

Daniela Calvetti

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/333354/publications.pdf>

Version: 2024-02-01

155
papers

3,375
citations

196777

29
h-index

214428

50
g-index

157
all docs

157
docs citations

157
times ranked

2685
citing authors

#	ARTICLE	IF	CITATIONS
1	Overcomplete representation in a hierarchical Bayesian framework. <i>Inverse Problems and Imaging</i> , 2022, 16, 19.	0.6	3
2	Brain Energy Metabolism. , 2022, , 540-558.		0
3	Modeling Epidemic Spread among a Commuting Population Using Transport Schemes. <i>Mathematics</i> , 2021, 9, 1861.	1.1	2
4	Mining the Mind: Linear Discriminant Analysis of MEG Source Reconstruction Time Series Supports Dynamic Changes in Deep Brain Regions During Meditation Sessions. <i>Brain Topography</i> , 2021, 34, 840-862.	0.8	4
5	Bayesian particle filter algorithm for learning epidemic dynamics. <i>Inverse Problems</i> , 2021, 37, 115008.	1.0	9
6	Sparse reconstructions from few noisy data: analysis of hierarchical Bayesian models with generalized gamma hyperpriors. <i>Inverse Problems</i> , 2020, 36, 025010.	1.0	24
7	Metabolism plays a central role in the cortical spreading depression: Evidence from a mathematical model. <i>Journal of Theoretical Biology</i> , 2020, 486, 110093.	0.8	0
8	Metapopulation Network Models for Understanding, Predicting, and Managing the Coronavirus Disease COVID-19. <i>Frontiers in Physics</i> , 2020, 8, .	1.0	62
9	Computational Model of Electrode-Induced Microenvironmental Effects on pH Measurements Near a Cell Membrane. <i>Multiscale Modeling and Simulation</i> , 2020, 18, 1053-1075.	0.6	4
10	A Bayesian filtering approach to layer stripping for electrical impedance tomography. <i>Inverse Problems</i> , 2020, 36, 055014.	1.0	5
11	Sparsity Promoting Hybrid Solvers for Hierarchical Bayesian Inverse Problems. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A3761-A3784.	1.3	14
12	Bayesian Mesh Adaptation for Estimating Distributed Parameters. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A3878-A3906.	1.3	1
13	Brain Activity Mapping from MEG Data via a Hierarchical Bayesian Algorithm with Automatic Depth Weighting. <i>Brain Topography</i> , 2019, 32, 363-393.	0.8	19
14	Brain energetics plays a key role in the coordination of electrophysiology, metabolism and hemodynamics: Evidence from an integrated computational model. <i>Journal of Theoretical Biology</i> , 2019, 478, 26-39.	0.8	5
15	Hierachical Bayesian models and sparsity: <i>inverse problems</i> . <i>Inverse Problems</i> , 2019, 35, 035003.	1.0	27
16	Approximation of continuous EIT data from electrode measurements with Bayesian methods. <i>Inverse Problems</i> , 2019, 35, 045012.	1.0	3
17	Estimating hemodynamic stimulus and blood vessel compliance from cerebral blood flow data. <i>Journal of Theoretical Biology</i> , 2019, 460, 243-261.	0.8	3
18	Brain Energy Metabolism. , 2019, , 1-19.		2

#	ARTICLE	IF	CITATIONS
19	A computational model integrating brain electrophysiology and metabolism highlights the key role of extracellular potassium and oxygen. <i>Journal of Theoretical Biology</i> , 2018, 446, 238-258.	0.8	16
20	Iterative updating of model error for Bayesian inversion. <i>Inverse Problems</i> , 2018, 34, 025008.	1.0	31
21	Inverse problems: From regularization to Bayesian inference. <i>Wiley Interdisciplinary Reviews: Computational Statistics</i> , 2018, 10, e1427.	2.1	68
22	Bayes Meets Krylov: Statistically Inspired Preconditioners for CGLS. <i>SIAM Review</i> , 2018, 60, 429-461.	4.2	21
23	Beyond the Model Limit: Parameter Inference Across Scales. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2017, 5, 665-693.	1.1	0
24	Priorconditioned CGLS-Based Quasi-MAP Estimate, Statistical Stopping Rule, and Ranking of Priors. <i>SIAM Journal of Scientific Computing</i> , 2017, 39, S477-S500.	1.3	5
25	Uncertainty quantification in flux balance analysis of spatially lumped and distributed models of neuron-astrocyte metabolism. <i>Journal of Mathematical Biology</i> , 2016, 73, 1823-1849.	0.8	8
26	Computational issues in linear multistep method particle filtering. <i>AIP Conference Proceedings</i> , 2016, , .	0.3	2
27	A hierarchical Krylov-Bayes iterative inverse solver for MEG with physiological preconditioning. <i>Inverse Problems</i> , 2015, 31, 125005.	1.0	32
28	Life sciences through mathematical models. <i>Rendiconti Lincei</i> , 2015, 26, 193-201.	1.0	5
29	A CS decomposition for orthogonal matrices with application to eigenvalue computation. <i>Linear Algebra and Its Applications</i> , 2015, 476, 197-232.	0.4	1
30	A spatially distributed computational model of brain cellular metabolism. <i>Journal of Theoretical Biology</i> , 2015, 376, 48-65.	0.8	22
31	Stochastic modelling of muscle recruitment during activity. <i>Interface Focus</i> , 2015, 5, 20140094.	1.5	47
32	Artificial boundary conditions and domain truncation in electrical impedance tomography. Part I: Theory and preliminary results. <i>Inverse Problems and Imaging</i> , 2015, 9, 749-766.	0.6	13
33	Artificial boundary conditions and domain truncation in electrical impedance tomography. Part II: Stochastic extension of the boundary map. <i>Inverse Problems and Imaging</i> , 2015, 9, 767-789.	0.6	13
34	Statistical Methods in Imaging. , 2015, , 1343-1392.		1
35	Vectorized and parallel particle filter SMC parameter estimation for stiff ODEs. , 2015, , .		1
36	Parameter estimation for stiff deterministic dynamical systems via ensemble Kalman filter. <i>Inverse Problems</i> , 2014, 30, 105008.	1.0	28

#	ARTICLE	IF	CITATIONS
37	Astrocytic tracer dynamics estimated from [1-11C]-acetate PET measurements. <i>Mathematical Medicine and Biology</i> , 2014, 32, dqu021.	0.8	4
38	Inverse problems in the Bayesian framework. <i>Inverse Problems</i> , 2014, 30, 110301.	1.0	16
39	Dynamic updating of numerical model discrepancy using sequential sampling. <i>Inverse Problems</i> , 2014, 30, 114019.	1.0	16
40	Variable order smoothness priors for ill-posed inverse problems. <i>Mathematics of Computation</i> , 2014, 84, 1753-1773.	1.1	3
41	Modeling HIV-1 Dynamics and Fitness in Cell Culture Across Scales. <i>Bulletin of Mathematical Biology</i> , 2014, 76, 486-514.	0.9	4
42	Computational tools for calculating alternative muscle force patterns during motion: A comparison of possible solutions. <i>Journal of Biomechanics</i> , 2013, 46, 2097-2100.	0.9	20
43	Quantitative in silico Analysis of Neurotransmitter Pathways Under Steady State Conditions. <i>Frontiers in Endocrinology</i> , 2013, 4, 137.	1.5	22
44	Bayesian Preconditioned CGLS for Source Separation in MEG Time Series. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, B778-B798.	1.3	5
45	Linear multistep methods, particle filtering and sequential Monte Carlo. <i>Inverse Problems</i> , 2013, 29, 085007.	1.0	22
46	Left and right preconditioning for electrical impedance tomography with structural information. <i>Inverse Problems</i> , 2012, 28, 055015.	1.0	18
47	MÃ©nage Ã Trois: The Role of Neurotransmitters in the Energy Metabolism of Astrocytes, Glutamatergic, and GABAergic Neurons. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2012, 32, 1472-1483.	2.4	20
48	The Metabolism of Neurons and Astrocytes Through Mathematical Models. <i>Annals of Biomedical Engineering</i> , 2012, 40, 2328-2344.	1.3	16
49	Quantitative imaging with electrical impedance spectroscopy. <i>Physics in Medicine and Biology</i> , 2012, 57, 7289-7302.	1.6	8
50	A reaction-diffusion model of CO ₂ influx into an oocyte. <i>Journal of Theoretical Biology</i> , 2012, 309, 185-203.	0.8	33
51	A hybrid stochastic-deterministic computational model accurately describes spatial dynamics and virus diffusion in HIV-1 growth competition assay. <i>Journal of Theoretical Biology</i> , 2012, 312, 120-132.	0.8	10
52	Bayesian mixture models for source separation in MEG. <i>Inverse Problems</i> , 2011, 27, 115001.	1.0	4
53	Dynamic activation model for a glutamatergic neurovascular unit. <i>Journal of Theoretical Biology</i> , 2011, 274, 12-29.	0.8	22
54	Hierarchical beamformer and cross-talk reduction in electroneurography. <i>Journal of Neural Engineering</i> , 2011, 8, 056002.	1.8	14

#	ARTICLE	IF	CITATIONS
55	Statistical Methods in Imaging. , 2011, , 913-957.		1
56	Interpretation of NMR Spectroscopy Human Brain Data with a Multi-Compartment Computational Model of Cerebral Metabolism. Advances in Experimental Medicine and Biology, 2011, 701, 249-254.	0.8	4
57	Metabolica: A statistical research tool for analyzing metabolic networks. Computer Methods and Programs in Biomedicine, 2010, 97, 151-167.	2.6	24
58	Energetics of Inhibition: Insights with a Computational Model of the Human GABAergic Neuronâ€™Astrocyte Cellular Complex. Journal of Cerebral Blood Flow and Metabolism, 2010, 30, 1834-1846.	2.4	24
59	Hierarchical regularization for edge-preserving reconstruction of PET images. Inverse Problems, 2010, 26, 035010.	1.0	24
60	Astrocytes as the Glucose Shunt for Glutamatergic Neurons at High Activity: An In Silico Study. Journal of Neurophysiology, 2009, 101, 2528-2538.	0.9	44
61	Conditionally Gaussian Hypermodels for Cerebral Source Localization. SIAM Journal on Imaging Sciences, 2009, 2, 879-909.	1.3	75
62	In silico study of lactate metabolism in brain during visual stimulation. FASEB Journal, 2009, 23, LB113.	0.2	0
63	Dynamic Bayesian sensitivity analysis of a myocardial metabolic model. Mathematical Biosciences, 2008, 212, 1-21.	0.9	6
64	An adaptive smoothness regularization algorithm for optical tomography. Optics Express, 2008, 16, 19957.	1.7	11
65	Sampling-Based Analysis of a Spatially Distributed Model for Liver Metabolism at Steady State. Multiscale Modeling and Simulation, 2008, 7, 407-431.	0.6	12
66	Hypermodels in the Bayesian imaging framework. Inverse Problems, 2008, 24, 034013.	1.0	78
67	Inverse problems and computational cell metabolic models: a statistical approach. Journal of Physics: Conference Series, 2008, 124, 012003.	0.3	1
68	Computational modelling of cellular level metabolism. Journal of Physics: Conference Series, 2008, 124, 012011.	0.3	0
69	The inverse problem of brain energetics: ketone bodies as alternative substrates. Journal of Physics: Conference Series, 2008, 124, 012013.	0.3	1
70	A mathematical model of liver metabolism: from steady state to dynamic. Journal of Physics: Conference Series, 2008, 124, 012012.	0.3	7
71	Recovery of shapes: hypermodels and Bayesian learning. Journal of Physics: Conference Series, 2008, 124, 012014.	0.3	0
72	A unified Bayesian framework for algorithms to recover blocky signals. Proceedings of SPIE, 2007, , .	0.8	0

#	ARTICLE	IF	CITATIONS
73	A Gaussian hypermodel to recover blocky objects. <i>Inverse Problems</i> , 2007, 23, 733-754.	1.0	51
74	Fast simulation of solid tumors thermal ablation treatments with a 3D reaction diffusion model. <i>Computers in Biology and Medicine</i> , 2007, 37, 1173-1182.	3.9	5
75	Preconditioned iterative methods for linear discrete ill-posed problems from a Bayesian inversion perspective. <i>Journal of Computational and Applied Mathematics</i> , 2007, 198, 378-395.	1.1	35
76	Bayesian flux balance analysis applied to a skeletal muscle metabolic model. <i>Journal of Theoretical Biology</i> , 2007, 248, 91-110.	0.8	25
77	Bayesian flux balance analysis applied to a skeletal muscle metabolic model. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 1120401-1120402.	0.2	0
78	An efficient deconvolution algorithm for estimating oxygen consumption during muscle activities. <i>Computer Methods and Programs in Biomedicine</i> , 2007, 85, 247-256.	2.6	3
79	Statistical Analysis of Metabolic Pathways of Brain Metabolism at Steady State. <i>Annals of Biomedical Engineering</i> , 2007, 35, 886-902.	1.3	27
80	Microlocal sequential regularization in imaging. <i>Inverse Problems and Imaging</i> , 2007, 1, 1-11.	0.6	10
81	Bayesian stationary state flux balance analysis for a skeletal muscle metabolic model. <i>Inverse Problems and Imaging</i> , 2007, 1, 247-263.	0.6	11
82	Large-scale Statistical Parameter Estimation in Complex Systems with an Application to Metabolic Models. <i>Multiscale Modeling and Simulation</i> , 2006, 5, 1333-1366.	0.6	25
83	Large-scale Bayesian parameter estimation for a three-compartment cardiac metabolism model during ischemia. <i>Inverse Problems</i> , 2006, 22, 1797-1816.	1.0	10
84	Image inpainting with structural bootstrap priors. <i>Image and Vision Computing</i> , 2006, 24, 782-793.	2.7	21
85	Local regularization method applied to estimating oxygen consumption during muscle activities. <i>Inverse Problems</i> , 2006, 22, 229-243.	1.0	7
86	Bayesian image deblurring and boundary effects. , 2005, , .		3
87	Local regularization and Bayesian hypermodels. , 2005, , .		1
88	Tikhonov regularization of large symmetric problems. <i>Numerical Linear Algebra With Applications</i> , 2005, 12, 127-139.	0.9	2
89	Invertible smoothing preconditioners for linear discrete ill-posed problems. <i>Applied Numerical Mathematics</i> , 2005, 54, 135-149.	1.2	43
90	Quadrature Rules Based on the Arnoldi Process. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2005, 26, 765-781.	0.7	13

#	ARTICLE	IF	CITATIONS
91	Statistical elimination of boundary artefacts in image deblurring. <i>Inverse Problems</i> , 2005, 21, 1697-1714.	1.0	19
92	Regularization of inverse planning for intensity-modulated radiotherapy. <i>Medical Physics</i> , 2005, 32, 501-514.	1.6	11
93	Priorconditioners for linear systems. <i>Inverse Problems</i> , 2005, 21, 1397-1418.	1.0	41
94	Non-negativity and iterative methods for ill-posed problems. <i>Inverse Problems</i> , 2004, 20, 1747-1758.	1.0	47
95	L-Curve and Curvature Bounds for Tikhonov Regularization. <i>Numerical Algorithms</i> , 2004, 35, 301-314.	1.1	50
96	Tikhonov Regularization with a Solution Constraint. <i>SIAM Journal of Scientific Computing</i> , 2004, 26, 224-239.	1.3	34
97	Regularized autoregressive analysis of intravascular ultrasound backscatter: improvement in spatial accuracy of tissue maps. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2004, 51, 420-431.	1.7	49
98	On the Evaluation of Polynomial Coefficients. <i>Numerical Algorithms</i> , 2003, 33, 153-161.	1.1	19
99	Tikhonov Regularization of Large Linear Problems. <i>BIT Numerical Mathematics</i> , 2003, 43, 263-283.	1.0	123
100	Gauss Quadrature Applied to Trust Region Computations. <i>Numerical Algorithms</i> , 2003, 34, 85-102.	1.1	4
101	Symmetric Gauss-Lobatto and Modified Anti-Gauss Rules. <i>BIT Numerical Mathematics</i> , 2003, 43, 541-554.	1.0	19
102	Noninvasive Electrocardiographic Imaging (ECGI): Application of the Generalized Minimal Residual (GMRES) Method. <i>Annals of Biomedical Engineering</i> , 2003, 31, 981-994.	1.3	95
103	Pole placement preconditioning. <i>Linear Algebra and Its Applications</i> , 2003, 366, 99-120.	0.4	3
104	Enriched Krylov subspace methods for ill-posed problems. <i>Linear Algebra and Its Applications</i> , 2003, 362, 257-273.	0.4	14
105	IRBL: An Implicitly Restarted Block-Lanczos Method for Large-Scale Hermitian Eigenproblems. <i>SIAM Journal of Scientific Computing</i> , 2003, 24, 1650-1677.	1.3	52
106	Algorithm 827. <i>ACM Transactions on Mathematical Software</i> , 2003, 29, 337-348.	1.6	25
107	A hybrid GMRES and TV-norm-based method for image restoration. , 2002, , .		0
108	On the regularizing properties of the GMRES method. <i>Numerische Mathematik</i> , 2002, 91, 605-625.	0.9	74

#	ARTICLE	IF	CITATIONS
109	The restarted QR-algorithm for eigenvalue computation of structured matrices. Journal of Computational and Applied Mathematics, 2002, 149, 415-422.	1.1	8
110	Lanczos-Based Exponential Filtering for Discrete Ill-Posed Problems. Numerical Algorithms, 2002, 29, 45-65.	1.1	16
111	GMRES, L-Curves, and Discrete Ill-Posed Problems. BIT Numerical Mathematics, 2002, 42, 44-65.	1.0	55
112	<title>Krylov subspace iterative methods for nonsymmetric discrete ill-posed problems in image restoration</title>. , 2001, , .		2
113	Polynomial zerofinders based on SzegÅ' polynomials. Journal of Computational and Applied Mathematics, 2001, 127, 1-16.	1.1	11
114	An iterative method with error estimators. Journal of Computational and Applied Mathematics, 2001, 127, 93-119.	1.1	10
115	On the solution of large Sylvester-observer equations. Numerical Linear Algebra With Applications, 2001, 8, 435-451.	0.9	27
116	<title>Restoration of images with spatially variant blur by the GMRES method</title>. , 2000, 4116, 364.		7
117	<title>L-curve for the MINRES method</title>. , 2000, , .		2
118	GMRES-type methods for inconsistent systems. Linear Algebra and Its Applications, 2000, 316, 157-169.	0.4	60
119	Iterative methods for large continuation problems. Journal of Computational and Applied Mathematics, 2000, 123, 217-240.	1.1	15
120	Tikhonov regularization and the L-curve for large discrete ill-posed problems. Journal of Computational and Applied Mathematics, 2000, 123, 423-446.	1.1	383
121	A regularizing Lanczos iteration method for underdetermined linear systems. Journal of Computational and Applied Mathematics, 2000, 115, 101-120.	1.1	15
122	An L-ribbon for large underdetermined linear discrete ill-posed problems. Numerical Algorithms, 2000, 25, 89-107.	1.1	8
123	Computable error bounds and estimates for the conjugate gradient method. Numerical Algorithms, 2000, 25, 75-88.	1.1	14
124	Iterative Solution Methods for Large Linear Discrete Ill-Posed Problems. , 1999, , 313-367.		16
125	On the selection of poles in the single-input pole placement problem. Linear Algebra and Its Applications, 1999, 302-303, 331-345.	0.4	6
126	A computable error bound for matrix functionals. Journal of Computational and Applied Mathematics, 1999, 103, 301-306.	1.1	6

#	ARTICLE	IF	CITATIONS
127	On an inverse eigenproblem for Jacobi matrices. <i>Advances in Computational Mathematics</i> , 1999, 11, 11-20.	0.8	5
128	A block-Lanczos method for large continuation problems. <i>Numerical Algorithms</i> , 1999, 21, 109-118.	1.1	2
129	Estimation of the L-Curve via Lanczos Bidiagonalization. <i>BIT Numerical Mathematics</i> , 1999, 39, 603-619.	1.0	88
130	Iterative exponential filtering for large discrete ill-posed problems. <i>Numerische Mathematik</i> , 1999, 83, 535-556.	0.9	13
131	Applications of Anti-Gauss Quadrature Rules in Linear Algebra. , 1999, , 41-56.		13
132	Computation of a Few Small Eigenvalues of a Large Matrix with Application to Liquid Crystal Modeling. <i>Journal of Computational Physics</i> , 1998, 146, 203-226.	1.9	17
133	A hybrid iterative method for symmetric indefinite linear systems. <i>Journal of Computational and Applied Mathematics</i> , 1998, 92, 109-133.	1.1	3
134	Adaptively Preconditioned GMRES Algorithms. <i>SIAM Journal of Scientific Computing</i> , 1998, 20, 243-269.	1.3	97
135	Smooth or abrupt: a comparison of regularization methods. , 1998, , .		2
136	Iterative methods for $X \hat{A} X B = C$. <i>Journal of Computational and Applied Mathematics</i> , 1997, 86, 73-101.	1.1	23
137	Factorizations of Cauchy matrices. <i>Journal of Computational and Applied Mathematics</i> , 1997, 86, 103-123.	1.1	7
138	Application of ADI Iterative Methods to the Restoration of Noisy Images. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1996, 17, 165-186.	0.7	157
139	Adaptive Richardson iteration based on Leja points. <i>Journal of Computational and Applied Mathematics</i> , 1996, 71, 267-286.	1.1	14
140	Continuation methods for the computation of zeros of Szegő polynomials. <i>Linear Algebra and Its Applications</i> , 1996, 249, 125-155.	0.4	13
141	An adaptive Richardson iteration method for indefinite linear systems. <i>Numerical Algorithms</i> , 1996, 12, 125-149.	1.1	14
142	A hybrid iterative method for symmetric positive definite linear systems. <i>Numerical Algorithms</i> , 1996, 11, 79-98.	1.1	5
143	Iterative methods for the computation of a few eigenvalues of a large symmetric matrix. <i>BIT Numerical Mathematics</i> , 1996, 36, 400-421.	1.0	49
144	<title>Iterative solution methods for ill-posed problems</title>. , 1995, 2563, 338.		4

#	ARTICLE	IF	CITATIONS
145	Incomplete partial fractions for parallel evaluation of rational matrix functions. Journal of Computational and Applied Mathematics, 1995, 59, 349-380.	1.1	22
146	Application of a block modified Chebyshev algorithm to the iterative solution of symmetric linear systems with multiple right hand side vectors. Numerische Mathematik, 1994, 68, 3-16.	0.9	6
147	An adaptive Chebyshev iterative methodewline for nonsymmetric linear systems based on modified moments. Numerische Mathematik, 1994, 67, 21-40.	0.9	24
148	Fast inversion of vandermonde-like matrices involving orthogonal polynomials. BIT Numerical Mathematics, 1993, 33, 473-484.	1.0	38
149	A stochastic roundoff error analysis for the convolution. Mathematics of Computation, 1992, 59, 569-569.	1.1	2
150	A Chebychev-Vandermonde solver. Linear Algebra and Its Applications, 1992, 172, 219-229.	0.4	8
151	Roundoff error for floating point representation of real data. Communications in Statistics - Theory and Methods, 1991, 20, 2687-2695.	0.6	6
152	A stochastic roundoff error analysis for the fast Fourier transform. Mathematics of Computation, 1991, 56, 755-774.	1.1	22
153	Numerical aspects of some solution methods for large Sylvester-observer equations. , 0, , .		2
154	'blind' data calibration of intravascular ultrasound data for automated tissue characterization. , 0, , .		4
155	Modeling surface pH measurements of oocytes. Biomedical Physics and Engineering Express, 0, , .	0.6	1