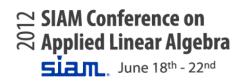




Tuesday, June 19 Room: Plenary Room

9:00–9:45	IP 4	Extending preconditioned GMRES to nonlinear			
		Optimization			
		Hans De Sterck (Chair: Daniel B. Szyld)			
10:10–10:55	IP 5	Matrix iterations to summarize evolving networks			
		Des Higham (Chair: Michele Benzi)			
11:00-12:40	MS 18	Preconditioning for PDE-constrained optimization			
		Part I of II			
		Organizer: Martin Stoll and Andy Wathen			
	11:00–11:25	Structural spectral properties of symmetric saddle point problems Valeria Simoncini			
	11:25–11:50	Preconditioned iterative methods for Stokes and Navier-Stokes			
		control problems John Pearson			
	11:50–12:15	Preconditioners for elliptic optimal control problems with inequality			
		constraints			
	12:15–12:40	Walter Zulehner Nearly optimal block preconditioners for block two-by-two linear			
	12.13–12.40	systems			
		Zhong-Zhi Bai			
15:00–16:40	MS 27	Preconditioning for PDE-constrained optimization -			
	1010 27	Part II of II			
		Organizer: Martin Stoll			
	15:00–15:25	On linear systems arising in trust-region methods Susann Mach			
	15:25–15:50	Preconditioning for PDE-constrained optimization using proper			
		orthogonal decomposition Ekkehard Sachs			
	15:50–16:15	Preconditioning for Allen-Cahn problems with non-local constrain			
	16:15–16:40	A one-shot approach to time-dependent PDE control Martin Stoll			
17:00–18:40	CP 18	Eigenvalue problems II			
	17:00–17:25	Differentials of eigenvalues and eigenvectors under nonstandard			
		normalizations with applications Raffaello Seri			
	17:25–17:50	A solution to the inverse eigenvalue problem for certain singular			
		hermitian matrices Kwasi Baah Gyamfi			
	17:50–18:15	Divide and conquer the CS decomposition Brian D. Sutton			
	18:15–18:40	The optimal perturbation bounds of the Moore-Penrose inverse			
		under the Frobenius norm Zheng Bing			
18:50	SIAG/LA	Meeting			
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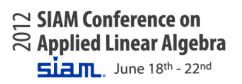




Tuesday, June 19 Room: A

11:00–12:40	MS 26	Advances in Krylov subspace methods		
		Organizer: Sou-Cheng Choi		
	11:00–11:25	The new challenges to Krylov subspace methods		
		Yousef Saad		
	11:25–11:50	Random shadow vectors in IDR(s): an explanation of its GMRES-		
		like convergence		
	44 = 2 4 2 4 =	Peter Sonneveld		
	11:50–12:15	Truncated and inexact Krylov subspace methods for parabolic		
		control problems		
	40:45 40:40	Daniel Szyld		
	12:15–12:40	Convergence of iterative solution algorithms for least-squares		
		problems David Titley-Peloquin		
45.00.40.40				
15:00–16:40	MS 31	Linear algebra for inverse problems - Part II of II		
	4-00 4-0-	Organizer: L. Reichel and H. Sadok		
	15:00–15:25	Implicit filtering methods for inverse problems		
	15:25–15:50	J.G. Nagy		
	15.25-15.50	Iterative reconstruction methods for adaptive optics R. Ramlau		
	15:50–16:15	Approximated nonstationary iterated Tikhonov with application to		
	10.00 10.10	image deblurring		
		M. Donatelli		
	16:15-16:40	On the Richardson-Lucy method for image restoration		
		F. Sgallari		
17:00–18:40	CP 22	Matrix functions		
	17:00–17:25	Improved Schur-Padé algorithm for fractional powers of a matrix		
		Lijing Lin		
	17:25–17:50	An automated version of rational Arnoldi for Markov matrix		
		functions		
		Leonid Knizhnerman		
	17:50–18:15	Ranking hubs and authorities using matrix functions Christine Klymko		
	18:15–18:40	The geometric mean of two matrices from a computational		
		viewpoint		
		Bruno lannazzo		

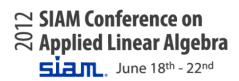




Tuesday, June 19 Room: B

17:00–18:40	CP 23	Applications
	17:00–17:25	Study on efficient numerical simulation methods of dynamic interaction system excited via moving contact points Akiyoshi Yoshimura
	17:25–17:50	A matrix version of a digital signature scheme based on Pell equation Aditya Mani Mishra
	17:50–18:15	Evaluating computer vision systems Mili Shah
	18:15-18:40	On the complexity of optimizing PageRank MOVED Roman Hollanders

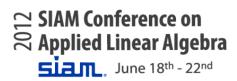




Tuesday, June 19 Room: 2.0

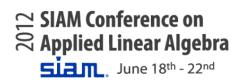
11:00–12:40	MS 24	Novel and synergetic algorithms for multicore and multinode architecture Organizer: Olaf Schenk and Ping Tak Peter Tang
	11:00–11:25	Novel and synergetic linear algebra algorithms on multicore and multinode architecture Ping Tak Peter Tang
	11:25–11:50	PSPIKE – A hybrid sparse linear system solver Olaf Schenk
	11:50–12:15	Eigensolver based reordering and parallel TraceMIN Murat Manguogluo
	12:15–12:40	FEAST – A density matrix based eigensolver Eric Polizzi





11:00–12:40	MS 22	Linear algebra for inverse problems - Part I of II Organizer: : L. Reichel and H. Sadok			
	11:00–11:25	Block-extrapolation methods for linear matrix ill-posed problem K. Jbilou			
	11:25–11:50	Convergence properties of the GMRES and RRGMES methods for ill-posed problems H. Sadok			
	11:50–12:15	Inverse problems for regularization matrices Silvia Noschese			
	12:15–12:40	Meshless regularization for the numerical computation of the solution of steady Burgers-type equations A. Bouhamidi			
14:05-14:55	CP 10	Miscellaneous II			
	14:05–14:30	Phylogenetic trees via latent semantic indexing Jeffery J. Leade			
	14:30–14:55	Synchronization of rotations via Riemannian trust-regions Nicolas Boumal			
15:00–16:40	MS 32	Orderings in sparse matrix computation Organizer: Iain S. Duff and Esmond G. Ng			
	15:00–15:25	Orderings and solvers for "non-uniform sparse matrices" Edmond Chow			
	15:25–15:50	On hypergraph partitioning based ordering methods for sparse matrix factorization Bora Uçar			
	15:50–16:15	Orderings Governed by numerical factorization lain S. Duff			
	15:15–16:40	Reordering sparse Cholesky factorization: minimum fill vs. minimum FLOP count Robert Luce			
17:00–18:40	CP 20	Control systems II			
	17:00–17:25	Disturbance decoupling problem for singular switched linear systems M. Dolors Magret			
	17:25–17:50	Invariant subspaces of switched linear systems M. Eul`alia Montoro			
	17:50–18:15	On the pole placement problem for singular systems Alicia Roca			
	18:15–18:40	Coordination control of linear systems Pia L. Kempker			





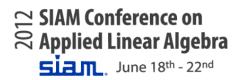
11:00–12:40	MC 40	Matrices and graphs Part Laf II	
11.00=12.40	MS 19	Matrices and graphs - Part I of II	
	11:00 11:05	Organizer: Leslie Hogben and Stephen Kirkland	
	11:00–11:25	(0; 1) matrices and the analysis of social networks Steve Kirkland	
	11:25–11:50	Necessary and sufficient conditions for a Hamiltonian graph Irene Sciriha	
	11:50–12:15	On the eigenvalues of symmetric matrices associated with graphs Miriam Farber	
	12:15–12:40	An extension of the polytope of doubly stochastic matrices Richard Brualdi	
14:05-14:55	CP 14	Iterative methods I	
	14:05–14:30	Meshless method for steady Burgers' equation: a matrix equation approach Mustapha Hached	
	14:30–14:55	Tuned preconditioners for inexact two-sided inverse and Rayleigh quotient iteration Patrick K"urschner	
15:00-16:40	MS 28	Matrices and graphs – Part II of II	
		Organizer: Leslie Hogben and Stephen Kirkland	
	15:00–15:25	Parameters related to maximum nullity, zero forcing number, and tree-width of a graph Leslie Hogben	
	15:25–15:50	Colin de Verdiere numbers of chordal and split graphs Felix Goldberg	
	15:50–16:15	On the null vectors of Graphs Shaun Fallat	
	16:15-16:40	Kochen-Specker sets and the Part quantum chromatic number Simone Severini	
17:00–18:40	CP 24	Preconditioning II	
	17:00–17:25	Overlapping blocks by growing a partition with applications to preconditioning Stephen D. Shank	
	17:25–17:50	Communication avoiding ILU(0) preconditioner Sophie Moufawad	
	17:50–18:15	Preconditioning for large scale µFE analysis of bone poroelasticity Peter Arbenz	
	18:15–18:40	Block-triangular preconditioners for systems arising from edge- preserving image restoration Yu-Mei Huang	





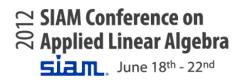
11:00–12:40	NAC OF	Direction properting andfiltering methods for solving	
11.00-12.40	MS 25	Direction preserving and filtering methods for solving	
		sparse linear systems	
	11:00–11:25	Organizer: Laura Grigori and Frederic Nataf Algebraic two-level domain decomposition methods	
		Frederic Nataf	
	11:25–11:50	Filtering solvers G. Wittum	
	11:50–12:15	Bootstrap algebraic multigrid Karsten Kahl	
	12:15–12:40	Block filtering decomposition Laura Grigori	
14:05-14:55	CP 11	Miscellaneous III	
	14:05–14:30	A new multi-wayarray decomposition I Evrim Korkmaz	
	14:30–14:55	Towards more reliable performances of accurate floating-point summation algorithms CE Philippe Langlois	
15:00–16:40	MS 34	Least squares methods and applications Organizer: Sanzheng Qiao and Yimin Wei	
	15:00–15:25	Block Gram–Schmidt algorithms with reorthogonalization Jesse Barlow	
	15:25–15:50	A numerical method for a mixed discrete bilinear least squares problem Xiao-Wen Chang	
	15:50–16:15	On condition numbers for constrained linear least squares problems Huaian Diao	
	15:15–16:40	SOR inner-iteration GMRES for underdetermined least squares problems Keiichi Morikuni	
17:00–18:40	CP 19	Positivity I	
	17:00–17:25	Positivity preserving simulation of differential-algebraic equations Ann-Kristin Baum	
	17:25–17:50	Computing the exponentials of essentially nonnegative matrices with high relative accuracy Meiyue Shao	
	17:50–18:15	Sparse and unique nonnegative matrix factorization through data preprocessing Nicolas Gillis	
	18:15–18:40	Iterative regularized solution of linear complementarity problems Constantin Popa	





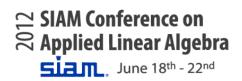
11:00–12:40	140.04	Deducing communication in linear clashys. Dowt Laf		
11.00-12.40	MS 21	Reducing communication in linear algebra - Part I of		
		// Organizer: : Aydın Buluç and Oded Schwartz		
	11:00–11:25	Communication-optimal parallel algorithm for Strassen's matrix		
		multiplication		
	44.05.44.50	Oded Schwartz		
	11:25–11:50	A communication-avoiding symmetric-indefinite factorization Sivan Toledo		
	11:50–12:15	LU factorisation with panel rank revealing pivoting and its		
		communication avoiding version		
	12:15–12:40	Amal Khabou 2.5D Algorithms for parallel dense linear algebra		
	12.15-12.40	Edgar Solomonik		
14:05-14:55	CP 13	Code theory		
	14:05–14:30	Linear codes in LRTJspaces		
		Sapna Jain		
	14:30–14:55	On turbo codes of rate 1=n from linear systems point of view Victoria Herranz		
15:00–16:40	MS 30	Reducing communication in linear algebra - Part II of		
	1010 00	II		
		Organizer: Aydın Buluç and Oded Schwartz		
	15:00–15:25	Communication-avoiding sparse matrix-matrix multiplication Aydın Buluç		
	15:25–15:50	Improving the stability of communication-avoiding Krylov subspace methods		
		Erin Carson		
	15:50–16:15	Hiding global synchronization latencies in Krylov methods for		
		systems of linear equations Pieter Ghysels		
	15:15–16:40	Avoiding communication with hierarchical matrices Nicholas Knight		
17:00–18:40	CP 17	Lyapunov equations		
	17:00–17:25	Lyapunov matrix inequalities with solutions sharing a common		
		Schur complement		
	17:25–17:50	Ana Catarina Carapito Solving large scale projected periodic Lyapunov equations using		
		structure-exploting methods		
	47.50 40.45	Mohammad-Sahadet Hossain		
	17:50–18:15	A new minimal residual method for large scale Lyapunov equations Yiding Lin		
	18:15–18:40	Contributions to the analysis of the extended Krylov subspace		
		method (EKSM) for Lyapunov matrix equations Carl Christian K. Mikkelsen		





11:00–12:40	MS 20	Tensor based methods for high dimensional problems in scientific computing – Part I of II Organizer: A. Falcó and A. Nouy				
	11:00–11:25	Optimal a priori tensor decomposition for the solution of high dimensional problems Anthony Nouy				
	11:25–11:50	Application of the Proper Generalized Decomposition (PGD) to 3D cracked plates and estimation of the discretization error Eugenio Giner				
	11:50–12:15	A tensor calculus approach for B´ezier shape deformation Lucía Hilario				
	12:15–12:40	Tensor approximation methods for partification Alexander Litvinenko				
14:05-14:55	CP 15	Polynomial equations II				
	14:05–14:30	Standard triples of structured matrix polynomials Maha Al-Ammari				
	14:30–14:55	Solving systems of polynomial equations using (numerical) linear algebra Philippe Dreesen				
15:00–16:40	MS 29	Tensor based methods for high dimensional problems in scientific computing – Part II of II Organizer: A. Falcó and A. Nouy				
	15:00–15:25	A greedy algorithm for the convergence of a Laplacian operators in the blind deconvolution problem Pantaleon David Romero				
	15:25–15:50	Algorithms for approximate inverse of operators for preconditioning systems of equations in tensor tormat Loic Giraldi				
	15:50–16:15	Geometric structures in tensor representations Antonio Falcó				
17:00–18:40	CP 16	Matrices and algebraic structures				
	17:00–17:25	Determinantal range and Frobenius endomorphisms Rute Lemos				
	17:25–17:50	On algorithms for constructing (0; 1)-matrices with prescribed row and column sum vectors Henrique F. da Cruz				
	17:50–18:15	Elementary matrices arising from unimodular rows Ratnesh Kumar Mishra				
	18:15–18:40	Nonsingular ACI-matrices over integral domains Alberto Borobia				





11:00–12:40	MS 23	Modern matrix methods for large scale data and networks Organizer: David F. Gleich				
	11:00–11:25	Nonlinear eigenproblems in data analysis and graph partitioning Matthias Hein				
	11:25–11:50	LSRN: a parallel iterative solver for strongly over- or under- determined systems Xiangrui Meng				
	11:50–12:15	Solving large dense linear systems with covariance matrices Jie Chen				
	12:15–12:40	Fast coordinate descent methods with variable selection for non- negative matrix factorization Inderjit S. Dhillon				
14:05-14:55	CP 12	Matrix norms				
	14:05–14:30	Numerical solutions of singular linear matrix differential equations loannis K. Dassios				
	14:30–14:55	Matrix version of Bohr's inequality Jagjit Singh				
15:00–16:40	MS 33	Moving from multicore to manycore in applied linear algebra Organizer: Jens Saak and Alfredo Remó				
	15:00–15:25	Parallel preconditioners and multigrid methods for sparse systems on GPUs Jan-Philipp Weiss				
	15:25–15:50	Towards a GPU-accelerated direct sparse solver Pablo Ezzatti				
	15:50–16:15	Unleashing the power of multicore DSPs for matrix computations. The FLAME approach. Francisco D. Igual				
	15:15–16:40	High-performance genome studies Lucas Beyer				
17:00–18:40	CP 21	Matrix pencils				
	17:00–17:25	Looking at the complexity index as a matrix measure Anabela Borges				
	17:25–17:50	A matrix pencil tool to solve a sampling problem Alberto Portal				
	17:50–18:15	A duality relation for matrix pencils with applications to Linearizations Federico Poloni				
	18:15–18:40	Stability of reducing subspaces of a pencil Gorka Armentia				