# Zdenek Strakos

List of Publications by Year
in descending order



| 55 | 1,643 | 377584 | 355658 |
|---|---|---|---|
| papers | citations | 21 h-index | 38 g-index |

| 59 | 59 | 59 | 766 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Numerical approximation of the spectrum of self-adjoint operators in operator preconditioning. Numerical Algorithms, 2022, 91, 301-325. | 1.1 | 2 |
| 2 | Decomposition into subspaces preconditioning: abstract framework. Numerical Algorithms, 2020, 83, 57-98. | 1.1 | 2 |
| 3 | Generalized Spectrum of Second Order Differential Operators. SIAM Journal on Numerical Analysis, 2020, 58, 2193-2211. | 1.1 | 7 |
| 4 | On the cost of iterative computations. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190050. | 1.6 | 9 |
| 5 | Laplacian Preconditioning of Elliptic PDEs: Localization of the Eigenvalues of the Discretized Operator. SIAM Journal on Numerical Analysis, 2019, 57, 1369-1394. | 1.1 | 21 |
| 6 | Algebraic description of the finite Stieltjes moment problem. Linear Algebra and Its Applications, 2019, 561, 207-227. | 0.4 | 1 |
| 7 | On a residual-based a posteriori error estimator for the total error. IMA Journal of Numerical Analysis, 2018, 38, 1164-1184. | 1.5 | 3 |
| 8 | Estimating and localizing the algebraic and total numerical errors using flux reconstructions. Numerische Mathematik, 2018, 138, 681-721. | 0.9 | 21 |
| 9 | The Numerical Stability Analysis of Pipelined Conjugate Gradient Methods: Historical Context and Methodology. SIAM Journal of Scientific Computing, 2018, 40, A3549-A3580. | 1.3 | 12 |
| 10 | Gauss quadrature for quasi-definite linear functionals. IMA Journal of Numerical Analysis, 2016, , dnw032. | 1.5 | 1 |
| 11 | Miroslav Fiedler, 1926â€“2015. Linear Algebra and Its Applications, 2016, 497, 162-166. | 0.4 | 0 |
| 12 | Band Generalization of the Golub--Kahan Bidiagonalization, Generalized Jacobi Matrices, and the Core Problem. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 417-434. | 0.7 | 12 |
| 13 | Composite convergence bounds based on Chebyshev polynomials and finite precision conjugate gradient computations. Numerical Algorithms, 2014, 65, 759-782. | 1.1 | 21 |
| 14 | Distribution of the discretization and algebraic error in numerical solution of partial differential equations. Linear Algebra and Its Applications, 2014, 449, 89-114. | 0.4 | 12 |
| 15 | On investigating GMRES convergence using unitary matrices. Linear Algebra and Its Applications, 2014, 450, 83-107. | 0.4 | 6 |
| 16 | Interplay between discretization and algebraic computation in adaptive numerical solutionof elliptic PDE problems. GAMM Mitteilungen, 2013, 36, 102-129. | 2.7 | 25 |
| 17 | The Core Problem within a Linear Approximation Problem $AXapprox B$ with Multiple Right-Hand Sides. SIAM Journal on Matrix Analysis and Applications, 2013, 34, 917-931. | 0.7 | 14 |
| 18 | On Efficient Numerical Approximation of the Bilinear Form $c^*A^{-1}b$. SIAM Journal of Scientific Computing, 2011, 33, 565-587. | 1.3 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | The Total Least Squares Problem in AXâ‰ˆB: A New Classification with the Relationship to the Classical Works. SIAM Journal on Matrix Analysis and Applications, 2011, 32, 748-770. | 0.7 | 27 |
| 20 | Gene H. Golub and GÃ©rard Meurant: Matrices, Moments and Quadrature with Applications. Foundations of Computational Mathematics, 2011, 11, 241-255. | 1.5 | 0 |
| 21 | A Posteriori Error Estimates Including Algebraic Error and Stopping Criteria for Iterative Solvers. SIAM Journal of Scientific Computing, 2010, 32, 1567-1590. | 1.3 | 75 |
| 22 | The regularizing effect of the Golub-Kahan iterative bidiagonalization and revealing the noise level inÂtheÂdata. BIT Numerical Mathematics, 2009, 49, 669-696. | 1.0 | 36 |
| 23 | Model reduction using the Vorobyev moment problem. Numerical Algorithms, 2009, 51, 363-379. | 1.1 | 11 |
| 24 | On solution of total least squares problems with multiple rightâ€hand sides. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10815-10816. | 0.2 | 3 |
| 25 | On Optimal Short Recurrences for Generating Orthogonal Krylov Subspace Bases. SIAM Review, 2008, 50, 485-503. | 4.2 | 12 |
| 26 | Lanczos tridiagonalization and core problems. Linear Algebra and Its Applications, 2007, 421, 243-251. | 0.4 | 12 |
| 27 | On sensitivity of Gaussâ€“Christoffel quadrature. Numerische Mathematik, 2007, 107, 147-174. | 0.9 | 21 |
| 28 | The Lanczos and conjugate gradient algorithms in finite precision arithmetic. Acta Numerica, 2006, 15, 471-542. | 6.3 | 101 |
| 29 | Modified Gram-Schmidt (MGS), Least Squares, and Backward Stability of MGS-GMRES. SIAM Journal on Matrix Analysis and Applications, 2006, 28, 264-284. | 0.7 | 74 |
| 30 | Error Estimation in Preconditioned Conjugate Gradients. BIT Numerical Mathematics, 2005, 45, 789-817. | 1.0 | 43 |
| 31 | On numerical stability in large scale linear algebraic computations. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2005, 85, 307-325. | 0.9 | 14 |
| 32 | Core Problems in Linear Algebraic Systems. SIAM Journal on Matrix Analysis and Applications, 2005, 27, 861-875. | 0.7 | 34 |
| 33 | GMRES Convergence Analysis for a Convection-Diffusion Model Problem. SIAM Journal of Scientific Computing, 2005, 26, 1989-2009. | 1.3 | 21 |
| 34 | Convergence of GMRES for Tridiagonal Toeplitz Matrices. SIAM Journal on Matrix Analysis and Applications, 2004, 26, 233-251. | 0.7 | 22 |
| 35 | Slow Initial Convergence of GMRES for SUPG Discretized Convection-Diffusion Problems. Proceedings in Applied Mathematics and Mechanics, 2003, 3, 551-552. | 0.2 | 1 |
| 36 | On Estimation of theA-norm of the Error in CG and PCG. Proceedings in Applied Mathematics and Mechanics, 2003, 3, 553-554. | 0.2 | 4 |

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|---|---|---|---|
| 37 | Residual and Backward Error Bounds in Minimum Residual Krylov Subspace Methods. SIAM Journal of Scientific Computing, 2002, 23, 1898-1923. | 1.3 | 21 |
| 38 | Least Squares Residuals and Minimal Residual Methods. SIAM Journal of Scientific Computing, 2002, 23, 1503-1525. | 1.3 | 34 |
| 39 | Scaled total least squares fundamentals. Numerische Mathematik, 2002, 91, 117-146. | 0.9 | 50 |
| 40 | Bounds for the least squares distance using scaled total least squares. Numerische Mathematik, 2002, 91, 93-115. | 0.9 | 7 |
| 41 | Unifying Least Squares, Total Least Squares and Data Least Squares. , 2002, , 25-34. | | 10 |
| 42 | Bounds for the Least Squares Residual Using Scaled Total Least Squares. , 2002, , 35-44. | | 3 |
| 43 | <title>Enforcing nonnegativity in image reconstruction algorithms</title>. , 2000, , . | | 64 |
| 44 | Accuracy of Two Three-term and Three Two-term Recurrences for Krylov Space Solvers. SIAM Journal on Matrix Analysis and Applications, 2000, 22, 213-229. | 0.7 | 49 |
| 45 | Krylov sequences of maximal length and convergence of GMRES. BIT Numerical Mathematics, 1998, 38, 636-643. | 1.0 | 47 |
| 46 | Stability of Conjugate Gradient and Lanczos Methods for Linear Least Squares Problems. SIAM Journal on Matrix Analysis and Applications, 1998, 19, 720-736. | 0.7 | 57 |
| 47 | Numerical behaviour of the modified gram-schmidt GMRES implementation. BIT Numerical Mathematics, 1997, 37, 706-719. | 1.0 | 48 |
| 48 | Any Nonincreasing Convergence Curve is Possible for GMRES. SIAM Journal on Matrix Analysis and Applications, 1996, 17, 465-469. | 0.7 | 184 |
| 49 | Review of iterative solution methods by O. Axelsson. Linear Algebra and Its Applications, 1996, 240, 231-233. | 0.4 | 0 |
| 50 | Numerical stability of GMRES. BIT Numerical Mathematics, 1995, 35, 309-330. | 1.0 | 62 |
| 51 | Matrices that Generate the same Krylov Residual Spaces. The IMA Volumes in Mathematics and Its Applications, 1994, , 95-118. | 0.5 | 19 |
| 52 | Estimates in quadratic formulas. Numerical Algorithms, 1994, 8, 241-268. | 1.1 | 74 |
| 53 | Predicting the Behavior of Finite Precision Lanczos and Conjugate Gradient Computations. SIAM Journal on Matrix Analysis and Applications, 1992, 13, 121-137. | 0.7 | 104 |
| 54 | On the real convergence rate of the conjugate gradient method. Linear Algebra and Its Applications, 1991, 154-156, 535-549. | 0.4 | 51 |

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|---|---|---|---|
| 55 | Effectivity and optimizing of algorithms and programs on the host-computer/array-processor system. Parallel Computing, 1987, 4, 189-207. | 1.3 | 4 |