

James G Nagy

List of Publications by Year in descending order

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55
papers

2,196
citations

279798

23
h-index

289244

40
g-index

56
all docs

56
docs citations

56
times ranked

1421
citing authors

#	ARTICLE	IF	CITATIONS
1	Restoring Images Degraded by Spatially Variant Blur. SIAM Journal of Scientific Computing, 1998, 19, 1063-1082.	2.8	171
2	Iterative Methods for Image Deblurring: A Matlab Object-Oriented Approach. Numerical Algorithms, 2004, 36, 73-93.	1.9	152
3	FFT-Based Preconditioners for Toeplitz-Block Least Squares Problems. SIAM Journal on Numerical Analysis, 1993, 30, 1740-1768.	2.3	94
4	IR Tools: a MATLAB package of iterative regularization methods and large-scale test problems. Numerical Algorithms, 2019, 81, 773-811.	1.9	89
5	Restoration of atmospherically blurred images by symmetric indefinite conjugate gradient techniques. Inverse Problems, 1996, 12, 157-173.	2.0	86
6	Numerical methods for coupled super-resolution. Inverse Problems, 2006, 22, 1261-1272.	2.0	73
7	Kronecker product and SVD approximations in image restoration. Linear Algebra and Its Applications, 1998, 284, 177-192.	0.9	72
8	A computational method for the restoration of images with an unknown, spatially-varying blur. Optics Express, 2006, 14, 1767.	3.4	67
9	Quasi-Newton approach to nonnegative image restorations. Linear Algebra and Its Applications, 2000, 316, 223-236.	0.9	65
10	<title>Enforcing nonnegativity in image reconstruction algorithms</title>. , 2000, , .		64
11	Circulant Preconditioned Toeplitz Least Squares Iterations. SIAM Journal on Matrix Analysis and Applications, 1994, 15, 80-97.	1.4	54
12	Covariance-Preconditioned Iterative Methods for Nonnegatively Constrained Astronomical Imaging. SIAM Journal on Matrix Analysis and Applications, 2006, 27, 1184-1197.	1.4	51
13	An Efficient Iterative Approach for Large-Scale Separable Nonlinear Inverse Problems. SIAM Journal of Scientific Computing, 2010, 31, 4654-4674.	2.8	51
14	Optimal Kronecker Product Approximation of Block Toeplitz Matrices. SIAM Journal on Matrix Analysis and Applications, 2000, 22, 155-172.	1.4	50
15	Generalized Arnoldi-Tikhonov Method for Sparse Reconstruction. SIAM Journal of Scientific Computing, 2014, 36, B225-B247.	2.8	42
16	Kronecker Product Approximations for Image Restoration with Reflexive Boundary Conditions. SIAM Journal on Matrix Analysis and Applications, 2003, 25, 829-841.	1.4	40
17	Kronecker product approximation for preconditioning in three-dimensional imaging applications. IEEE Transactions on Image Processing, 2006, 15, 604-613.	9.8	36
18	Synthetic boundary conditions for image deblurring. Linear Algebra and Its Applications, 2011, 434, 2244-2268.	0.9	33

#	ARTICLE	IF	CITATIONS
19	Parallel Colt. ACM Transactions on Mathematical Software, 2010, 37, 1-22.	2.9	29
20	Limited-Angle CT Reconstruction via the L_1/L_2 Minimization. SIAM Journal on Imaging Sciences, 2021, 14, 749-777.	2.2	29
21	Inverse Toeplitz preconditioners for ill-posed problems. Linear Algebra and Its Applications, 1998, 284, 137-156.	0.9	28
22	Numerical Algorithms for Polyenergetic Digital Breast Tomosynthesis Reconstruction. SIAM Journal on Imaging Sciences, 2010, 3, 133-152.	2.2	25
23	High-resolution speckle imaging through strong atmospheric turbulence. Optics Express, 2016, 24, 12116.	3.4	25
24	Toeplitz approximate inverse preconditioner for banded Toeplitz matrices. Numerical Algorithms, 1994, 7, 183-199.	1.9	24
25	Space-varying restoration of optical images. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1997, 14, 3162.	1.5	24
26	Constrained numerical optimization methods for blind deconvolution. Numerical Algorithms, 2014, 65, 23-42.	1.9	24
27	Iterative Methods for Image Restoration. Academic Press Library in Signal Processing, 2014, 4, 193-247.	0.8	24
28	Fast Inverse QR Factorization for Toeplitz Matrices. SIAM Journal of Scientific Computing, 1993, 14, 1174-1193.	2.8	21
29	A total least squares method for Toeplitz systems of equations. BIT Numerical Mathematics, 1998, 38, 560-582.	2.0	17
30	Structured linear algebra problems in adaptive optics imaging. Advances in Computational Mathematics, 2011, 35, 103-117.	1.6	17
31	Iterative Wavefront Reconstruction for Astronomical Imaging. SIAM Journal of Scientific Computing, 2013, 35, S84-S103.	2.8	16
32	Large-Scale Inverse Problems in Imaging. , 2011, , 43-86.		11
33	Deblurring and Sparse Unmixing of Hyperspectral Images Using Multiple Point Spread Functions. SIAM Journal of Scientific Computing, 2015, 37, S389-S406.	2.8	10
34	Semi-blind sparse affine spectral unmixing of autofluorescence-contaminated micrographs. Bioinformatics, 2020, 36, 910-917.	4.1	10
35	Iterative Breast Tomosynthesis Image Reconstruction. SIAM Journal of Scientific Computing, 2013, 35, S192-S208.	2.8	7
36	An effective alternating direction method of multipliers for color image restoration. Applied Numerical Mathematics, 2021, 164, 43-56.	2.1	7

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37	An inner-outer iterative method for edge preservation in image restoration and reconstruction. Inverse Problems, 2020, 36, 124004.	2.0	7
38	A scaled gradient method for digital tomographic image reconstruction. Inverse Problems and Imaging, 2018, 12, 239-259.	1.1	7
39	Minimizing L_1 over L_2 norms on the gradient. Inverse Problems, 2022, 38, 065011.	2.0	7
40	Rotational image deblurring with sparse matrices. BIT Numerical Mathematics, 2014, 54, 649-671.	2.0	6
41	Singular Value Decomposition Approximation via Kronecker Summations for Imaging Applications. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 1836-1857.	1.4	6
42	Robust regression for mixed Poisson-Gaussian model. Numerical Algorithms, 2018, 79, 825-851.	1.9	6
43	Iteratively Reweighted FGMRES and FLSQR for Sparse Reconstruction. SIAM Journal of Scientific Computing, 2021, 43, S47-S69.	2.8	6
44	An efficient computational approach for multiframe blind deconvolution. Journal of Computational and Applied Mathematics, 2012, 236, 2112-2125.	2.0	5
45	Nonlinear optimization for mixed attenuation polyenergetic image reconstruction. Inverse Problems, 2019, 35, 064004.	2.0	5
46	Fast Deterministic Approximation of Symmetric Indefinite Kernel Matrices with High Dimensional Datasets. SIAM Journal on Matrix Analysis and Applications, 2022, 43, 1003-1028.	1.4	5
47	An alternating direction method of multipliers for the solution of matrix equations arising in inverse problems. Numerical Linear Algebra With Applications, 2018, 25, e2123.	1.6	4
48	Structured FISTA for image restoration. Numerical Linear Algebra With Applications, 2020, 27, e2278.	1.6	4
49	LAP: A Linearize and Project Method for Solving Inverse Problems with Coupled Variables. Sampling Theory in Signal and Information Processing, 2018, 17, 127-151.	0.2	4
50	Estimation of atmospheric PSF parameters for hyperspectral imaging. Numerical Linear Algebra With Applications, 2015, 22, 795-813.	1.6	3
51	Krylov Methods for Low-Rank Regularization. SIAM Journal on Matrix Analysis and Applications, 2020, 41, 1477-1504.	1.4	3
52	Degradation reduction in optics imagery using Toeplitz structure. Calcolo, 1996, 33, 269-288.	1.1	2
53	An ADMM-LAP method for total variation myopic deconvolution of adaptive optics retinal images. Inverse Problems, 2021, 37, 014001.	2.0	1
54	Dedication to Robert J. Plemmons. Numerical Linear Algebra With Applications, 2015, 22, 793-794.	1.6	0

#	ARTICLE	IF	CITATIONS
55	Iodine quantification in limited angle tomography. Medical Physics, 2020, 47, 4906-4916.	3.0	0