^T factorizations Alexander Andrianov
	17:25–17:50	A fast algorithm for constructing the solution operator for homogeneous elliptic boundary value problems  Adrianna Gillman
	17:50–18:15	Eliminate last variable first! Winfried Grassmann
	18:15–18:40	Sharp estimates for the convergence rate of Orthomin(k) for a class of linear systems
		Andrei Draganescu





11:00–12:40	MS 41	Recent advances in model reduction - Part I of II Organizer: Athanasios C. Antoulas and Serkan Gugercin
	11:00–11:25	The Loewner framework in data-driven model reduction Athanasios C. Antoulas
	11:25–11:50	Robust computational approaches to H_2-optimal model reduction Christoper A. Beattie
	11:50–12:15	Reduced order modeling via frames Volker Mehrmann
	12:15–12:40	Semidefinite Hankel-type model reduction based on frequency response matching Aivar Sootla
15:00–16:40	MS 48	Parallelization of efficient algorithms Organizer: Matthias Bolten and Stefan Kunis
	15:00–15:25	A highly scalable error-controlled fast multipole method Ivo Kabadshow
	15:25–15:50	A parallel fast Coulomb solver based on nonequispaced Fourier transforms  Michael Pippig
	15:50–16:15	Generalized fast Fourier transforms via CUDA Stefan Kunis  NEW SPEAKER
	16:15–16:40	Efficient regularization and parallelization for sparse grid regression Dirk Pfluger
17:00–18:40	CP 32	Nonlinear methods
	17:00–17:25	On the performance of the algebraic optimized Schwarz methods with applications Lahcen Laayouni
	17:25–17:50	Optimizing additive Runge-Kutta smoothers for unsteady flow problems Philipp Birken
	17:50–18:15	On convergence conditions of waveform relaxation methods for linear differential-algebraic equations X. Yang
	18:15–18:40	On sinc discretization and banded preconditioning for linear third- order ordinary differential equations Zhi-Ru Ren