

Pavel Tomancak

List of Publications by Year in descending order

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101
papers

63,925
citations

36203

51
h-index

37111

96
g-index

125
all docs

125
docs citations

125
times ranked

99677
citing authors

#	ARTICLE	IF	CITATIONS
1	Fiji: an open-source platform for biological-image analysis. <i>Nature Methods</i> , 2012, 9, 676-682.	9.0	47,818
2	Globally optimal stitching of tiled 3D microscopic image acquisitions. <i>Bioinformatics</i> , 2009, 25, 1463-1465.	1.8	1,970
3	Global Analysis of mRNA Localization Reveals a Prominent Role in Organizing Cellular Architecture and Function. <i>Cell</i> , 2007, 131, 174-187.	13.5	878
4	RNA buffers the phase separation behavior of prion-like RNA binding proteins. <i>Science</i> , 2018, 360, 918-921.	6.0	837
5	TrakEM2 Software for Neural Circuit Reconstruction. <i>PLoS ONE</i> , 2012, 7, e38011.	1.1	832
6	Content-aware image restoration: pushing the limits of fluorescence microscopy. <i>Nature Methods</i> , 2018, 15, 1090-1097.	9.0	758
7	Computational identification of <i>Drosophila</i> microRNA genes. <i>Genome Biology</i> , 2003, 4, R42.	13.9	624
8	Systematic determination of patterns of gene expression during <i>Drosophila</i> embryogenesis. <i>Genome Biology</i> , 2002, 3, research0088.1.	13.9	600
9	Exploiting transcription factor binding site clustering to identify cis-regulatory modules involved in pattern formation in the <i>Drosophila</i> genome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 757-762.	3.3	541
10	Biological imaging software tools. <i>Nature Methods</i> , 2012, 9, 697-710.	9.0	462
11	An objective comparison of cell-tracking algorithms. <i>Nature Methods</i> , 2017, 14, 1141-1152.	9.0	399
12	Global analysis of patterns of gene expression during <i>Drosophila</i> embryogenesis. <i>Genome Biology</i> , 2007, 8, R145.	13.9	387
13	Gene expression divergence recapitulates the developmental hourglass model. <i>Nature</i> , 2010, 468, 811-814.	13.7	364
14	Software for bead-based registration of selective plane illumination microscopy data. <i>Nature Methods</i> , 2010, 7, 418-419.	9.0	354
15	Tissue clearing and its applications in neuroscience. <i>Nature Reviews Neuroscience</i> , 2020, 21, 61-79.	4.9	350
16	Assessing phototoxicity in live fluorescence imaging. <i>Nature Methods</i> , 2017, 14, 657-661.	9.0	346
17	CATMAID: collaborative annotation toolkit for massive amounts of image data. <i>Bioinformatics</i> , 2009, 25, 1984-1986.	1.8	333
18	A genome-wide resource for the analysis of protein localisation in <i>Drosophila</i> . <i>ELife</i> , 2016, 5, e12068.	2.8	315

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19	OpenSPIM: an open-access light-sheet microscopy platform. <i>Nature Methods</i> , 2013, 10, 598-599.	9.0	312
20	An Integrated Micro- and Macroarchitectural Analysis of the <i>Drosophila</i> Brain by Computer-Assisted Serial Section Electron Microscopy. <i>PLoS Biology</i> , 2010, 8, e1000502.	2.6	308
21	Elastic volume reconstruction from series of ultra-thin microscopy sections. <i>Nature Methods</i> , 2012, 9, 717-720.	9.0	265
22	BigDataViewer: visualization and processing for large image data sets. <i>Nature Methods</i> , 2015, 12, 481-483.	9.0	256
23	<i>Drosophila</i> microRNAs exhibit diverse spatial expression patterns during embryonic development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005, 102, 18017-18022.	3.3	252
24	Efficient Bayesian-based multiview deconvolution. <i>Nature Methods</i> , 2014, 11, 645-648.	9.0	232
25	Visualization of image data from cells to organisms. <i>Nature Methods</i> , 2010, 7, S26-S41.	9.0	226
26	Abundant Occurrence of Basal Radial Glia in the Subventricular Zone of Embryonic Neocortex of a Lissencephalic Primate, the Common Marmoset <i>Callithrix jacchus</i> . <i>Cerebral Cortex</i> , 2012, 22, 469-481.	1.6	201
27	Guide to light-sheet microscopy for adventurous biologists. <i>Nature Methods</i> , 2015, 12, 30-34.	9.0	191
28	The Earliest Transcribed Zygotic Genes Are Short, Newly Evolved, and Different across Species. <i>Cell Reports</i> , 2014, 6, 285-292.	2.9	179
29	Oocyte polarity depends on regulation of <i>gurken</i> by <i>Vasa</i> . <i>Development (Cambridge)</i> , 1998, 125, 1723-1732.	1.2	167
30	Endogenously Tagged Rab Proteins: A Resource to Study Membrane Trafficking in <i>Drosophila</i> . <i>Developmental Cell</i> , 2015, 33, 351-365.	3.1	159
31	A <i>Drosophila melanogaster</i> homologue of <i>Caenorhabditis elegans</i> <i>par-1</i> acts at an early step in embryonic-axis formation. <i>Nature Cell Biology</i> , 2000, 2, 458-460.	4.6	157
32	An Adaptive Threshold in Mammalian Neocortical Evolution. <i>PLoS Biology</i> , 2014, 12, e1002000.	2.6	139
33	Multi-view light-sheet imaging and tracking with the MaMuT software reveals the cell lineage of a direct developing arthropod limb. <i>eLife</i> , 2018, 7, .	2.8	134
34	ImgLib2—generic image processing in Java. <i>Bioinformatics</i> , 2012, 28, 3009-3011.	1.8	132
35	As-rigid-as-possible mosaicking and serial section registration of large ssTEM datasets. <i>Bioinformatics</i> , 2010, 26, i57-i63.	1.8	124
36	Systematic imaging reveals features and changing localization of mRNAs in <i>Drosophila</i> development. <i>eLife</i> , 2015, 4, .	2.8	123

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37	CLIJ: GPU-accelerated image processing for everyone. <i>Nature Methods</i> , 2020, 17, 5-6.	9.0	122
38	linkcomm: an R package for the generation, visualization, and analysis of link communities in networks of arbitrary size and type. <i>Bioinformatics</i> , 2011, 27, 2011-2012.	1.8	121
39	A toolkit for high-throughput, cross-species gene engineering in <i>Drosophila</i> . <i>Nature Methods</i> , 2009, 6, 435-437.	9.0	110
40	Multiscale imaging of plant development by light-sheet fluorescence microscopy. <i>Nature Plants</i> , 2018, 4, 639-650.	4.7	109
41	The evolution of early animal embryos: conservation or divergence?. <i>Trends in Ecology and Evolution</i> , 2012, 27, 385-393.	4.2	106
42	The <scp>ImageJ</scp> ecosystem: Open-source software for image visualization, processing, and analysis. <i>Protein Science</i> , 2021, 30, 234-249.	3.1	102
43	Attachment of the blastoderm to the vitelline envelope affects gastrulation of insects. <i>Nature</i> , 2019, 568, 395-399.	13.7	95
44	Motif composition, conservation and condition-specificity of single and alternative transcription start sites in the <i>Drosophila</i> genome. <i>Genome Biology</i> , 2009, 10, R73.	13.9	86
45	LABKIT: Labeling and Segmentation Toolkit for Big Image Data. <i>Frontiers in Computer Science</i> , 2022, 4, .	1.7	85
46	Mutations in DONSON disrupt replication fork stability and cause microcephalic dwarfism. <i>Nature Genetics</i> , 2017, 49, 537-549.	9.4	81
47	Surface tension determines tissue shape and growth kinetics. <i>Science Advances</i> , 2019, 5, eaav9394.	4.7	80
48	Introns and gene expression: Cellular constraints, transcriptional regulation, and evolutionary consequences. <i>BioEssays</i> , 2015, 37, 148-154.	1.2	77
49	Oocyte polarity depends on regulation of gurken by Vasa. <i>Development (Cambridge)</i> , 1998, 125, 1723-32.	1.2	67
50	Current challenges in open-source bioimage informatics. <i>Nature Methods</i> , 2012, 9, 661-665.	9.0	61
51	Regionalized tissue fluidization is required for epithelial gap closure during insect gastrulation. <i>Nature Communications</i> , 2020, 11, 5604.	5.8	53
52	Iron-regulatory protein-1 (IRP-1) is highly conserved in two invertebrate species. Characterization of IRP-1 homologues in <i>Drosophila melanogaster</i> and <i>Caenorhabditis elegans</i> . <i>FEBS Journal</i> , 1998, 254, 230-237.	0.2	51
53	Imaging plant germline differentiation within <i>Arabidopsis</i> flowers by light sheet microscopy. <i>ELife</i> , 2020, 9, .	2.8	48
54	Imaging Flies by Fluorescence Microscopy: Principles, Technologies, and Applications. <i>Genetics</i> , 2019, 211, 15-34.	1.2	45

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55	Using Light Sheet Fluorescence Microscopy to Image Zebrafish Eye Development. <i>Journal of Visualized Experiments</i> , 2016, , e53966.	0.2	40
56	The ancestral retinoic acid receptor was a low-affinity sensor triggering neuronal differentiation. <i>Science Advances</i> , 2018, 4, eaao1261.	4.7	37
57	An Excess of Gene Expression Divergence on the X Chromosome in <i>Drosophila</i> Embryos: Implications for the Faster-X Hypothesis. <i>PLoS Genetics</i> , 2012, 8, e1003200.	1.5	34
58	In Vivo RNAi Rescue in <i>Drosophila melanogaster</i> with Genomic Transgenes from <i>Drosophila pseudoobscura</i> . <i>PLoS ONE</i> , 2010, 5, e8928.	1.1	34
59	An automated workflow for parallel processing of large multiview SPIM recordings. <i>Bioinformatics</i> , 2016, 32, 1112-1114.	1.8	33
60	Small molecule screen in embryonic zebrafish using modular variations to target segmentation. <i>Nature Communications</i> , 2017, 8, 1901.	5.8	29
61	Light-sheet microscopy for everyone? Experience of building an OpenSPIM to study flatworm development. <i>BMC Developmental Biology</i> , 2016, 16, 22.	2.1	28
62	Control of Hox transcription factor concentration and cell-to-cell variability by an auto-regulatory switch. <i>Development (Cambridge)</i> , 2019, 146, .	1.2	23
63	Bioimage Informatics in the context of <i>Drosophila</i> research. <i>Methods</i> , 2014, 68, 60-73.	1.9	22
64	Selective maintenance of <i>Drosophila</i> tandemly arranged duplicated genes during evolution. <i>Genome Biology</i> , 2008, 9, R176.	13.9	20
65	An alignment-free method to identify candidate orthologous enhancers in multiple <i>Drosophila</i> genomes. <i>Bioinformatics</i> , 2010, 26, 2109-2115.	1.8	20
66	Open-source solutions for SPIMage processing. <i>Methods in Cell Biology</i> , 2014, 123, 505-529.	0.5	20
67	Sample Preparation and Mounting of <i>Drosophila</i> Embryos for Multiview Light Sheet Microscopy. <i>Methods in Molecular Biology</i> , 2016, 1478, 189-202.	0.4	18
68	Mapping the gene expression universe. <i>Current Opinion in Genetics and Development</i> , 2008, 18, 506-512.	1.5	17
69	A role for tuned levels of nucleosome remodeler subunit ACF1 during <i>Drosophila</i> oogenesis. <i>Developmental Biology</i> , 2016, 411, 217-230.	0.9	16
70	Probing the kinetic landscape of Hox transcription factorâ€œDNA binding in live cells by massively parallel Fluorescence Correlation Spectroscopy. <i>Mechanisms of Development</i> , 2015, 138, 218-225.	1.7	15
71	The apical protein Apnoia interacts with Crumbs to regulate tracheal growth and inflation. <i>PLoS Genetics</i> , 2019, 15, e1007852.	1.5	15
72	Comment on â€œCortical folding scales universally with surface area and thickness, not number of neuronsâ€œ. <i>Science</i> , 2016, 351, 825-825.	6.0	14

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73	Ordered patterning of the sensory system is susceptible to stochastic features of gene expression. <i>ELife</i> , 2020, 9, .	2.8	14
74	Recombination-Mediated Genetic Engineering of Large Genomic DNA Transgenes. <i>Methods in Molecular Biology</i> , 2012, 772, 445-458.	0.4	13
75	Ectopic expression of S28A-mutated Histone H3 modulates longevity, stress resistance and cardiac function in <i>Drosophila</i> . <i>Scientific Reports</i> , 2018, 8, 2940.	1.6	13
76	Yorkie controls tube length and apical barrier integrity during airway development. <i>Journal of Cell Biology</i> , 2019, 218, 2762-2781.	2.3	13
77	scenery: Flexible Virtual Reality Visualization on the Java VM. , 2019, , .		13
78	Production of Fosmid Genomic Libraries Optimized for Liquid Culture Recombineering and Cross-Species Transgenesis. <i>Methods in Molecular Biology</i> , 2012, 772, 423-443.	0.4	12
79	Going "open" with Mesoscopy: a new dimension on multi-view imaging. <i>Protoplasma</i> , 2014, 251, 363-372.	1.0	12
80	Mosaicing of single plane illumination microscopy images using groupwise registration and fast content-based image fusion. , 2008, , .		11
81	Bead-based mosaicing of single plane illumination microscopy images using geometric local descriptor matching. <i>Proceedings of SPIE</i> , 2009, , .	0.8	11
82	<i>Drosophila</i> Brain Development: Closing the Gap between a Macroarchitectural and Microarchitectural Approach. <i>Cold Spring Harbor Symposia on Quantitative Biology</i> , 2009, 74, 235-248.	2.0	11
83	Exploring Time-dependent Scientific Data Using Spatially Aware Mobiles and Large Displays. , 2016, , .		11
84	Epithelial rotation is preceded by planar symmetry breaking of actomyosin and protects epithelial tissue from cell deformations. <i>PLoS Genetics</i> , 2017, 13, e1007107.	1.5	11
85	Transcriptional control in embryonic <i>Drosophila</i> midline guidance assessed through a whole genome approach. <i>BMC Neuroscience</i> , 2007, 8, 59.	0.8	9
86	Restoration of Uneven Illumination in Light Sheet Microscopy Images. <i>Microscopy and Microanalysis</i> , 2011, 17, 607-613.	0.2	7
87	Gene Regulation: Analog to Digital Conversion of \hat{A} Transcription Factor Gradients. <i>Current Biology</i> , 2019, 29, R422-R424.	1.8	4
88	HPC-as-a-Service via HEAppE Platform. <i>Advances in Intelligent Systems and Computing</i> , 2020, , 280-293.	0.5	4
89	Mapping the complexity of transcription control in higher eukaryotes. <i>Genome Biology</i> , 2010, 11, 115.	13.9	3
90	Towards digital representation of <i>Drosophila</i> embryogenesis. , 2008, , .		2

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91	Rapid Ovary Mass-Isolation (ROMi) to Obtain Large Quantities of Drosophila Egg Chambers for Fluorescent In Situ Hybridization. <i>Methods in Molecular Biology</i> , 2016, 1478, 253-262.	0.4	2
92	Scijava Interface for Parallel Execution in the ImageJ Ecosystem. <i>Lecture Notes in Computer Science</i> , 2018, , 288-299.	1.0	2
93	A Behavioral Assay to Study Effects of Retinoid Pharmacology on Nervous System Development in a Marine Annelid. <i>Methods in Molecular Biology</i> , 2019, 2019, 193-207.	0.4	1
94	Analysis of Actomyosin Dynamics at Local Cellular and Tissue Scales Using Time-lapse Movies of Cultured <i>Drosophila</i> Egg Chambers. <i>Journal of Visualized Experiments</i> , 2019, , .	0.2	1
95	SPIM workflow manager for HPC. <i>Bioinformatics</i> , 2019, 35, 3875-3876.	1.8	1
96	Registration of Multi-modal Volumetric Images by Establishing Cell Correspondence. <i>Lecture Notes in Computer Science</i> , 2020, , 458-473.	1.0	1
97	ImgLib2--generic image processing in Java. <i>Bioinformatics</i> , 2013, 29, 298-298.	1.8	0
98	Universal Rules of Regulation. <i>Cell</i> , 2016, 165, 1035-1036.	13.5	0
99	Evolutionary history of tissue bending. <i>Science</i> , 2019, 366, 300-301.	6.0	0
100	Cell communication in the blink of an eye. <i>Nature</i> , 2019, 571, 484-485.	13.7	0
101	Time to Upgrade: A New OpenSPIM Guide to Build and Operate Advanced OpenSPIM Configurations. <i>Advanced Biology</i> , 2021, , 2101182.	1.4	0