Leonid Knizhnerman

List of Publications by Citations

27 papers	784 citations	12 h-index	27 g-index
27 ext. papers	862 ext. citations	2.3 avg, IF	3.85 L-index

#	Paper	IF	Citations
27	Spectral approach to solving three-dimensional Maxwell's diffusion equations in the time and frequency domains. *Radio Science*, **1994**, 29, 937-953	1.4	156
26	Extended Krylov Subspaces: Approximation of the Matrix Square Root and Related Functions. *SIAM Journal on Matrix Analysis and Applications*, **1998**, 19, 755-771	1.5	154
25	Krylov subspace approximation of eigenpairs and matrix functions in exact and computer arithmetic. *Numerical Linear Algebra With Applications*, **1995**, 2, 205-217	1.6	74
24	On Optimal Finite-Difference Approximation of PML. *SIAM Journal on Numerical Analysis*, **2003**, 41, 287-305	2.4	63
23	Solution of Large Scale Evolutionary Problems Using Rational Krylov Subspaces with Optimized Shifts. *SIAM Journal of Scientific Computing*, **2009**, 31, 3760-3780	2.6	62
22	Gaussian Spectral Rules for the Three-Point Second Differences: I. A Two-Point Positive Definite Problem in a Semi-Infinite Domain. *SIAM Journal on Numerical Analysis*, **1999**, 37, 403-422	2.4	44
21	A 3D parametric inversion algorithm for triaxial induction data. *Geophysics*, **2006**, 71, G1-G9	3.1	37
20	A black-box rational Arnoldi variant for Cauchy-Stieltjes matrix functions. *BIT Numerical Mathematics*, **2013**, 53, 595-616	1.7	30
19	On Optimal Convergence Rate of the Rational Krylov Subspace Reduction for Electromagnetic Problems in Unbounded Domains. *SIAM Journal on Numerical Analysis*, **2009**, 47, 953-971	2.4	30
18	Near-Optimal Perfectly Matched Layers for Indefinite Helmholtz Problems. *SIAM Review*, **2016**, 58, 90-116	7.4	28
17	Application of the Difference Gaussian Rules to Solution of Hyperbolic Problems. *Journal of Computational Physics*, **2000**, 158, 116-135	4.1	21
16	Gaussian spectral rules for second order finite-difference schemes. *Numerical Algorithms*, **2000**, 25, 139-159	2.1	20
15	Finite-difference modeling of viscoelastic materials with quality factors of arbitrary magnitude. *Geophysics*, **2004**, 69, 817-824	3.1	12
14	Automated parameter selection for rational Arnoldi approximation of Markov functions. *Proceedings in Applied Mathematics and Mechanics*, **2011**, 11, 15-18	0.2	9
13	Application of the Difference Gaussian Rules to Solution of Hyperbolic Problems. *Journal of Computational Physics*, **2002**, 175, 24-49	4.1	7
12	On application of the Lanczos method to solution of some partial differential equations. *Journal of Computational and Applied Mathematics*, **1994**, 50, 255-262	2.4	7
11	Error bounds for the Arnoldi method: a set of extreme eigenpairs. *Linear Algebra and Its Applications*, **1999**, 296, 191-211	0.9	6

LIST OF PUBLICATIONS

10	An extended Krylov subspace method to simulate single-phase fluid flow phenomena in axisymmetric and anisotropic porous media. *Journal of Petroleum Science and Engineering*, **2003**, 40, 121-144	4.4	5
9	On the sensitivity of Lanczos recursions to the spectrum. *Linear Algebra and Its Applications*, **2005**, 396, 103-125	0.9	4
8	Spectral Lanczos decomposition method for solving single-phase fluid flow porous media. *Numerical Methods for Partial Differential Equations*, **1994**, 10, 569-580	2.5	4
7	The Lanczos optimization of a splitting-up method to solve homogeneous evolutionary equations. *Journal of Computational and Applied Mathematics*, **1992**, 42, 221-231	2.4	4
6	Krylov subspace reduction and its extensions for option pricing. *Journal of Computational Finance*, **1997**, 1, 63-79	1.7	4
5	Stability Estimates on the Jacobi and Unitary Hessenberg Inverse Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **2004**, 26, 154-169	1.5	2
4	On GMRES-Equivalent Bounded Operators. *SIAM Journal on Matrix Analysis and Applications*, **2000**, 22, 195-212	1.5	1
3	Sensitivity of the Lanczos recurrence to Gaussian quadrature data: How malignant can small weights be?. *Journal of Computational and Applied Mathematics*, **2010**, 233, 1238-1244	2.4	
2	Residual and Restarting in Krylov Subspace Evaluation of the φ Function. *SIAM Journal of Scientific Computing*, **2021**, 43, A3733-A3759	2.6	
1	Adaptive residual-time restarting for Krylov subspace matrix exponential evaluations. *Keldysh Institute Preprints*, **2019**, 1-28	0.3	