Roel Van Beeumen

List of Publications by Year
in descending order

25 papers	364 citations	10 h-index	19 g-index
26 all docs	26 docs citations	26 times ranked	273 citing authors

933447

794594

#	Article	IF	Citations
1	NLEIGS: A Class of Fully Rational Krylov Methods for Nonlinear Eigenvalue Problems. SIAM Journal of Scientific Computing, 2014, 36, A2842-A2864.	2.8	60
2	Compact Rational Krylov Methods for Nonlinear Eigenvalue Problems. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 820-838.	1.4	48
3	A Rational Krylov Method Based on Hermite Interpolation for Nonlinear Eigenvalue Problems. SIAM Journal of Scientific Computing, 2013, 35, A327-A350.	2.8	40
4	Modal characteristics of structures considering dynamic soil-structure interaction effects. Soil Dynamics and Earthquake Engineering, 2018, 105, 114-118.	3.8	23
5	Linearization of Lagrange and Hermite interpolating matrix polynomials. IMA Journal of Numerical Analysis, 2015, 35, 909-930.	2.9	21
6	Algebraic compression of quantum circuits for Hamiltonian evolution. Physical Review A, 2022, 105, .	2.5	21
7	Chemistry on Quantum Computers with Virtual Quantum Subspace Expansion. Journal of Chemical Theory and Computation, 2020, 16, 5425-5431.	5.3	20
8	Approximate Green's Function Coupled Cluster Method Employing Effective Dimension Reduction. Journal of Chemical Theory and Computation, 2019, 15, 3185-3196.	5.3	17
9	Constant-depth circuits for dynamic simulations of materials on quantum computers. Materials Theory, 2022, 6, .	4.3	15
10	Model Order Reduction Algorithm for Estimating the Absorption Spectrum. Journal of Chemical Theory and Computation, 2017, 13, 4950-4961.	5.3	14
11	Approximate quantum circuit synthesis using block encodings. Physical Review A, 2020, 102, .	2.5	11
12	Model reduction for dynamical systems with quadratic output. International Journal for Numerical Methods in Engineering, 2012, 91, 229-248.	2.8	10
13	A rank-exploiting infinite Arnoldi algorithm for nonlinear eigenvalue problems. Numerical Linear Algebra With Applications, 2016, 23, 607-628.	1.6	10
14	Quantum Fourier transform revisited. Numerical Linear Algebra With Applications, 2021, 28, .	1.6	10
15	Computing resonant modes of accelerator cavities by solving nonlinear eigenvalue problems via rational approximation. Journal of Computational Physics, 2018, 374, 1031-1043.	3.8	9
16	An Algebraic Quantum Circuit Compression Algorithm for Hamiltonian Simulation. SIAM Journal on Matrix Analysis and Applications, 2022, 43, 1084-1108.	1.4	9
17	Model Reduction by Balanced Truncation of Linear Systems with a Quadratic Output. AIP Conference Proceedings, 2010, , .	0.4	5
18	Computing the modal characteristics of structures considering soil-structure interaction effects. Procedia Engineering, 2017, 199, 2414-2419.	1.2	5

#	Article	IF	Citations
19	A greedy algorithm for computing eigenvalues of a symmetric matrix with localized eigenvectors. Numerical Linear Algebra With Applications, 2021, 28, e2341.	1.6	5
20	Determining bound states in a semiconductor device with contacts using a nonlinear eigenvalue solver. Journal of Computational Electronics, 2014, 13, 753-762.	2.5	3
21	Quantum pixel representations and compression for N-dimensional images. Scientific Reports, 2022, 12, 7712.	3.3	3
22	A Scalable Matrix-Free Iterative Eigensolver for Studying Many-Body Localization. , 2020, , .		2
23	Fast algorithms for computing the distance to instability of nonlinear eigenvalue problems, with application to time-delay systems. International Journal of Dynamics and Control, 2014, 2, 133.	2.5	1
24	Computation of pseudospectral abscissa for large-scale nonlinear eigenvalue problems. IMA Journal of Numerical Analysis, 2017, , drw065.	2.9	1
25	Enhancing scalability of a matrix-free eigensolver for studying many-body localization. International Journal of High Performance Computing Applications, 2022, 36, 307-319.	3.7	1