Carolina WÃ¤hlby

List of Publications by Year
in descending order

94 papers	3,917 citations	257450 24 h-index	144013 57 g-index
106 all docs	106 docs citations	106 times ranked	6600 citing authors

#	Article	IF	Citations
1	In situ sequencing for RNA analysis in preserved tissue and cells. Nature Methods, 2013, 10, 857-860.	19.0	650
2	Artificial intelligence for diagnosis and grading of prostate cancer in biopsies: a population-based, diagnostic study. Lancet Oncology, The, 2020, 21, 222-232.	10.7	364
3	Combining intensity, edge and shape information for 2D and 3D segmentation of cell nuclei in tissue sections. Journal of Microscopy, 2004, 215, 67-76.	1.8	293
4	In Situ Detection of Phosphorylated Platelet-derived Growth Factor Receptor Î² Using a Generalized Proximity Ligation Method. Molecular and Cellular Proteomics, 2007, 6, 1500-1509.	3.8	197
5	Pseudomonas aeruginosa Disrupts Caenorhabditis elegans Iron Homeostasis, Causing a Hypoxic Response and Death. Cell Host and Microbe, 2013, 13, 406-416.	11.0	178
6	An image analysis toolbox for high-throughput C. elegans assays. Nature Methods, 2012, 9, 714-716.	19.0	154
7	Deep Learning in Image Cytometry: A Review. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2019, 95, 366-380.	1.5	145
8	Algorithms for Cytoplasm Segmentation of Fluorescence Labelled Cells. Analytical Cellular Pathology, 2002, 24, 101-111.	2.1	129
9	A comprehensive structural, biochemical and biological profiling of the human NUDIX hydrolase family. Nature Communications, 2017, 8, 1541.	12.8	124
10	BlobFinder, a tool for fluorescence microscopy image cytometry. Computer Methods and Programs in Biomedicine, 2009, 94, 58-65.	4.7	116
11	Fully automated cellular-resolution vertebrate screening platform with parallel animal processing. Lab on A Chip, 2012, 12, 711-716.	6.0	107
12	Automated Training of Deep Convolutional Neural Networks for Cell Segmentation. Scientific Reports, 2017, 7, 7860.	3.3	103
13	High-throughput hyperdimensional vertebrate phenotyping. Nature Communications, 2013, 4, 1467.	12.8	85
14	Sequential immunofluorescence staining and image analysis for detection of large numbers of antigens in individual cell nuclei. Cytometry, 2002, 47, 32-41.	1.8	75
15	Blind Color Decomposition of Histological Images. IEEE Transactions on Medical Imaging, 2013, 32, 983-994.	8.9	75
16	Image analysis for automatic segmentation of cytoplasms and classification of Rac1 activation. , 2004, 57A, 22-33.		65
17	High- and low-throughput scoring of fat mass and body fat distribution in C. elegans. Methods, 2014, 68, 492-499.	3.8	54
18	Automated analysis of dynamic behavior of single cells in picoliter droplets. Lab on A Chip, 2014, 14, 931.	6.0	52

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19	Increasing the dynamic range of in situ PLA. Nature Methods, 2011, 8, 892-893.	19.0	47
20	Bright-Field Microscopy Visualization of Proteins and Protein Complexes by In Situ Proximity Ligation with Peroxidase Detection. Clinical Chemistry, 2010, 56, 99-110.	3.2	34
21	Multiplexed fluorescence microscopy reveals heterogeneity among stromal cells in mouse bone marrow sections. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2018, 93, 876-888.	1.5	32
22	Visualising individual sequence-specific proteinâ€“DNA interactions in situ. New Biotechnology, 2012, 29, 589-598.	4.4	30
23	Spage2vec: Unsupervised representation of localized spatial gene expression signatures. FEBS Journal, 2021, 288, 1859-1870.	4.7	30
24	TissUUmaps: interactive visualization of large-scale spatial gene expression and tissue morphology data. Bioinformatics, 2020, 36, 4363-4365.	4.1	30
25	Sequential immunofluorescence staining and image analysis for detection of large numbers of antigens in individual cell nuclei. Cytometry, 2002, 47, 32-41.	1.8	30
26	Segmentation and Track-Analysis in Time-Lapse Imaging of Bacteria. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 174-184.	10.8	29
27	Deep Fish. SLAS Discovery, 2017, 22, 102-107.	2.7	29
28	Resolving clustered worms via probabilistic shape models. , 2010, 2010, 552-555.		28
29	Compaction of rolling circle amplification products increases signal integrity and signal-to-noise ratio. Scientific Reports, 2015, 5, 12317.	3.3	27
30	Deep Convolutional Neural Networks for Detecting Cellular Changes Due to Malignancy. , 2017, , .		25
31	Seeded Watersheds for Combined Segmentation and Tracking of Cells. Lecture Notes in Computer Science, 2005, , 336-343.	1.3	24
32	Automated classification of immunostaining patterns in breast tissue from the human protein atlas. Journal of Pathology Informatics, 2013, 4, 14.	1.7	24
33	A single molecule array for digital targeted molecular analyses. Nucleic Acids Research, 2009, 37, e7-e7.	14.5	22
34	Non-Random mtDNA Segregation Patterns Indicate a Metastable Heteroplasmic Segregation Unit in m.3243A>G Cybrid Cells. PLoS ONE, 2012, 7, e52080.	2.5	21
35	Abnormal expression pattern of cyclin E in tumour cells. International Journal of Cancer, 2003, 104, 369-375.	5.1	20
36	Introducing Hann windows for reducing edge-effects in patch-based image segmentation. PLoS ONE, 2020, 15, e0229839.	2.5	20

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37	ImageJ and CellProfiler: Complements in Openâ€Source Bioimage Analysis. Current Protocols, 2021, 1, e89.	2.9	20
38	Impact of Q-Griffithsin anti-HIV microbicide gel in non-human primates: In situ analyses of epithelial and immune cell markers in rectal mucosa. Scientific Reports, 2019, 9, 18120.	3.3	19
39	Quantification of colocalization and crossâ€talk based on spectral angles. Journal of Microscopy, 2009, 234, 311-324.	1.8	18
40	Fast adaptive local thresholding based on ellipse fit. , 2016, , .		18
41	Regular Use of Depot Medroxyprogesterone Acetate Causes Thinning of the Superficial Lining and Apical Distribution of Human Immunodeficiency Virus Target Cells in the Human Ectocervix. Journal of Infectious Diseases, 2022, 225, 1151-1161.	4.0	18
42	Deep Learning With Conformal Prediction for Hierarchical Analysis of Large-Scale Whole-Slide Tissue Images. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 371-380.	6.3	18
43	Deep-learning models for lipid nanoparticle-based drug delivery. Nanomedicine, 2021, 16, 1097-1110.	3.3	18
44	Artificial Intelligence for Diagnosis and Gleason Grading of Prostate Cancer in Biopsiesâ€"Current Status and Next Steps. European Urology Focus, 2021, 7, 687-691.	3.1	18
45	Next-Generation Pathologyâ€"Surveillance of Tumor Microecology. Journal of Molecular Biology, 2015, 427, 2013-2022.	4.2	17
46	Genes in human obesity loci are causal obesity genes in C. elegans. PLoS Genetics, 2021, 17, e1009736.	3.5	17
47	Automated identification of the mouse brainâ€™s spatial compartments from in situ sequencing data. BMC Biology, 2020, 18, 144.	3.8	16
48	Human Immunodeficiency Virus-Infected Women Have High Numbers of CD103â^'CD8+ T Cells Residing Close to the Basal Membrane of the Ectocervical Epithelium. Journal of Infectious Diseases, 2018, 218, 453-465.	4.0	15
49	Morphological Features Extracted by AI Associated with Spatial Transcriptomics in Prostate Cancer. Cancers, 2021, 13, 4837.	3.7	15
50	Morphology-Guided Graph Search for Untangling Objects: C. elegans Analysis. Lecture Notes in Computer Science, 2010, 13, 634-641.	1.3	15
51	Single-cell A3243G Mitochondrial DNA Mutation Load Assays for Segregation Analysis. Journal of Histochemistry and Cytochemistry, 2007, 55, 1159-1166.	2.5	13
52	A detailed analysis of 3D subcellular signal localization. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2009, 75A, 319-328.	1.5	13
53	Global grayâ€level thresholding based on object size. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2016, 89, 385-390.	1.5	11
54	Feature Augmented Deep Neural Networks for Segmentation of Cells. Lecture Notes in Computer Science, 2016, , 231-243.	1.3	11

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55	Spheroid Segmentation Using Multiscale Deep Adversarial Networks. , 2017, , .		11
56	Quantitative image analysis of protein expression and colocalisation in skin sections. Experimental Dermatology, 2018, 27, 196-199.	2.9	9
57	Segmentation of Cell Nuclei in Tissue by Combining Seeded Watersheds with Gradient Information. Lecture Notes in Computer Science, 2003, , 408-414.	1.3	9
58	Quantitative highâ€content/highâ€throughput microscopy analysis of lipid droplets in subjectâ€specific adipogenesis models. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2017, 91, 1068-1077.	1.5	8
59	Machine learning for cell classification and neighborhood analysis in glioma tissue. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2021, 99, 1176-1186.	1.5	8
60	PopulationProfiler: A Tool for Population Analysis and Visualization of Image-Based Cell Screening Data. PLoS ONE, 2016, 11, e0151554.	2.5	8
61	Whole Slide Image Registration for the Study of Tumor Heterogeneity. Lecture Notes in Computer Science, 2018, , 95-102.	1.3	7
62	Spatial Statistics for Understanding Tissue Organization. Frontiers in Physiology, 2022, 13, 832417.	2.8	7
63	Automated quantification of Zebrafish tail deformation for high-throughput drug screening. , 2013, , 902-905.		5
64	Towards Automatic Protein Co-Expression Quantification in Immunohistochemical TMA Slides. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 393-402.	6.3	5
65	Image Based Measurements of Single Cell mtDNA Mutation Load. Lecture Notes in Computer Science, 2007, , 631-640.	1.3	5
66	Robust signal detection in 3D fluorescence microscopy. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2010, 77A, 86-96.	1.5	4
67	Automated classification of multicolored rolling circle products in dualâ€channel wideâ€field fluorescence microscopy. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2011, 79A, 518-527.	1.5	4
68	Bridging Histology and Bioinformaticsâ€"Computational Analysis of Spatially Resolved Transcriptomics. Proceedings of the IEEE, 2016, , 1-12.	21.3	4
69	A short feature vector for image matching: The Log-Polar Magnitude feature descriptor. PLoS ONE, 2017, 12, e0188496.	2.5	4
70	Comparison of Flow Cytometry and Image-Based Screening for Cell Cycle Analysis. Lecture Notes in Computer Science, 2016, , 623-630.	1.3	4
71	The quest for multiplexed spatially resolved transcriptional profiling. Nature Methods, 2016, 13, 623-624.	19.0	3
72	Differential Neuroprotective Effects of Interleukin-1 Receptor Antagonist on Spinal Cord Neurons after Excitotoxic Injury. NeuroImmunoModulation, 2017, 24, 220-230.	1.8	3

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73	TEM image restoration from fast image streams. PLoS ONE, 2021, 16, e0246336.	2.5	3
74	Image based in situ sequencing for RNA analysis in tissue. , 2014, , .		2
75	In Silico Prediction of Cell Traction Forces. , 2020, , .		2
76	Rapid development of cloud-native intelligent data pipelines for scientific data streams using the HASTE Toolkit. GigaScience, 2021, 10, .	6.4	2
77	Image Segmentation, Processing and Analysis in Microscopy and Life Science. , 2015, , 1-16.		1
78	Objective automated quantification of fluorescence signal in histological sections of rat lens. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2017, 91, 815-821.	1.5	1
79	Graph-based image decoding for multiplexed in situ RNA detection. , 2021, , .		1
80	Decoding Gene Expression in 2D and 3D. Lecture Notes in Computer Science, 2017, , 257-268.	1.3	1
81	Transcriptome-Supervised Classification of Tissue Morphology Using Deep Learning. , 2020, , .		1
82	Automated detection of vascular remodeling in tumorâ€draining lymph nodes by the deep learning tool <scp>HEV</scp> â€finder. Journal of Pathology, 0, , .	4.5	1
83	Finding cells, finding molecules, finding patterns. International Journal of Signal and Imaging Systems Engineering, 2008, 1, 11.	0.6	0
84	An Evaluation of the Faster STORM Method for Super-resolution Microscopy. , 2014, , .		0
85	Image-Based Detection of Patient-Specific Drug-Induced Cell-Cycle Effects in Glioblastoma. SLAS Discovery, 2018, 23, 1030-1039.	2.7	0
86	Weakly-Supervised Prediction of Cell Migration Modes in Confocal Microscopy Images Using Bayesian Deep Learning. , 2020, , .		0
87	Easy-to-Use Object Selection by Color Space Projections and Watershed Segmentation. Lecture Notes in Computer Science, 2005, , 269-276.	1.3	0
88	Abstract 441: Zebrafish Larvae as a Model System for High-throughput, Image-based Genetic Screens in Dyslipidemia and Atherosclerosis. Arteriosclerosis, Thrombosis, and Vascular Biology, 2018, 38, .	2.4	0
89	Introducing Hann windows for reducing edge-effects in patch-based image segmentation. , 2020, 15, e0229839.		0
90	Introducing Hann windows for reducing edge-effects in patch-based image segmentation. , 2020, 15, e0229839.		0

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91	Introducing Hann windows for reducing edge-effects in patch-based image segmentation. , 2020, 15, e0229839.		0
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93	Introducing Hann windows for reducing edge-effects in patch-based image segmentation. , 2020, 15, e0229839.		0
94	Introducing Hann windows for reducing edge-effects in patch-based image segmentation. , 2020, 15, e0229839.		0