

Matthias Joachim Ehrhardt

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1688209/publications.pdf>

Version: 2024-02-01

37
papers

807
citations

623734

14
h-index

526287

27
g-index

37
all docs

37
docs citations

37
times ranked

742
citing authors

#	ARTICLE	IF	CITATIONS
1	Joint reconstruction of PET-MRI by exploiting structural similarity. <i>Inverse Problems</i> , 2015, 31, 015001.	2.0	106
2	Multicontrast MRI Reconstruction with Structure-Guided Total Variation. <i>SIAM Journal on Imaging Sciences</i> , 2016, 9, 1084-1106.	2.2	90
3	PET Reconstruction With an Anatomical MRI Prior Using Parallel Level Sets. <i>IEEE Transactions on Medical Imaging</i> , 2016, 35, 2189-2199.	8.9	82
4	Stochastic Primal-Dual Hybrid Gradient Algorithm with Arbitrary Sampling and Imaging Applications. <i>SIAM Journal on Optimization</i> , 2018, 28, 2783-2808.	2.0	76
5	Vector-Valued Image Processing by Parallel Level Sets. <i>IEEE Transactions on Image Processing</i> , 2014, 23, 9-18.	9.8	66
6	Blind image fusion for hyperspectral imaging with the directional total variation. <i>Inverse Problems</i> , 2018, 34, 044003.	2.0	40
7	NiftyPET: a High-throughput Software Platform for High Quantitative Accuracy and Precision PET Imaging and Analysis. <i>Neuroinformatics</i> , 2018, 16, 95-115.	2.8	40
8	Learning the Sampling Pattern for MRI. <i>IEEE Transactions on Medical Imaging</i> , 2020, 39, 4310-4321.	8.9	37
9	SIRF: Synergistic Image Reconstruction Framework. <i>Computer Physics Communications</i> , 2020, 249, 107087.	7.5	35
10	Deep learning as optimal control problems: Models and numerical methods. <i>Journal of Computational Dynamics</i> , 2019, 6, 171-198.	1.1	29
11	Faster PET reconstruction with non-smooth priors by randomization and preconditioning. <i>Physics in Medicine and Biology</i> , 2019, 64, 225019.	3.0	24
12	Enhancing joint reconstruction and segmentation with non-convex Bregman iteration. <i>Inverse Problems</i> , 2019, 35, 055001.	2.0	17
13	Structure-preserving deep learning. <i>European Journal of Applied Mathematics</i> , 2021, 32, 888-936.	2.9	17
14	Incorporating structural prior information and sparsity into EIT using parallel level sets. <i>Inverse Problems and Imaging</i> , 2019, 13, 285-307.	1.1	16
15	Fast Quasi-Newton Algorithms for Penalized Reconstruction in Emission Tomography and Further Improvements via Preconditioning. <i>IEEE Transactions on Medical Imaging</i> , 2018, 37, 1000-1010.	8.9	14
16	Robust Image Reconstruction With Misaligned Structural Information. <i>IEEE Access</i> , 2020, 8, 222944-222955.	4.2	13
17	Inexact Derivative-Free Optimization for Bilevel Learning. <i>Journal of Mathematical Imaging and Vision</i> , 2021, 63, 580.	1.3	11
18	(An overview of) Synergistic reconstruction for multimodality/multichannel imaging methods. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200205.	3.4	10

#	ARTICLE	IF	CITATIONS
19	Accelerating variance-reduced stochastic gradient methods. <i>Mathematical Programming</i> , 2022, 191, 671-715.	2.4	9
20	Motion estimation and correction for simultaneous PET/MR using SIRF and CIL. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200208.	3.4	8
21	Enhancing the spatial resolution of hyperpolarized carbon-13 MRI of human brain metabolism using structure guidance. <i>Magnetic Resonance in Medicine</i> , 2022, 87, 1301-1312.	3.0	8
22	Evaluation of decomposition tools for sea floor pressure data. <i>Computers and Geosciences</i> , 2012, 45, 4-12.	4.2	6
23	Choose Your Path Wisely: Gradient Descent in a Bregman Distance Framework. <i>SIAM Journal on Imaging Sciences</i> , 2021, 14, 814-843.	2.2	6
24	Equivariant neural networks for inverse problems. <i>Inverse Problems</i> , 2021, 37, 085006.	2.0	6
25	Synergistic multi-spectral CT reconstruction with directional total variation. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021, 379, 20200198.	3.4	6
26	Faster PET reconstruction with a stochastic primal-dual hybrid gradient method. , 2017, , .		6
27	Performance evaluation of MAP algorithms with different penalties, object geometries and noise levels. , 2015, , .		5
28	Joint reconstruction of PET-MRI by parallel level sets. , 2014, , .		4
29	Preface to special issue on joint reconstruction and multi-modality/multi-spectral imaging. <i>Inverse Problems</i> , 2020, 36, 020302.	2.0	4
30	Multi-modality Imaging with Structure-Promoting Regularizers. , 2021, , 1-38.		4
31	A Geometric Integration Approach to Nonsmooth, Nonconvex Optimisation. <i>Foundations of Computational Mathematics</i> , 2022, 22, 1351-1394.	2.5	4
32	Robust Blind Image Fusion for Misaligned Hyperspectral Imaging Data. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800033.	0.2	3
33	Convergence Properties of a Randomized Primal-Dual Algorithm with Applications to Parallel MRI. <i>Lecture Notes in Computer Science</i> , 2021, , 254-266.	1.3	2
34	Deep learning as optimal control problems. <i>IFAC-PapersOnLine</i> , 2021, 54, 620-623.	0.9	2
35	Improving a Stochastic Algorithm for Regularized PET Image Reconstruction. , 2020, , .		1
36	Versatile regularisation toolkit for iterative image reconstruction with proximal splitting algorithms. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
37	Corrigendum to "Incorporating structural prior information and sparsity into EIT using parallel level sets". Inverse Problems and Imaging, 2020, 14, 399-399.	1.1	0