

Per Christian Hansen

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

92
papers

12,099
citations

32
h-index

99
g-index

99
ext. papers

13,767
ext. citations

2
avg, IF

7
L-index

#	Paper	IF	Citations
92	Analysis of Discrete Ill-Posed Problems by Means of the L-Curve. <i>SIAM Review</i> , 1992 , 34, 561-580	7.4	2554
91	The Use of the L-Curve in the Regularization of Discrete Ill-Posed Problems. <i>SIAM Journal of Scientific Computing</i> , 1993 , 14, 1487-1503	2.6	1843
90	Rank-Deficient and Discrete Ill-Posed Problems 1998 ,		1585
89	REGULARIZATION TOOLS: A Matlab package for analysis and solution of discrete ill-posed problems. <i>Numerical Algorithms</i> , 1994 , 6, 1-35	2.1	1057
88	Tikhonov Regularization and Total Least Squares. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1999 , 21, 185-194	1.5	571
87	Regularization Tools version 4.0 for Matlab 7.3. <i>Numerical Algorithms</i> , 2007 , 46, 189-194	2.1	502
86	The truncatedSVD as a method for regularization. <i>BIT Numerical Mathematics</i> , 1987 , 27, 534-553	1.7	460
85	Discrete Inverse Problems 2010 ,		431
84	Deblurring Images 2006 ,		370
83	Truncated Singular Value Decomposition Solutions to Discrete Ill-Posed Problems with Ill-Determined Numerical Rank. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1990 , 11, 503-518		339
82	The discrete picard condition for discrete ill-posed problems. <i>BIT Numerical Mathematics</i> , 1990 , 30, 658-672		199
81	AIR Tools A MATLAB package of algebraic iterative reconstruction methods. <i>Journal of Computational and Applied Mathematics</i> , 2012 , 236, 2167-2178	2.4	189
80	Some Applications of the Rank Revealing QR Factorization. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1992 , 13, 727-741		121
79	An adaptive pruning algorithm for the discrete L-curve criterion. <i>Journal of Computational and Applied Mathematics</i> , 2007 , 198, 483-492	2.4	117
78	Algorithms and software for total variation image reconstruction via first-order methods. <i>Numerical Algorithms</i> , 2010 , 53, 67-92	2.1	114
77	Regularization,GSVD and truncatedGSVD. <i>BIT Numerical Mathematics</i> , 1989 , 29, 491-504	1.7	113
76	Deconvolution and Regularization with Toeplitz Matrices. <i>Numerical Algorithms</i> , 2002 , 29, 323-378	2.1	104

75	Sound source reconstruction using inverse boundary element calculations. <i>Journal of the Acoustical Society of America</i> , 2003 , 113, 114-27	2.2	102
74	The Modified Truncated SVD Method for Regularization in General Form. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1992 , 13, 1142-1150		85
73	AIR Tools II: algebraic iterative reconstruction methods, improved implementation. <i>Numerical Algorithms</i> , 2018 , 79, 107-137	2.1	77
72	A Projection-Based Approach to General-Form Tikhonov Regularization. <i>SIAM Journal of Scientific Computing</i> , 2007 , 29, 315-330	2.6	63
71	Computing Truncated Singular Value Decomposition Least Squares Solutions by Rank Revealing QR-Factorizations. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1990 , 11, 519-530		60
70	Analysis of depth resolution in potential-field inversion. <i>Geophysics</i> , 2005 , 70, A1-A11	3.1	57
69	IR Tools: a MATLAB package of iterative regularization methods and large-scale test problems. <i>Numerical Algorithms</i> , 2019 , 81, 773-811	2.1	52
68	Efficient wave-function matching approach for quantum transport calculations. <i>Physical Review B</i> , 2009 , 79,	3.3	42
67	The effective condition number applied to error analysis of certain boundary collocation methods. <i>Journal of Computational and Applied Mathematics</i> , 1994 , 54, 15-36	2.4	42
66	Low-rank revealing UTV decompositions. <i>Numerical Algorithms</i> , 1997 , 15, 37-55	2.1	39
65	Semiconvergence and Relaxation Parameters for Projected SIRT Algorithms. <i>SIAM Journal of Scientific Computing</i> , 2012 , 34, A2000-A2017	2.6	34
64	Regularization Tools Version 3.0 for Matlab 5.2. <i>Numerical Algorithms</i> , 1999 , 20, 195-196	2.1	33
63	A Look-Ahead Levinson Algorithm for Indefinite Toeplitz Systems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1992 , 13, 490-506	1.5	33
62	Semi-convergence properties of Kaczmarz method. <i>Inverse Problems</i> , 2014 , 30, 055007	2.3	32
61	Low-rank revealing QR factorizations. <i>Numerical Linear Algebra With Applications</i> , 1994 , 1, 33-44	1.6	32
60	Krylov subspace method for evaluating the self-energy matrices in electron transport calculations. <i>Physical Review B</i> , 2008 , 77,	3.3	30
59	A hybrid method for the parallel computation of Green's functions. <i>Journal of Computational Physics</i> , 2009 , 228, 5020-5039	4.1	29
58	Smoothing-Norm Preconditioning for Regularizing Minimum-Residual Methods. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2007 , 29, 1-14	1.5	29

57	Accuracy of TSVD solutions computed from rank-revealing decompositions. <i>Numerische Mathematik</i> , 1995 , 70, 453-471	2.2	29
56	Structure-Preserving and Rank-Revealing QR-Factorizations. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1991 , 12, 1332-1350		29
55	A tensor-based dictionary learning approach to tomographic image reconstruction. <i>BIT Numerical Mathematics</i> , 2016 , 56, 1425-1454	1.7	26
54	UTV Tools: Matlab templates for rank-revealing UTV decompositions. <i>Numerical Algorithms</i> , 1999 , 20, 165-194	2.1	26
53	A computationally efficient tool for assessing the depth resolution in large-scale potential-field inversion. <i>Geophysics</i> , 2014 , 79, A33-A38	3.1	25
52	Subspace-Based Noise Reduction for Speech Signals via Diagonal and Triangular Matrix Decompositions: Survey and Analysis. <i>Eurasip Journal on Advances in Signal Processing</i> , 2007 , 2007, 1	1.9	25
51	Block tridiagonal matrix inversion and fast transmission calculations. <i>Journal of Computational Physics</i> , 2008 , 227, 3174-3190	4.1	22
50	Reconstruction of Single-Grain Orientation Distribution Functions for Crystalline Materials. <i>SIAM Journal on Imaging Sciences</i> , 2009 , 2, 593-613	1.9	20
49	Multicore Performance of Block Algebraic Iterative Reconstruction Methods. <i>SIAM Journal of Scientific Computing</i> , 2014 , 36, C524-C546	2.6	19
48	Piecewise Polynomial Solutions Without a priori Break Points. <i>Numerical Linear Algebra With Applications</i> , 1996 , 3, 513-524	1.6	19
47	Generalized row-action methods for tomographic imaging. <i>Numerical Algorithms</i> , 2014 , 67, 121-144	2.1	17
46	Multilevel Fast Multipole Method for Higher Order Discretizations. <i>IEEE Transactions on Antennas and Propagation</i> , 2014 , 62, 4695-4705	4.9	17
45	Oblique projections and standard-form transformations for discrete inverse problems. <i>Numerical Linear Algebra With Applications</i> , 2013 , 20, 250-258	1.6	17
44	Computing Symmetric Rank-Revealing Decompositions via Triangular Factorization. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2001 , 23, 443-458	1.5	17
43	The 2-norm of random matrices. <i>Journal of Computational and Applied Mathematics</i> , 1988 , 23, 117-120	2.4	16
42	Test Matrices for Regularization Methods. <i>SIAM Journal of Scientific Computing</i> , 1995 , 16, 506-512	2.6	14
41	A block algorithm for computing rank-revealing QR factorizations. <i>Numerical Algorithms</i> , 1992 , 2, 371-391	1.1	14
40	EMPIRICAL AVERAGE-CASE RELATION BETWEEN UNDERSAMPLING AND SPARSITY IN X-RAY CT. <i>Inverse Problems and Imaging</i> , 2015 , 9, 431-446	2.1	14

39	Relations between SVD and GSVD of Discrete regularization problems in standard and general form. <i>Linear Algebra and Its Applications</i> , 1990 , 141, 165-176	0.9	13
38	An SVD analysis of linear algebraic equations derived from first kind integral equations. <i>Journal of Computational and Applied Mathematics</i> , 1985 , 12-13, 341-357	2.4	13
37	Electrical impedance tomography: 3D reconstructions using scattering transforms. <i>Applicable Analysis</i> , 2012 , 91, 737-755	0.8	12
36	Regularization and the general Gauss-Markov linear model. <i>Mathematics of Computation</i> , 1990 , 55, 613-618	1.3	12
35	Unmatched Projector/Backprojector Pairs: Perturbation and Convergence Analysis. <i>SIAM Journal of Scientific Computing</i> , 2018 , 40, A573-A591	2.6	11
34	Simultaneous tomographic reconstruction and segmentation with class priors. <i>Inverse Problems in Science and Engineering</i> , 2016 , 24, 1432-1453	1.3	10
33	Convergence analysis for column-action methods in image reconstruction. <i>Numerical Algorithms</i> , 2017 , 74, 905-924	2.1	9
32	Rank-deficient prewhitening with quotientSVD andULV decompositions. <i>BIT Numerical Mathematics</i> , 1998 , 38, 34-43	1.7	9
31	Limited-data x-ray CT for underwater pipeline inspection. <i>Inverse Problems</i> , 2018 , 34, 034002	2.3	8
30	UTV Expansion Pack: Special-purpose rank-revealing algorithms. <i>Numerical Algorithms</i> , 2005 , 40, 47-66	2.1	8
29	Implementation of QR up- and downdating on a massively parallel computer. <i>Parallel Computing</i> , 1995 , 21, 49-61	1	8
28	Tomographic image reconstruction using training images. <i>Journal of Computational and Applied Mathematics</i> , 2017 , 313, 243-258	2.4	7
27	Fixing Nonconvergence of Algebraic Iterative Reconstruction with an Unmatched Backprojector. <i>SIAM Journal of Scientific Computing</i> , 2019 , 41, A1822-A1839	2.6	6
26	Deblurring Images: Matrices, Spectra and Filtering. <i>Journal of Electronic Imaging</i> , 2007 , 17, 019901	0.7	6
25	FORTTRAN subroutines for general Toeplitz systems. <i>ACM Transactions on Mathematical Software</i> , 1992 , 18, 256-273	2.3	6
24	Large-Scale Methods in Image Deblurring 2006 , 24-35		6
23	Joint CT Reconstruction and Segmentation With Discriminative Dictionary Learning. <i>IEEE Transactions on Computational Imaging</i> , 2018 , 4, 528-536	4.5	5
22	Computing segmentations directly from x-ray projection data via parametric deformable curves. <i>Measurement Science and Technology</i> , 2018 , 29, 014003	2	4

21	Rotational image deblurring with sparse matrices. <i>BIT Numerical Mathematics</i> , 2014 , 54, 649-671	1.7	4
20	User-Friendly Simultaneous Tomographic Reconstruction and Segmentation with Class Priors. <i>Lecture Notes in Computer Science</i> , 2017 , 260-270	0.9	4
19	Hybrid enriched bidiagonalization for discrete ill-posed problems. <i>Numerical Linear Algebra With Applications</i> , 2019 , 26, e2230	1.6	3
18	Improved Multilevel Fast Multipole Method for Higher-Order discretizations 2014 ,		3
17	Detection of near-singularity in Cholesky and LDLT factorizations. <i>Journal of Computational and Applied Mathematics</i> , 1987 , 19, 293-299	2.4	3
16	MCMC Algorithms for Computational UQ of Nonnegativity Constrained Linear Inverse Problems. <i>SIAM Journal of Scientific Computing</i> , 2020 , 42, A1269-A1288	2.6	2
15	Reflector antenna analysis using physical optics on Graphics Processing Units 2014 ,		2
14	Adaptive grouping for the higher-order multilevel fast multipole method. <i>Microwave and Optical Technology Letters</i> , 2014 , 56, 2451-2456	1.2	2
13	A direct numerical reconstruction algorithm for the 3D Calderón problem. <i>Journal of Physics: Conference Series</i> , 2011 , 290, 012003	0.3	2
12	Computed Tomography Reconstruction with Uncertain View Angles by Iteratively Updated Model Discrepancy. <i>Journal of Mathematical Imaging and Vision</i> , 2021 , 63, 133-143	1.6	2
11	Noise robustness of a combined phase retrieval and reconstruction method for phase-contrast tomography. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2016 , 33, 447-54	1.8	1
10	Gaussian translation operator for Multi-Level Fast Multipole Method 2014 ,		1
9	Stabilization by Perturbation of a 4n2 Toeplitz Solver. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2000 , 21, 849-866	1.5	1
8	A Twin Error Gauge for Kaczmarz's Iterations. <i>SIAM Journal of Scientific Computing</i> , S173-S199	2.6	1
7	Computed tomography with view angle estimation using uncertainty quantification. <i>Inverse Problems</i> , 2021 , 37, 065007	2.3	1
6	A parameter-choice method that exploits residual information. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007 , 7, 1021705-1021706	0.2	0
5	Parallel issues of regularization problems. <i>Lecture Notes in Computer Science</i> , 1994 , 287-295	0.9	
4	Comparison of massively parallel SIMD computers using air pollution models. <i>Lecture Notes in Computer Science</i> , 1994 , 110-126	0.9	

- 3 Recent Developments in Rank Revealing and Lanczos Methods for TLS-Related Problems **2002**, 47-56
- 2 Filter model of reduced-rank noise reduction. *Lecture Notes in Computer Science*, **1996**, 379-387 0.9
- 1 GMRES methods for tomographic reconstruction with an unmatched back projector. *Journal of Computational and Applied Mathematics*, **2022**, 413, 114352 2.4