

Pavel Tomancak

List of Publications by Citations

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

107
papers

39,129
citations

47
h-index

125
g-index

125
ext. papers

54,399
ext. citations

12.9
avg, IF

6.91
L-index

#	Paper	IF	Citations
107	Fiji: an open-source platform for biological-image analysis. <i>Nature Methods</i> , 2012 , 9, 676-82	21.6	27799
106	Globally optimal stitching of tiled 3D microscopic image acquisitions. <i>Bioinformatics</i> , 2009 , 25, 1463-5	7.2	1339
105	Global analysis of mRNA localization reveals a prominent role in organizing cellular architecture and function. <i>Cell</i> , 2007 , 131, 174-87	56.2	714
104	TrakEM2 software for neural circuit reconstruction. <i>PLoS ONE</i> , 2012 , 7, e38011	3.7	564
103	Computational identification of Drosophila microRNA genes. <i>Genome Biology</i> , 2003 , 4, R42	18.3	539
102	RNA buffers the phase separation behavior of prion-like RNA binding proteins. <i>Science</i> , 2018 , 360, 918-931	31.3	491
101	Systematic determination of patterns of gene expression during Drosophila embryogenesis. <i>Genome Biology</i> , 2002 , 3, RESEARCH0088	18.3	487
100	Exploiting transcription factor binding site clustering to identify cis-regulatory modules involved in pattern formation in the Drosophila genome. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002 , 99, 757-62	11.5	482
99	Biological imaging software tools. <i>Nature Methods</i> , 2012 , 9, 697-710	21.6	377
98	Content-aware image restoration: pushing the limits of fluorescence microscopy. <i>Nature Methods</i> , 2018 , 15, 1090-1097	21.6	369
97	Global analysis of patterns of gene expression during Drosophila embryogenesis. <i>Genome Biology</i> , 2007 , 8, R145	18.3	307
96	Gene expression divergence recapitulates the developmental hourglass model. <i>Nature</i> , 2010 , 468, 811-450.4	50.4	280
95	Software for bead-based registration of selective plane illumination microscopy data. <i>Nature Methods</i> , 2010 , 7, 418-9	21.6	269
94	An integrated micro- and macroarchitectural analysis of the Drosophila brain by computer-assisted serial section electron microscopy. <i>PLoS Biology</i> , 2010 , 8, e1000502	9.7	247
93	An objective comparison of cell-tracking algorithms. <i>Nature Methods</i> , 2017 , 14, 1141-1152	21.6	242
92	CATMAID: collaborative annotation toolkit for massive amounts of image data. <i>Bioinformatics</i> , 2009 , 25, 1984-6	7.2	222
91	Drosophila 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, 18017-22	11.5	219

90	OpenSPIM: an open-access light-sheet microscopy platform. <i>Nature Methods</i> , 2013 , 10, 598-9	21.6	215
89	A genome-wide resource for the analysis of protein localisation in <i>Drosophila</i> . <i>ELife</i> , 2016 , 5, e12068	8.9	193
88	Visualization of image data from cells to organisms. <i>Nature Methods</i> , 2010 , 7, S26-41	21.6	189
87	Assessing phototoxicity in live fluorescence imaging. <i>Nature Methods</i> , 2017 , 14, 657-661	21.6	188
86	Elastic volume reconstruction from series of ultra-thin microscopy sections. <i>Nature Methods</i> , 2012 , 9, 717-20	21.6	184
85	Tissue clearing and its applications in neuroscience. <i>Nature Reviews Neuroscience</i> , 2020 , 21, 61-79	13.5	178
84	BigDataViewer: visualization and processing for large image data sets. <i>Nature Methods</i> , 2015 , 12, 481-3	21.6	171
83	Efficient Bayesian-based multiview deconvolution. <i>Nature Methods</i> , 2014 , 11, 645-8	21.6	154
82	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, 469-81	5.1	154
81	Oocyte polarity depends on regulation of gurken by Vasa. <i>Development (Cambridge)</i> , 1998 , 125, 1723-1732	21.6	145
80	A <i>Drosophila melanogaster</i> homologue of <i>Caenorhabditis elegans</i> par-1 acts at an early step in embryonic-axis formation. <i>Nature Cell Biology</i> , 2000 , 2, 458-60	23.4	139
79	Guide to light-sheet microscopy for adventurous biologists. <i>Nature Methods</i> , 2015 , 12, 30-4	21.6	135
78	The earliest transcribed zygotic genes are short, newly evolved, and different across species. <i>Cell Reports</i> , 2014 , 6, 285-92	10.6	121
77	An adaptive threshold in mammalian neocortical evolution. <i>PLoS Biology</i> , 2014 , 12, e1002000	9.7	105
76	As-rigid-as-possible mosaicking and serial section registration of large ssTEM datasets. <i>Bioinformatics</i> , 2010 , 26, i57-63	7.2	100
75	A toolkit for high-throughput, cross-species gene engineering in <i>Drosophila</i> . <i>Nature Methods</i> , 2009 , 6, 435-7	21.6	95
74	Systematic imaging reveals features and changing localization of mRNAs in <i>Drosophila</i> development. <i>ELife</i> , 2015 , 4,	8.9	95
73	The evolution of early animal embryos: conservation or divergence?. <i>Trends in Ecology and Evolution</i> , 2012 , 27, 385-93	10.9	90

72	ImgLib2--generic image processing in Java. <i>Bioinformatics</i> , 2012 , 28, 3009-11	7.2	89
71	Endogenously tagged rab proteins: a resource to study membrane trafficking in Drosophila. <i>Developmental Cell</i> , 2015 , 33, 351-65	10.2	87
70	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, 2011-2	7.2	87
69	ImgLib2--generic image processing in Java. <i>Bioinformatics</i> , 2013 , 29, 298-298	7.2	78
68	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,	8.9	77
67	Motif composition, conservation and condition-specificity of single and alternative transcription start sites in the Drosophila genome. <i>Genome Biology</i> , 2009 , 10, R73	18.3	74
66	Oocyte polarity depends on regulation of gurken by Vasa. <i>Development (Cambridge)</i> , 1998 , 125, 1723-326.6		63
65	Introns and gene expression: cellular constraints, transcriptional regulation, and evolutionary consequences. <i>BioEssays</i> , 2015 , 37, 148-54	4.1	55
64	Mutations in DONSON disrupt replication fork stability and cause microcephalic dwarfism. <i>Nature Genetics</i> , 2017 , 49, 537-549	36.3	52
63	Multiscale imaging of plant development by light-sheet fluorescence microscopy. <i>Nature Plants</i> , 2018 , 4, 639-650	11.5	51
62	Attachment of the blastoderm to the vitelline envelope affects gastrulation of insects. <i>Nature</i> , 2019 , 568, 395-399	50.4	47
61	Iron-regulatory protein-1 (IRP-1) is highly conserved in two invertebrate species--characterization of IRP-1 homologues in Drosophila melanogaster and Caenorhabditis elegans. <i>FEBS Journal</i> , 1998 , 254, 230-7		47
60	Current challenges in open-source bioimage informatics. <i>Nature Methods</i> , 2012 , 9, 661-5	21.6	45
59	Surface tension determines tissue shape and growth kinetics. <i>Science Advances</i> , 2019 , 5, eaav9394	14.3	42
58	CLIJ: GPU-accelerated image processing for everyone. <i>Nature Methods</i> , 2020 , 17, 5-6	21.6	42
57	In vivo RNAi rescue in Drosophila melanogaster with genomic transgenes from Drosophila pseudoobscura. <i>PLoS ONE</i> , 2010 , 5, e8928	3.7	31
56	An excess of gene expression divergence on the X chromosome in Drosophila embryos: implications for the faster-X hypothesis. <i>PLoS Genetics</i> , 2012 , 8, e1003200	6	30
55	The ancestral retinoic acid receptor was a low-affinity sensor triggering neuronal differentiation. <i>Science Advances</i> , 2018 , 4, eaao1261	14.3	28

54	An automated workflow for parallel processing of large multiview SPIM recordings. <i>Bioinformatics</i> , 2016 , 32, 1112-4	7.2	28
53	Imaging plant germline differentiation within Arabidopsis flowers by light sheet microscopy. <i>ELife</i> , 2020 , 9,	8.9	26
52	Imaging Flies by Fluorescence Microscopy: Principles, Technologies, and Applications. <i>Genetics</i> , 2019 , 211, 15-34	4	23
51	The ImageJ ecosystem: Open-source software for image visualization, processing, and analysis. <i>Protein Science</i> , 2021 , 30, 234-249	6.3	22
50	Using Light Sheet Fluorescence Microscopy to Image Zebrafish Eye Development. <i>Journal of Visualized Experiments</i> , 2016 , e53966	1.6	21
49	Bioimage Informatics in the context of Drosophila research. <i>Methods</i> , 2014 , 68, 60-73	4.6	21
48	Regionalized tissue fluidization is required for epithelial gap closure during insect gastrulation. <i>Nature Communications</i> , 2020 , 11, 5604	17.4	21
47	An alignment-free method to identify candidate orthologous enhancers in multiple Drosophila genomes. <i>Bioinformatics</i> , 2010 , 26, 2109-15	7.2	19
46	Light-sheet microscopy for everyone? Experience of building an OpenSPIM to study flatworm development. <i>BMC Developmental Biology</i> , 2016 , 16, 22	3.1	17
45	Open-source solutions for SPIMage processing. <i>Methods in Cell Biology</i> , 2014 , 123, 505-29	1.8	16
44	Mapping the gene expression universe. <i>Current Opinion in Genetics and Development</i> , 2008 , 18, 506-12	4.9	16
43	Sample Preparation and Mounting of Drosophila Embryos for Multiview Light Sheet Microscopy. <i>Methods in Molecular Biology</i> , 2016 , 1478, 189-202	1.4	15
42	Content-Aware Image Restoration: Pushing the Limits of Fluorescence Microscopy		13
41	Probing the kinetic landscape of Hox transcription factor-DNA binding in live cells by massively parallel Fluorescence Correlation Spectroscopy. <i>Mechanisms of Development</i> , 2015 , 138 Pt 2, 218-225	1.7	12
40	Control of Hox transcription factor concentration and cell-to-cell variability by an auto-regulatory switch. <i>Development (Cambridge)</i> , 2019 , 146,	6.6	12
39	A role for tuned levels of nucleosome remodeler subunit ACF1 during Drosophila oogenesis. <i>Developmental Biology</i> , 2016 , 411, 217-230	3.1	11
38	Bead-based mosaicing of single plane illumination microscopy images using geometric local descriptor matching 2009 ,		11
37	Ectopic expression of S28A-mutated Histone H3 modulates longevity, stress resistance and cardiac function in Drosophila. <i>Scientific Reports</i> , 2018 , 8, 2940	4.9	10

36	Comment on "Cortical folding scales universally with surface area and thickness, not number of neurons". <i>Science</i> , 2016 , 351, 825	33.3	10
35	Going "open" with mesoscopy: a new dimension on multi-view imaging. <i>Protoplasma</i> , 2014 , 251, 363-72	3.4	10
34	Small molecule screen in embryonic zebrafish using modular variations to target segmentation. <i>Nature Communications</i> , 2017 , 8, 1901	17.4	10
33	Recombination-mediated genetic engineering of large genomic DNA transgenes. <i>Methods in Molecular Biology</i> , 2011 , 772, 445-58	1.4	10
32	Selective maintenance of Drosophila tandemly arranged duplicated genes during evolution. <i>Genome Biology</i> , 2008 , 9, R176	18.3	10
31	Production of fosmid genomic libraries optimized for liquid culture recombineering and cross-species transgenesis. <i>Methods in Molecular Biology</i> , 2011 , 772, 423-43	1.4	9
30	Drosophila brain development: closing the gap between a macroarchitectural and microarchitectural approach. <i>Cold Spring Harbor Symposia on Quantitative Biology</i> , 2009 , 74, 235-48	3.9	9
29	Epithelial rotation is preceded by planar symmetry breaking of actomyosin and protects epithelial tissue from cell deformations. <i>PLoS Genetics</i> , 2017 , 13, e1007107	6	9
28	Mosaicing of single plane illumination microscopy images using groupwise registration and fast content-based image fusion 2008 ,		8
27	2019 ,		8
26	Yorkie controls tube length and apical barrier integrity during airway development. <i>Journal of Cell Biology</i> , 2019 , 218, 2762-2781	7.3	7
25	Restoration of uneven illumination in light sheet microscopy images. <i>Microscopy and Microanalysis</i> , 2011 , 17, 607-13	0.5	6
24	Transcriptional control in embryonic Drosophila midline guidance assessed through a whole genome approach. <i>BMC Neuroscience</i> , 2007 , 8, 59	3.2	6
23	Exploring Time-dependent Scientific Data Using Spatially Aware Mobiles and Large Displays 2016 ,		6
22	Ordered patterning of the sensory system is susceptible to stochastic features of gene expression. <i>ELife</i> , 2020 , 9,	8.9	5
21	Regionalized tissue fluidization by an actomyosin cable is required for epithelial gap closure during insect gastrulation		5
20	The apical protein Apnoia interacts with Crumbs to regulate tracheal growth and inflation. <i>PLoS Genetics</i> , 2019 , 15, e1007852	6	5
19	Interactive design of GPU-accelerated Image Data Flow Graphs and cross-platform deployment using multi-lingual code generation		4

18	Reconstruction of cell lineages and behaviors underlying arthropod limb outgrowth with multi-view light-sheet imaging and tracking		4
17	Mapping the complexity of transcription control in higher eukaryotes. <i>Genome Biology</i> , 2010 , 11, 115	18.3	3
16	Author response: Multi-view light-sheet imaging and tracking with the MaMuT software reveals the cell lineage of a direct developing arthropod limb 2018 ,		3
15	HPC-as-a-Service via HEAppE Platform. <i>Advances in Intelligent Systems and Computing</i> , 2020 , 280-293	0.4	3
14	Gene Regulation: Analog to Digital Conversion of Transcription Factor Gradients. <i>Current Biology</i> , 2019 , 29, R422-R424	6.3	2
13	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	1.4	2
12	Analysis of Actomyosin Dynamics at Local Cellular and Tissue Scales Using Time-lapse Movies of Cultured Drosophila Egg Chambers. <i>Journal of Visualized Experiments</i> , 2019 ,	1.6	1
11	SPIM workflow manager for HPC. <i>Bioinformatics</i> , 2019 , 35, 3875-3876	7.2	1
10	Towards digital representation of Drosophila embryogenesis 2008 ,		1
9	Integrin-mediated attachment of the blastoderm to the vitelline envelope impacts gastrulation of insects		1
8	Surface tension determines tissue shape and growth kinetics		1
7	Ordered patterning of the sensory system is susceptible to stochastic features of gene expression		1
6	CLIJ: GPU-accelerated image processing for everyone		1
5	SciJava Interface for Parallel Execution in the ImageJ Ecosystem. <i>Lecture Notes in Computer Science</i> , 2018 , 288-299	0.9	1
4	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	1.4	0
3	Evolutionary history of tissue bending. <i>Science</i> , 2019 , 366, 300-301	33.3	
2	Registration of Multi-modal Volumetric Images by Establishing Cell Correspondence. <i>Lecture Notes in Computer Science</i> , 2020 , 458-473	0.9	
1	Time to Upgrade: A New OpenSPIM Guide to Build and Operate Advanced OpenSPIM Configurations. <i>Advanced Biology</i> , 2021 , e2101182		

