Matthias Joachim Ehrhardt

List of Publications by Year
in descending order

37	807	623734	526287
papers	citations	14	27
		h-index	g-index

37	37	37	742
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Accelerating variance-reduced stochastic gradient methods. Mathematical Programming, 2022, 191, 671-715.	2.4	9
2	A Geometric Integration Approach to Nonsmooth, Nonconvex Optimisation. Foundations of Computational Mathematics, 2022, 22, 1351-1394.	2.5	4
3	Enhancing the spatial resolution of hyperpolarized carbonâ€‘13 MRI of human brain metabolism using structure guidance. Magnetic Resonance in Medicine, 2022, 87, 1301-1312.	3.0	8
4	Choose Your Path Wisely: Gradient Descent in a Bregman Distance Framework. SIAM Journal on Imaging Sciences, 2021, 14, 814-843.	2.2	6
5	Convergence Properties of a Randomized Primal-Dual Algorithm with Applications to Parallel MRI. Lecture Notes in Computer Science, 2021, , 254-266.	1.3	2
6	Multi-modality Imaging with Structure-Promoting Regularizers. , 2021, , 1-38.		4
7	Inexact Derivative-Free Optimization for Bilevel Learning. Journal of Mathematical Imaging and Vision, 2021, 63, 580.	1.3	11
8	(An overview of) Synergistic reconstruction for multimodality/multichannel imaging methods. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200205.	3.4	10
9	Structure-preserving deep learning. European Journal of Applied Mathematics, 2021, 32, 888-936.	2.9	17
10	Equivariant neural networks for inverse problems. Inverse Problems, 2021, 37, 085006.	2.0	6
11	Motion estimation and correction for simultaneous PET/MR using SIRF and CIL. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200208.	3.4	8
12	Synergistic multi-spectral CT reconstruction with directional total variation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200198.	3.4	6
13	Deep learning as optimal control problems. IFAC-PapersOnLine, 2021, 54, 620-623.	0.9	2
14	SIRF: Synergistic Image Reconstruction Framework. Computer Physics Communications, 2020, 249, 107087.	7.5	35
15	Learning the Sampling Pattern for MRI. IEEE Transactions on Medical Imaging, 2020, 39, 4310-4321.	8.9	37
16	Robust Image Reconstruction With Misaligned Structural Information. IEEE Access, 2020, 8, 222944-222955.	4.2	13
17	Preface to special issue on joint reconstruction and multi-modality/multi-spectral imaging. Inverse Problems, 2020, 36, 020302.	2.0	4
18	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

#	Article	IF	Citations
19	Improving a Stochastic Algorithm for Regularized PET Image Reconstruction. , 2020, , .		1
20	Faster PET reconstruction with non-smooth priors by randomization and preconditioning. Physics in Medicine and Biology, 2019, 64, 225019.	3.0	24
21	Enhancing joint reconstruction and segmentation with non-convex Bregman iteration. Inverse Problems, 2019, 35, 055001.	2.0	17
22	Incorporating structural prior information and sparsity into EIT using parallel level sets. Inverse Problems and Imaging, 2019, 13, 285-307.	1.1	16
23	Deep learning as optimal control problems: Models and numerical methods. Journal of Computational Dynamics, 2019, 6, 171-198.	1.1	29
24	Versatile regularisation toolkit for iterative image reconstruction with proximal splitting algorithms. , 2019, , .		0
25	Fast Quasi-Newton Algorithms for Penalized Reconstruction in Emission Tomography and Further Improvements via Preconditioning. IEEE Transactions on Medical Imaging, 2018, 37, 1000-1010.	8.9	14
26	Blind image fusion for hyperspectral imaging with the directional total variation. Inverse Problems, 2018, 34, 044003.	2.0	40
27	NiftyPET: a High-throughput Software Platform for High Quantitative Accuracy and Precision PET Imaging and Analysis. Neuroinformatics, 2018, 16, 95-115.	2.8	40
28	Robust Blind Image Fusion for Misaligned Hyperspectral Imaging Data. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800033.	0.2	3
29	Stochastic Primal-Dual Hybrid Gradient Algorithm with Arbitrary Sampling and Imaging Applications. SIAM Journal on Optimization, 2018, 28, 2783-2808.	2.0	76
30	Faster PET reconstruction with a stochastic primal-dual hybrid gradient method. , 2017, , .		6
31	Multicontrast MRI Reconstruction with Structure-Guided Total Variation. SIAM Journal on Imaging Sciences, 2016, 9, 1084-1106.	2.2	90
32	PET Reconstruction With an Anatomical MRI Prior Using Parallel Level Sets. IEEE Transactions on Medical Imaging, 2016, 35, 2189-2199.	8.9	82
33	Performance evaluation of MAP algorithms with different penalties, object geometries and noise levels. , 2015, , .		5
34	Joint reconstruction of PET-MRI by exploiting structural similarity. Inverse Problems, 2015, 31, 015001.	2.0	106
35	Vector-Valued Image Processing by Parallel Level Sets. IEEE Transactions on Image Processing, 2014, 23, 9-18.	9.8	66
36	Joint reconstruction of PET-MRI by parallel level sets. , 2014, , .		4

#	Article	IF	Citations
37	Evaluation of decomposition tools for sea floor pressure data. Computers and Geosciences, 2012, 45, 4-12.	4.2	6