

# Carola-Bibiane Schnlieb

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/7228570/carola-bibiane-schonlieb-publications-by-citations.pdf>

**Version:** 2024-04-20

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

121  
papers

2,191  
citations

25  
h-index

44  
g-index

130  
ext. papers

3,035  
ext. citations

3.9  
avg, IF

5.77  
L-index

#	Paper	IF	Citations
121	Learning to Diversify Deep Belief Networks for Hyperspectral Image Classification. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , <b>2017</b> , 55, 3516-3530	8.1	201
120	Common pitfalls and recommendations for using machine learning to detect and prognosticate for COVID-19 using chest radiographs and CT scans. <i>Nature Machine Intelligence</i> , <b>2021</b> , 3, 199-217	22.5	200
119	Solving inverse problems using data-driven models. <i>Acta Numerica</i> , <b>2019</b> , 28, 1-174	15.1	173
118	A Combined First and Second Order Variational Approach for Image Reconstruction. <i>Journal of Mathematical Imaging and Vision</i> , <b>2014</b> , 48, 308-338	1.6	170
117	Cahn-Willard Inpainting and a Generalization for Grayvalue Images. <i>SIAM Journal on Imaging Sciences</i> , <b>2009</b> , 2, 1129-1167	1.9	93
116	Unconditionally stable schemes for higher order inpainting. <i>Communications in Mathematical Sciences</i> , <b>2011</b> , 9, 413-457	1	61
115	Variational Depth From Focus Reconstruction. <i>IEEE Transactions on Image Processing</i> , <b>2015</b> , 24, 5369-78	8.7	54
114	Image denoising: Learning the noise model via nonsmooth PDE-constrained optimization. <i>Inverse Problems and Imaging</i> , <b>2013</b> , 7, 1183-1214	2.1	51
113	Stochastic Primal-Dual Hybrid Gradient Algorithm with Arbitrary Sampling and Imaging Applications. <i>SIAM Journal on Optimization</i> , <b>2018</b> , 28, 2783-2808	2	50
112	Liquid phase blending of metal-organic frameworks. <i>Nature Communications</i> , <b>2018</b> , 9, 2135	17.4	49
111	Oriented diffusion filtering for enhancing low-quality fingerprint images. <i>IET Biometrics</i> , <b>2012</b> , 1, 105	2.9	49
110	Phase reconstruction from velocity-encoded MRI measurements--a survey of sparsity-promoting variational approaches. <i>Journal of Magnetic Resonance</i> , <b>2014</b> , 238, 26-43	3	45
109	Bilevel Parameter Learning for Higher-Order Total Variation Regularisation Models. <i>Journal of Mathematical Imaging and Vision</i> , <b>2017</b> , 57, 1-25	1.6	44
108	Imaging with Kantorovich--Rubinstein Discrepancy. <i>SIAM Journal on Imaging Sciences</i> , <b>2014</b> , 7, 2833-2859	1.9	43
107	Superpixel Contracted Graph-Based Learning for Hyperspectral Image Classification. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , <b>2020</b> , 58, 4180-4193	8.1	38
106	Partial Differential Equation Methods for Image Inpainting <b>2015</b> ,		38
105	Individual Tree Species Classification From Airborne Multisensor Imagery Using Robust PCA. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , <b>2016</b> , 9, 2554-2567	4.7	37

104	Subspace Correction Methods for Total Variation and $\ell_1$ -Minimization. <i>SIAM Journal on Numerical Analysis</i> , <b>2009</b> , 47, 3397-3428	2.4	36
103	Accurate Measurement of Tropical Forest Canopy Heights and Aboveground Carbon Using Structure From Motion. <i>Remote Sensing</i> , <b>2019</b> , 11, 928	5	33
102	A Variational Model for Joint Motion Estimation and Image Reconstruction. <i>SIAM Journal on Imaging Sciences</i> , <b>2018</b> , 11, 94-128	1.9	32
101	A convergent overlapping domain decomposition method for total variation minimization. <i>Numerische Mathematik</i> , <b>2010</b> , 116, 645-685	2.2	31
100	Infimal Convolution of Data Discrepancies for Mixed Noise Removal. <i>SIAM Journal on Imaging Sciences</i> , <b>2017</b> , 10, 1196-1233	1.9	29
99	Blind image fusion for hyperspectral imaging with the directional total variation. <i>Inverse Problems</i> , <b>2018</b> , 34, 044003	2.3	28
98	The structure of optimal parameters for image restoration problems. <i>Journal of Mathematical Analysis and Applications</i> , <b>2016</b> , 434, 464-500	1.1	25
97	A deep-learning pipeline for the diagnosis and discrimination of viral, non-viral and COVID-19 pneumonia from chest X-ray images. <i>Nature Biomedical Engineering</i> , <b>2021</b> , 5, 509-521	19	25
96	. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , <b>2020</b> , 58, 754-776	8.1	22
95	Directional sinogram inpainting for limited angle tomography. <i>Inverse Problems</i> , <b>2019</b> , 35, 024004	2.3	20
94	Infimal Convolution Regularisation Functionals of BV and [Formula: see text] Spaces: Part I: The Finite [Formula: see text] Case. <i>Journal of Mathematical Imaging and Vision</i> , <b>2016</b> , 55, 343-369	1.6	19
93	Unified Focal loss: Generalising Dice and cross entropy-based losses to handle class imbalanced medical image segmentation.. <i>Computerized Medical Imaging and Graphics</i> , <b>2021</b> , 95, 102026	7.6	18
92	Graph Clustering, Variational Image Segmentation Methods and Hough Transform Scale Detection for Object Measurement in Images. <i>Journal of Mathematical Imaging and Vision</i> , <b>2017</b> , 57, 269-291	1.6	16
91	Nonparametric Image Registration of Airborne LiDAR, Hyperspectral and Photographic Imagery of Wooded Landscapes. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , <b>2015</b> , 53, 6073-6084	8.1	15
90	Discrete gradient methods for solving variational image regularisation models. <i>Journal of Physics A: Mathematical and Theoretical</i> , <b>2017</b> , 50, 295201	2	15
89	Preconditioned ADMM with Nonlinear Operator Constraint. <i>IFIP Advances in Information and Communication Technology</i> , <b>2016</b> , 117-126	0.5	15
88	Focus U-Net: A novel dual attention-gated CNN for polyp segmentation during colonoscopy. <i>Computers in Biology and Medicine</i> , <b>2021</b> , 137, 104815	7	15
87	Wavelet Decomposition Method for $\ell_2/\ell_1$ -TV-Image Deblurring. <i>SIAM Journal on Imaging Sciences</i> , <b>2012</b> , 5, 857-885	1.9	14

86	Bregmanized Domain Decomposition for Image Restoration. <i>Journal of Scientific Computing</i> , <b>2013</b> , 54, 549-576	2.3	13
85	8. Bilevel approaches for learning of variational imaging models <b>2016</b> , 252-290		13
84	Enhancing joint reconstruction and segmentation with non-convex Bregman iteration. <i>Inverse Problems</i> , <b>2019</b> , 35, 055001	2.3	12
83	Faster PET reconstruction with non-smooth priors by randomization and preconditioning. <i>Physics in Medicine and Biology</i> , <b>2019</b> , 64, 225019	3.8	12
82	Deep learning as optimal control problems: Models and numerical methods. <i>Journal of Computational Dynamics</i> , <b>2019</b> , 6, 171-198	2.6	12
81	Linkage Between Piecewise Constant Mumford–Shah Model and Rudin–Osher–Fatemi Model and Its Virtue in Image Segmentation. <i>SIAM Journal of Scientific Computing</i> , <b>2019</b> , 41, B1310-B1340	2.6	12
80	Variational Image Regularization with Euler’s Elastica Using a Discrete Gradient Scheme. <i>SIAM Journal on Imaging Sciences</i> , <b>2018</b> , 11, 2665-2691	1.9	12
79	ADI splitting schemes for a fourth-order nonlinear partial differential equation from image processing. <i>Discrete and Continuous Dynamical Systems</i> , <b>2014</b> , 34, 931-957	2	11
78	Nonlinear Spectral Image Fusion. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 41-53	0.9	11
77	Learning the Sampling Pattern for MRI. <i>IEEE Transactions on Medical Imaging</i> , <b>2020</b> , 39, 4310-4321	11.7	11
76	On Learned Operator Correction in Inverse Problems. <i>SIAM Journal on Imaging Sciences</i> , <b>2021</b> , 14, 92-127	1.9	11
75	Inverse scale space decomposition. <i>Inverse Problems</i> , <b>2018</b> , 34, 045008	2.3	10
74	Artificial intelligence in clinical imaging: a health system approach. <i>Clinical Radiology</i> , <b>2020</b> , 75, 3-6	2.9	10
73	Unveiling the invisible: mathematical methods for restoring and interpreting illuminated manuscripts. <i>Heritage Science</i> , <b>2018</b> , 6, 56	2.5	10
72	Phase diagrams of liquid-phase mixing in multi-component metal-organic framework glasses constructed by quantitative elemental nano-tomography. <i>APL Materials</i> , <b>2019</b> , 7, 091111	5.7	9
71	Analysis and Application of a Nonlocal Hessian. <i>SIAM Journal on Imaging Sciences</i> , <b>2015</b> , 8, 2161-2202	1.9	9
70	Pattern formation of a nonlocal, anisotropic interaction model. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2018</b> , 28, 409-451	3.5	9
69	Radiological tumor classification across imaging modality and histology. <i>Nature Machine Intelligence</i> , <b>2021</b> , 3, 787-798	22.5	9

68	GraphXCOVID: Explainable deep graph diffusion pseudo-Labeling for identifying COVID-19 on chest X-rays. <i>Pattern Recognition</i> , <b>2022</b> , 122, 108274	7.7	9
67	Exploiting prior knowledge about biological macromolecules in cryo-EM structure determination. <i>IUCrJ</i> , <b>2021</b> , 8, 60-75	4.7	7
66	Decoding the Interdependence of Multiparametric Magnetic Resonance Imaging to Reveal Patient Subgroups Correlated with Survivals. <i>Neoplasia</i> , <b>2019</b> , 21, 442-449	6.4	6
65	Anisotropic osmosis filtering for shadow removal in images. <i>Inverse Problems</i> , <b>2019</b> , 35, 054001	2.3	6
64	Higher-Order Total Directional Variation: Imaging Applications. <i>SIAM Journal on Imaging Sciences</i> , <b>2020</b> , 13, 2063-2104	1.9	6
63	Mathematical imaging methods for mitosis analysis in live-cell phase contrast microscopy. <i>Methods</i> , <b>2017</b> , 115, 91-99	4.6	5
62	Optical flow analysis reveals that Kinesin-mediated advection impacts the orientation of microtubules in the oocyte. <i>Molecular Biology of the Cell</i> , <b>2020</b> , 31, 1246-1258	3.5	5
61	Mirror, Mirror, on the Wall, Who's Got the Clearest Image of Them All?-A Tailored Approach to Single Image Reflection Removal. <i>IEEE Transactions on Image Processing</i> , <b>2019</b> , 28, 6185-6197	8.7	5
60	Regularized Regression and Density Estimation based on Optimal Transport. <i>Applied Mathematics Research EXpress</i> , <b>2012</b> ,		5
59	Compressed sensing plus motion (CS+M): A new perspective for improving undersampled MR image reconstruction. <i>Medical Image Analysis</i> , <b>2021</b> , 68, 101933	15.4	5
58	Entropic Comparison of Atomic-Resolution Electron Tomography of Crystals and Amorphous Materials. <i>Physical Review Letters</i> , <b>2017</b> , 119, 166101	7.4	4
57	An anisotropic interaction model for simulating fingerprints. <i>Journal of Mathematical Biology</i> , <b>2019</b> , 78, 2171-2206	2	4
56	A multi-contrast MRI approach to thalamus segmentation. <i>Human Brain Mapping</i> , <b>2020</b> , 41, 2104-2120	5.9	4
55	Bregman Itôbe Methods for Sparse Optimisation. <i>Journal of Mathematical Imaging and Vision</i> , <b>2020</b> , 62, 842-857	1.6	4
54	Multi-tasking to Correct: Motion-Compensated MRI via Joint Reconstruction and Registration. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 263-274	0.9	4
53	Infimal Convolution Regularisation Functionals of $(\mathrm{BV})$ and $(\mathrm{L}^p)$ Spaces. The Case $(p=\infty)$ . <i>IFIP Advances in Information and Communication Technology</i> , <b>2016</b> , 169-179	0.5	4
52	Dynamic Sampling Schemes for Optimal Noise Learning Under Multiple Nonsmooth Constraints. <i>IFIP Advances in Information and Communication Technology</i> , <b>2014</b> , 85-95	0.5	4
51	Mechanisms Underlying Vascular Endothelial Growth Factor Receptor Inhibition-Induced Hypertension: The HYPАЗ Trial. <i>Hypertension</i> , <b>2021</b> , 77, 1591-1599	8.5	4

50	Structure-preserving deep learning. <i>European Journal of Applied Mathematics</i> , <b>2021</b> , 32, 888-936	1	4
49	Template-Based Image Reconstruction from Sparse Tomographic Data. <i>Applied Mathematics and Optimization</i> , <b>2020</b> , 82, 1081-1109	1.5	4
48	Semi-Supervised Superpixel-Based Multi-Feature Graph Learning for Hyperspectral Image Data. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , <b>2021</b> , 1-12	8.1	4
47	<b>2018</b> ,		4
46	Peekaboo-Where are the Objects? Structure Adjusting Superpixels <b>2018</b> ,		4
45	Variational Osmosis for Non-linear Image Fusion. <i>IEEE Transactions on Image Processing</i> , <b>2020</b> ,	8.7	3
44	Learning parametrised regularisation functions via quotient minimisation. <i>Proceedings in Applied Mathematics and Mechanics</i> , <b>2016</b> , 16, 933-936	0.2	3
43	Learning Filter Functions in Regularisers by Minimising Quotients. <i>Lecture Notes in Computer Science</i> , <b>2017</b> , 511-523	0.9	3
42	A Primal-Dual Approach for a Total Variation Wasserstein Flow. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 413-421	0.9	3
41	Scanning electron diffraction tomography of strain. <i>Inverse Problems</i> , <b>2021</b> , 37, 015003	2.3	3
40	A high-contrast fourth-order PDE from imaging: numerical solution by ADI splitting. <i>Contemporary Mathematics</i> , <b>2012</b> , 93-103	1.6	3
39	Accelerating variance-reduced stochastic gradient methods. <i>Mathematical Programming</i> , <b>2020</b> , 1	2.1	3
38	Stability Analysis of Line Patterns of an Anisotropic Interaction Model. <i>SIAM Journal on Applied Dynamical Systems</i> , <b>2019</b> , 18, 1798-1845	2.8	3
37	3D deformable registration of longitudinal abdominopelvic CT images using unsupervised deep learning. <i>Computer Methods and Programs in Biomedicine</i> , <b>2021</b> , 208, 106261	6.9	3
36	A Variational Model Dedicated to Joint Segmentation, Registration, and Atlas Generation for Shape Analysis. <i>SIAM Journal on Imaging Sciences</i> , <b>2020</b> , 13, 351-380	1.9	2
35	A DBN-crf for spectral-spatial classification of hyperspectral data <b>2016</b> ,		2
34	Introduction: Big data and partial differential equations $\square$ <i>European Journal of Applied Mathematics</i> , <b>2017</b> , 28, 877-885	1	2
33	Guidefill: GPU Accelerated, Artist Guided Geometric Inpainting for 3D Conversion of Film. <i>SIAM Journal on Imaging Sciences</i> , <b>2017</b> , 10, 2049-2090	1.9	2

32	AN OPTIMIZATION PROBLEM RELATED TO THE BEST SOBOLEV TRACE CONSTANT IN THIN DOMAINS. <i>Communications in Contemporary Mathematics</i> , <b>2008</b> , 10, 633-650	1.1	2
31	Joint Motion Estimation and Source Identification using Convective Regularisation with an Application to the Analysis of Laser Nanoablations		2
30	Variational regularisation for inverse problems with imperfect forward operators and general noise models. <i>Inverse Problems</i> , <b>2020</b> , 36, 125014	2.3	2
29	Optical flow analysis reveals that Kinesin-mediated advection impacts on the orientation of microtubules in the <i>Drosophila</i> oocyte		2
28	Anisotropic Third-Order Regularization for Sparse Digital Elevation Models. <i>Lecture Notes in Computer Science</i> , <b>2013</b> , 161-173	0.9	2
27	Equivariant neural networks for inverse problems. <i>Inverse Problems</i> , <b>2021</b> , 37, 085006	2.3	2
26	Rethinking medical image reconstruction via shape prior, going deeper and faster: Deep joint indirect registration and reconstruction. <i>Medical Image Analysis</i> , <b>2021</b> , 68, 101930	15.4	2
25	Joint Phase Reconstruction and Magnitude Segmentation from Velocity-Encoded MRI Data <b>2021</b> , 1-24		2
24	Improving Fast Iterative Shrinkage-Thresholding Algorithm—Faster, Smarter, and Greedier. <i>SIAM Journal of Scientific Computing</i> , <b>2022</b> , 44, A1069-A1091	2.6	2
23	Analysis of Artifacts in Shell-Based Image Inpainting: Why They Occur and How to Eliminate Them. <i>Foundations of Computational Mathematics</i> , <b>2020</b> , 20, 1549-1651	2.7	1
22	A Total Variation Based Regularizer Promoting Piecewise-Lipschitz Reconstructions. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 485-497	0.9	1
21	Mapping individual trees from airborne multi-sensor imagery <b>2015</b> ,		1
20	Random simulations for generative art construction—Some examples. <i>Journal of Mathematics and the Arts</i> , <b>2013</b> , 7, 29-39	0.3	1
19	Nonlocal higher order evolution equations. <i>Applicable Analysis</i> , <b>2010</b> , 89, 949-960	0.8	1
18	Exploiting prior knowledge about biological macromolecules in cryo-EM structure determination		1
17	Enhancing the spatial resolution of hyperpolarized carbon-13 MRI of human brain metabolism using structure guidance. <i>Magnetic Resonance in Medicine</i> , <b>2021</b> ,	4.4	1
16	Learning to Segment Microscopy Images with Lazy Labels. <i>Lecture Notes in Computer Science</i> , <b>2020</b> , 411-428	0.9	1
15	Learning optical flow for fast MRI reconstruction. <i>Inverse Problems</i> , <b>2021</b> , 37, 095007	2.3	1

14	Total Directional Variation for Video Denoising. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 522-534	0.9	o
13	A Stochastic Proximal Alternating Minimization for Nonsmooth and Nonconvex Optimization. <i>SIAM Journal on Imaging Sciences</i> , <b>2021</b> , 14, 1932-1970	1.9	o
12	GANReDL: Medical Image Enhancement Using a Generative Adversarial Network with Real-Order Derivative Induced Loss Functions. <i>Lecture Notes in Computer Science</i> , <b>2019</b> , 110-117	0.9	o
11	Variational multi-task MRI reconstruction: Joint reconstruction, registration and super-resolution. <i>Medical Image Analysis</i> , <b>2021</b> , 68, 101941	15.4	o
10	Choose Your Path Wisely: Gradient Descent in a Bregman Distance Framework. <i>SIAM Journal on Imaging Sciences</i> , <b>2021</b> , 14, 814-843	1.9	o
9	Adversarially Learned Iterative Reconstruction for Imaging Inverse Problems. <i>Lecture Notes in Computer Science</i> , <b>2021</b> , 540-552	0.9	o
8	Preface for Inverse Problems special issue on learning and inverse problems. <i>Inverse Problems</i> , <b>2017</b> , 33, 070301	2.3	
7	A generalization of Cahn-Hilliard inpainting for grayvalue images. <i>Proceedings in Applied Mathematics and Mechanics</i> , <b>2007</b> , 7, 1041905-1041906	0.2	
6	Cahn-Hilliard inpainting and the Willmore functional. <i>Proceedings in Applied Mathematics and Mechanics</i> , <b>2007</b> , 7, 1011209-1011210	0.2	
5	Estimation of the zero-pressure computational start shape of atherosclerotic plaques: Improving the backward displacement method with deformation gradient tensor.. <i>Journal of Biomechanics</i> , <b>2021</b> , 131, 110910	2.9	
4	Mini-Workshop: Deep Learning and Inverse Problems. <i>Oberwolfach Reports</i> , <b>2018</b> , 15, 559-589	o	
3	Equilibria of an anisotropic nonlocal interaction equation: Analysis and numerics. <i>Discrete and Continuous Dynamical Systems</i> , <b>2021</b> , 41, 3985	2	
2	Joint Motion Estimation and Source Identification Using Convective Regularisation with an Application to the Analysis of Laser Nanoablations <b>2021</b> , 191-227		
1	A Geometric Integration Approach to Nonsmooth, Nonconvex Optimisation. <i>Foundations of Computational Mathematics</i> , 1	2.7	