Erik Meijering

List of Publications by Year in Descending Order

69 papers	4,815 citations	25 h-index	69 g-index
87 ext. papers	6,079 ext. citations	8.4 avg, IF	6.04 L-index

#	Paper	IF	Citations
69	Deep Learning in Biological Image and Signal Processing [From the Guest Editors]. *IEEE Signal Processing Magazine*, **2022**, 39, 24-26	9.4	0
68	Deep-Learning Based Automated Neuron Reconstruction from 3D Microscopy Images Using Synthetic Training Images. *IEEE Transactions on Medical Imaging*, **2021**, PP,	11.7	1
67	Efficient 3D Junction Detection in Biomedical Images Based on a Circular Sampling Model and Reverse Mapping. *IEEE Journal of Biomedical and Health Informatics*, **2021**, 25, 1612-1623	7.2	1
66	Protein Phosphatase 2B Dual Function Facilitates Synaptic Integrity and Motor Learning. *Journal of Neuroscience*, **2021**, 41, 5579-5594	6.6	
65	Classifying Retinal Degeneration in Histological Sections Using Deep Learning. *Translational Vision Science and Technology*, **2021**, 10, 9	3.3	0
64	Spherical-Patches Extraction for Deep-Learning-Based Critical Points Detection in 3D Neuron Microscopy Images. *IEEE Transactions on Medical Imaging*, **2021**, 40, 527-538	11.7	5
63	3D Neuron Microscopy Image Segmentation via the Ray-Shooting Model and a DC-BLSTM Network. *IEEE Transactions on Medical Imaging*, **2021**, 40, 26-37	11.7	9
62	Estimation of three-dimensional chromatin morphology for nuclear classification and characterisation. *Scientific Reports*, **2021**, 11, 3364	4.9	1
61	Automatic Improvement of Deep Learning Based Cell Segmentation in Time-Lapse Microscopy by Neural Architecture Search. *Bioinformatics*, **2021**,	7.2	3
60	Deep learning methods for automatic segmentation of lower leg muscles and bones from MRI scans of children with and without cerebral palsy. *NMR in Biomedicine*, **2021**, 34, e4609	4.4	1
59	Concerted action of kinesins KIF5B and KIF13B promotes efficient secretory vesicle transport to microtubule plus ends. *ELife*, **2020**, 9,	8.9	15
58	Deep-learning method for data association in particle tracking. *Bioinformatics*, **2020**, 36, 4935-4941	7.2	9
57	A bird's-eye view of deep learning in bioimage analysis. *Computational and Structural Biotechnology Journal*, **2020**, 18, 2312-2325	6.8	41
56	Facilitating Data Association In Particle Tracking Using Autoencoding And Score Matching **2019**,		4
55	Bayesian Polytrees With Learned Deep Features for Multi-Class Cell Segmentation. *IEEE Transactions on Image Processing*, **2019**, 28, 3246-3260	8.7	11
54	Reverse genetic screen reveals that Il34 facilitates yolk sac macrophage distribution and seeding of the brain. *DMM Disease Models and Mechanisms*, **2019**, 12,	4.1	23
53	Particle Mobility Analysis Using Deep Learning and the Moment Scaling Spectrum. *Scientific Reports* , **2019**, 9, 17160	4.9	20

52	Automated Neuron Detection in High-Content Fluorescence Microscopy Images Using Machine Learning. *Neuroinformatics*, **2019**, 17, 253-269	3.2	7
51	Automated Neuron Reconstruction from 3D Fluorescence Microscopy Images Using Sequential Monte Carlo Estimation. *Neuroinformatics*, **2019**, 17, 423-442	3.2	9
50	3-D Quantification of Filopodia in Motile Cancer Cells. *IEEE Transactions on Medical Imaging*, **2019**, 38, 862-872	11.7	10
49	Segmentation of actin-stained 3D fluorescent cells with filopodial protrusions using convolutional neural networks **2018**,		8
48	Spotlight on Bioimaging and Signal Processing [In the Spotlight]. *IEEE Signal Processing Magazine*, **2018**, 35, 128-125	9.4	
47	Deep neural networks for data association in particle tracking **2018**,		11
46	Automated neuron tracing using probability hypothesis density filtering. *Bioinformatics*, **2017**, 33, 1073-1080	7.8	22
45	Automated Analysis of Intracellular Dynamic Processes. *Methods in Molecular Biology*, **2017**, 1563, 209-228	1.4	7
44	Automatic tracing of ultra-volumes of neuronal images. *Nature Methods*, **2017**, 14, 332-333	21.6	52
43	An objective comparison of cell-tracking algorithms. *Nature Methods*, **2017**, 14, 1141-1152	21.6	242
42	EB1 and EB3 regulate microtubule minus end organization and Golgi morphology. *Journal of Cell Biology*, **2017**, 216, 3179-3198	7.3	40
41	Neuron reconstruction from fluorescence microscopy images using sequential Monte Carlo estimation **2017**,		3
40	Automatic detection of neurons in high-content microscope images using machine learning approaches **2016**,		2
39	Fuzzy-Logic Based Detection and Characterization of Junctions and Terminations in Fluorescence Microscopy Images of Neurons. *Neuroinformatics*, **2016**, 14, 201-19	3.2	18
38	Imagining the future of bioimage analysis. *Nature Biotechnology*, **2016**, 34, 1250-1255	44.5	108
37	Quantitative comparison of multiframe data association techniques for particle tracking in time-lapse fluorescence microscopy. *Medical Image Analysis*, **2015**, 24, 163-189	15.4	24
36	BigNeuron: Large-Scale 3D Neuron Reconstruction from Optical Microscopy Images. *Neuron*, **2015**, 87, 252-6	13.9	147
35	Automated neuron morphology reconstruction using fuzzy-logic detection and Bayesian tracing algorithms **2015**,		10

34	Toward a Morphodynamic Model of the Cell: Signal processing for cell modeling. *IEEE Signal Processing Magazine*, **2015**, 32, 20-29	9.4	10
33	Multiple Sparse Representations Classification. *PLoS ONE*, **2015**, 10, e0131968	3.7	6
32	Quantitative imaging of focal adhesion dynamics and their regulation by HGF and Rap1 signaling. *Experimental Cell Research*, **2015**, 330, 382-397	4.2	8
31	Comprehensive single cell-resolution analysis of the role of chromatin regulators in early C. elegans embryogenesis. *Developmental Biology*, **2015**, 398, 153-62	3.1	21
30	Objective comparison of particle tracking methods. *Nature Methods*, **2014**, 11, 281-9	21.6	571
29	Three-dimensional inversion recovery manganese-enhanced MRI of mouse brain using super-resolution reconstruction to visualize nuclei involved in higher brain function. *NMR in Biomedicine*, **2014**, 27, 749-59	4.4	2
28	Fuzzy logic based detection of neuron bifurcations in microscopy images **2014**,		3
27	A benchmark for comparison of cell tracking algorithms. *Bioinformatics*, **2014**, 30, 1609-17	7.2	262
26	BRCA2 diffuses as oligomeric clusters with RAD51 and changes mobility after DNA damage in live cells. *Journal of Cell Biology*, **2014**, 207, 599-613	7.3	42
25	Extracellular matrix defects in aneurysmal Fibulin-4 mice predispose to lung emphysema. *PLoS ONE* , **2014**, 9, e106054	3.7	15
24	Interactive local super-resolution reconstruction of whole-body MRI mouse data: a pilot study with applications to bone and kidney metastases. *PLoS ONE*, **2014**, 9, e108730	3.7	2
23	End-binding proteins sensitize microtubules to the action of microtubule-targeting agents. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 8900-5	11.5	76
22	Reversible jump MCMC methods for fully automatic motion analysis in tagged MRI. *Medical Image Analysis*, **2012**, 16, 301-24	15.4	18
21	Methods for cell and particle tracking. *Methods in Enzymology*, **2012**, 504, 183-200	1.7	893
20	Cell Segmentation: 50 Years Down the Road [Life Sciences]. *IEEE Signal Processing Magazine*, **2012**, 29, 140-145	9.4	299
19	Super-resolution methods in MRI: can they improve the trade-off between resolution, signal-to-noise ratio, and acquisition time?. *Magnetic Resonance in Medicine*, **2012**, 68, 1983-93	4.4	116
18	Rab6, Rab8, and MICAL3 cooperate in controlling docking and fusion of exocytotic carriers. *Current Biology*, **2011**, 21, 967-74	6.3	132
17	ATP-dependent and independent functions of Rad54 in genome maintenance. *Journal of Cell Biology*, **2011**, 192, 735-50	7.3	59

16	Particle filtering methods for motion analysis in tagged MRI **2010**,		5
15	Microtubule dynamics analysis using kymographs and variable-rate particle filters. *IEEE Transactions on Image Processing*, **2010**, 19, 1861-76	8.7	21
14	Quantitative comparison of spot detection methods in fluorescence microscopy. *IEEE Transactions on Medical Imaging*, **2010**, 29, 282-301	11.7	174
13	Advanced level-set-based cell tracking in time-lapse fluorescence microscopy. *IEEE Transactions on Medical Imaging*, **2010**, 29, 852-67	11.7	188
12	History-dependent catastrophes regulate axonal microtubule behavior. *Current Biology*, **2010**, 20, 1023-8	6.3	51
11	In vitro reconstitution of the functional interplay between MCAK and EB3 at microtubule plus ends. *Current Biology*, **2010**, 20, 1717-22	6.3	109
10	Neuron tracing in perspective. *Cytometry Part A: the Journal of the International Society for Analytical Cytology*, **2010**, 77, 693-704	4.6	264
9	Tracking in cell and developmental biology. *Seminars in Cell and Developmental Biology*, **2009**, 20, 894-902	7.5	169
8	Particle filtering for multiple object tracking in dynamic fluorescence microscopy images: application to microtubule growth analysis. *IEEE Transactions on Medical Imaging*, **2008**, 27, 789-804	11.7	126
7	Evaluation of an improved technique for lumen path definition and lumen segmentation of atherosclerotic vessels in CT angiography. *European Radiology*, **2007**, 17, 1738-45	8	9
6	In vivo characterization and quantification of atherosclerotic carotid plaque components with multidetector computed tomography and histopathological correlation. *Arteriosclerosis, Thrombosis, and Vascular Biology*, **2006**, 26, 2366-72	9.4	149
5	Particle Filtering for Multiple Object Tracking in Molecular Cell Biology **2006**,		6
4	Evaluation of an improved technique for automated center lumen line definition in cardiovascular image data. *European Radiology*, **2006**, 16, 391-8	8	4
3	A note on cubic convolution interpolation. *IEEE Transactions on Image Processing*, **2003**, 12, 477-9	8.7	56
2	Diffusion-enhanced visualization and quantification of vascular anomalies in three-dimensional rotational angiography: results of an in-vitro evaluation. *Medical Image Analysis*, **2002**, 6, 215-33	15.4	13
1	Concerted action of kinesins KIF5B and KIF13B promotes efficient secretory vesicle transport to microtubule plus ends		1