Mikko A Juusola

List of Publications by Year
in descending order

65 papers	2,721 citations	186265 28 h-index	197818 49 g-index
71 all docs	71 docs citations	71 times ranked	1978 citing authors

#	Article	IF	Citations
1	Calcium Influx via TRP Channels Is Required to Maintain PIP2 Levels in Drosophila Photoreceptors. Neuron, 2001, 30, 149-159.	8.1	187
2	Information processing by graded-potential transmission through tonically active synapses. Trends in Neurosciences, 1996, 19, 292-297.	8.6	140
3	Light Adaptation in Drosophila Photoreceptors. Journal of General Physiology, 2001, 117, 3-25.	1.9	134
4	Normal Mitochondrial Dynamics Requires Rhomboid-7 and Affects Drosophila Lifespan and Neuronal Function. Current Biology, 2006, 16, 982-989.	3.9	119
5	Compound eyes and retinal information processing in miniature dipteran species match their specific ecological demands. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 4224-4229.	7.1	113
6	Molecular Basis of Amplification in Drosophila Phototransduction. Neuron, 2002, 36, 689-701.	8.1	111
7	Multiple Spectral Inputs Improve Motion Discrimination in the <i>Drosophila</i> Visual System. Science, 2012, 336, 925-931.	12.6	107
8	Phototransduction in Drosophila. Current Opinion in Neurobiology, 2015, 34, 37-45.	4.2	104
9	Transfer of graded potentials at the photoreceptor-interneuron synapse.. Journal of General Physiology, 1995, 105, 117-148.	1.9	101
10	Feedback Network Controls Photoreceptor Output at the Layer of First Visual Synapses in Drosophila. Journal of General Physiology, 2006, 127, 495-510.	1.9	96
11	The contribution of Shaker K+ channels to the information capacity of Drosophila photoreceptors. Nature, 2003, 421, 630-634.	27.8	84
12	Distinct Roles for Two Histamine Receptors (<i>hclA</i>and<i>hclB</i>) at the<i>Drosophila</i>Photoreceptor Synapse. Journal of Neuroscience, 2008, 28, 7250-7259.	3.6	84
13	Stochastic, Adaptive Sampling of Information by Microvilli in Fly Photoreceptors. Current Biology, 2012, 22, 1371-1380.	3.9	79
14	The Efficiency of Sensory Information Coding by Mechanoreceptor Neurons. Neuron, 1997, 18, 959-968.	8.1	78
15	Stimulus History Reliably Shapes Action Potential Waveforms of Cortical Neurons. Journal of Neuroscience, 2005, 25, 5657-5665.	3.6	71
16	The Rate of Information Transfer of Naturalistic Stimulation by Graded Potentials. Journal of General Physiology, 2003, 122, 191-206.	1.9	61
17	Robustness of Neural Coding in Drosophila Photoreceptors in the Absence of Slow Delayed Rectifier K+ Channels. Journal of Neuroscience, 2006, 26, 2652-2660.	3.6	61
18	Use of Meixner Functions in Estimation of Volterra Kernels of Nonlinear Systems With Delay. IEEE Transactions on Biomedical Engineering, 2005, 52, 229-237.	4.2	55

#	Article	IF	Citations
19	Microsaccadic sampling of moving image information provides Drosophila hyperacute vision. ELife, 2017, 6, .	6.0	55
20	Intrinsic Activity in the Fly Brain Gates Visual Information during Behavioral Choices. PLoS ONE, 2010, 5, e14455.	2.5	50
21	Speed and Sensitivity of Phototransduction in<i>Drosophila</i>Depend on Degree of Saturation of Membrane Phospholipids. Journal of Neuroscience, 2015, 35, 2731-2746.	3.6	49
22	Network Adaptation Improves Temporal Representation of Naturalistic Stimuli in Drosophila Eye: I Dynamics. PLoS ONE, 2009, 4, e4307.	2.5	46
23	Light Adaptation in Drosophila Photoreceptors. Journal of General Physiology, 2001, 117, 27-42.	1.9	45
24	Perceptual Color Map in Macaque Visual Area V4. Journal of Neuroscience, 2014, 34, 202-217.	3.6	42
25	Measurement of cell impedance in frequency domain using discontinuous current clamp and white-noise-modulated current injection. Pflugers Archiv European Journal of Physiology, 1992, 421, 469-472.	2.8	37
26	Band-pass filtering by voltage-dependent membrane in an insect photoreceptor. Neuroscience Letters, 1993, 154, 84-88.	2.1	37
27	Refractory Sampling Links Efficiency and Costs of Sensory Encoding to Stimulus Statistics. Journal of Neuroscience, 2014, 34, 7216-7237.	3.6	35
28	Overexpressing Temperature-Sensitive Dynamin Decelerates Phototransduction and Bundles Microtubules in Drosophila Photoreceptors. Journal of Neuroscience, 2009, 29, 14199-14210.	3.6	34
29	Visual Acuity for Moving Objects in First- and Second-Order Neurons of the Fly Compound Eye. Journal of Neurophysiology, 1997, 77, 1487-1495.	1.8	33
30	Network Adaptation Improves Temporal Representation of Naturalistic Stimuli in Drosophila Eye: II Mechanisms. PLoS ONE, 2009, 4, e4306.	2.5	31
31	The Drosophila SK Channel (dSK) Contributes to Photoreceptor Performance by Mediating Sensitivity Control at the First Visual Network. Journal of Neuroscience, 2011, 31, 13897-13910.	3.6	30
32	Signal coding in cockroach photoreceptors is tuned to dim environments. Journal of Neurophysiology, 2012, 108, 2641-2652.	1.8	30
33	Adaptation Properties of Two Types of Sensory Neurons in a Spider Mechanoreceptor Organ. Journal of Neurophysiology, 1998, 80, 2781-2784.	1.8	28
34	The proteasomal inhibitor MG132 prevents muscular dystrophy in zebrafish. PLOS Currents, 2011, 3, RRN1286.	1.4	28
35	Coding with spike shapes and graded potentials in cortical networks. BioEssays, 2007, 29, 178-187.	2.5	27
36	Measuring complex admittance and receptor current by single electrode voltage-clamp. Journal of Neuroscience Methods, 1994, 53, 1-6.	2.5	24

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37	A method for determining photoreceptor signal-to-noise ratio in the time and frequency domains with a pseudorandom stimulus. Visual Neuroscience, 1994, 11, 1221-1225.	1.0	23
38	Shaker K+ Channels Contribute Early Nonlinear Amplification to the Light Response in Drosophila Photoreceptors. Journal of Neurophysiology, 2003, 90, 2014-2021.	1.8	23
39	Visual Coding in Locust Photoreceptors. PLoS ONE, 2008, 3, e2173.	2.5	21
40	Rapid coating of glass-capillary microelectrodes for single-electrode voltage-clamp. Journal of Neuroscience Methods, 1997, 71, 199-204.	2.5	18
41	How a fly photoreceptor samples light information in time. Journal of Physiology, 2017, 595, 5427-5437.	2.9	18
42	Interactions Between Light-Induced Currents, Voltage-Gated Currents, and Input Signal Properties in Drosophila Photoreceptors. Journal of Neurophysiology, 2004, 91, 2696-2706.	1.8	16
43	Recording from cuticular mechanoreceptors during mechanical stimulation. Pflugers Archiv European Journal of Physiology, 1995, 431, 125-128.	2.8	14
44	Impact of Rearing Conditions and Short-Term Light Exposure on Signaling Performance in Drosophila Photoreceptors. Journal of Neurophysiology, 2004, 92, 1918-1927.	1.8	14
45	Electrophysiological Method for Recording Intracellular Voltage Responses of Drosophila Photoreceptors and Interneurons to Light Stimuli In Vivo. Journal of Visualized Experiments, 2016, , .	0.3	12
46	Data Modelling for Analysis of Adaptive Changes in Fly Photoreceptors. Lecture Notes in Computer Science, 2009, , 34-48.	1.3	12
47	Principal Dynamic Mode Analysis of Nonlinear Transduction in a Spider Mechanoreceptor. Annals of Biomedical Engineering, 1999, 27, 391-402.	2.5	11
48	A biomimetic fly photoreceptor model elucidates how stochastic adaptive quantal sampling provides a large dynamic range. Journal of Physiology, 2017, 595, 5439-5456.	2.9	11
49	Evidence for Dynamic Network Regulation of Drosophila Photoreceptor Function from Mutants Lacking the Neurotransmitter Histamine. Frontiers in Neural Circuits, 2016, 10, 19.	2.8	10
50	Binocular mirrorâ€“symmetric microsaccadic sampling enables <i>Drosophila</i> hyperacute 3D vision. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2109717119.	7.1	8
51	Ca²⁺-Activated K⁺ Channels Reduce Network Excitability, Improving Adaptability and Energetics for Transmitting and Perceiving Sensory Information. Journal of Neuroscience, 2019, 39, 7132-7154.	3.6	7
52	Fast-acting compressive and facilitatory nonlinearities in light-adapted fly photoreceptors. Annals of Biomedical Engineering, 1995, 23, 70-77.	2.5	6
53	Intrinsic Activity in the Fly Brain Gates Visual Information during Behavioral Choices. Nature Precedings, 2010, , .	0.1	6
54	Random Photon Absorption Model Elucidates How Early Gain Control in Fly Photoreceptors Arises from Quantal Sampling. Frontiers in Computational Neuroscience, 2016, 10, 61.	2.1	6

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55	Modeling elucidates how refractory period can provide profound nonlinear gain control to graded potential neurons. Physiological Reports, 2017, 5, e13306.	1.7	6
56	Phototransduction Biophysics. , 2015, , 2359-2376.		6
57	Biophysical Modeling of a Drosophila Photoreceptor. Lecture Notes in Computer Science, 2009, , 57-71.	1.3	6
58	Fly Photoreceptors Encode Phase Congruency. PLoS ONE, 2016, 11, e0157993.	2.5	6
59	Multiscale â€˜whole-cellâ€™ models to study neural information processing â€“ New insights from fly photoreceptor studies. Journal of Neuroscience Methods, 2021, 357, 109156.	2.5	2
60	Reverse Engineering Gain Adaptation in Sensory Systems. , 2012, , .		2
61	High-speed imaging of light-induced photoreceptor microsaccades in compound eyes. Communications Biology, 2022, 5, 203.	4.4	2
62	Professor Matti WeckstrÃ¶m (1959â€“2015). Journal of Comparative Physiology A: Neuroethology, Sensory, Neural, and Behavioral Physiology, 2016, 202, 85-86.	1.6	0
63	Shining new light into the workings of photoreceptors and visual interneurons. Journal of Physiology, 2017, 595, 5425-5426.	2.9	0
64	Phototransduction Biophysics. , 2013, , 1-20.		0
65	Phototransduction Biophysics. , 2022, , 2758-2776.		0