

REFEREED PUBLICATIONS

1. (with P. Quillen) A Block Inverse-free Preconditioned Krylov Subspace Method for Symmetric Generalized Eigenvalue Problems, to appear in *J. Comp. Applied Math.*
2. Computing Singular Values of Diagonally Dominant Matrices to High Relative Accuracy, *Mathematics of Computations*, to appear.
3. (with L. Reichel) A generalized LSQR algorithm, *Numerical Linear Algebra with Applications*, to appear.
4. Relative perturbation bounds for eigenvalues of symmetric positive definite diagonally dominant matrices, *SIAM Journal on Matrix Analysis and Applications*, to appear.
5. Optimal expansion of subspaces for eigenvector approximations, *Linear Algebra Appl.*, 428(2008):911-918
6. (with H. Zha, R. Li) Analysis of alignment algorithms in nonlinear manifold learning, *BIT - Numerical Mathematics* , 47(2007):873-885.
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9. (with L. Hoffnung and R.C. Li) Krylov type subspace methods for matrix polynomials, *Linear Algebra and its Applications*, 415 (2006):5281
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11. (with James Money) Algorithm 845: EIGIFP: A MATLAB Program for Solving Large Symmetric Generalized Eigenvalue Problems, *ACM Transaction on Mathematical Softwares*, 31(2005):270-279.
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19. (with H. van der Vorst) Residual replacement strategies for krylov subspace iterative methods for the convergence of true residuals, *SIAM Journal on Scientific Computing*, 22(2000):836-852.
20. High accuracy algorithms for solving nonlinear matrix equations in queueing models, *Advances in Algorithmic Methods for Stochastic Models*, G. Latouche and P.G. Taylor (Editors), 2000, Notable Publications Inc. NJ. pp. 401-415.
21. (with Charles Tong) Analysis of finite precision bi-conjugate gradient algorithm for nonsymmetric linear systems, *Mathematics of Computations* 69(2000):1559-1575.
22. (with A. Alfa, J. Xue) Perturbation theory for the asymptotic decay rates in the queues with Markovian arrival process, *Queueing Systems - Theory and Applications*, 36(2000):287-301.
23. (with A. Alfa, J. Xue) Entrywise perturbation theory for rate matrices of GI/M/1 type Markov chains, *Stochastic Models*, 16(2000):361-375.
24. (with G. Golub) Inexact inverse iterations for the generalized eigenvalue problems, *BIT - Numerical Mathematics*, 40 (2000): 672-684.
25. (with P.N. Shivakumar, J.J. Williams, C. Ji) An analysis of groundwater flow in an infinite region with a sinusoidal top, *Numerical Functional Analysis and Optimization*, 21(2000):263-271.
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OTHER PAPERS

54. Invited Discussion Paper: Discussion of *Discrete Time Queues And Matrix-Analytic Methods* by A.S. Alfa, *TOP (SOCIEDAD DE ESTADSTICA E INVESTIGACIN OPERATIVA)*, 10 (2002):202-203.

PAPERS SUBMITTED

55. (with J. Xue) Entrywise Relative Perturbation Bounds for Exponentials of Nonnegative Matrices, submitted.

SOFTWARE CONTRIBUTIONS

1. EIGIFP: A program for computing a few extreme eigenvalues of the symmetric generalized eigenvalue problem by Inverse Free Preconditioned Krylov subspace methods. Distributed at <http://www.ms.uky.edu/~qye/software.html>.
2. ABLE: An Adaptive Block Lanczos algorithm for Eigenproblems, (with Z. Bai and D. Day).