Edward S Ruthazer

List of Publications by Year
in descending order

78	3,849	136950 32	138484 58
papers	citations	h-index	g-index

97	97	97	4193
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dendrite growth increased by visual activity requires NMDA receptor and Rho GTPases. Nature, 2002, 419, 475-480.	27.8	416
2	Control of Axon Branch Dynamics by Correlated Activity in Vivo. Science, 2003, 301, 66-70.	12.6	236
3	The Role of Activity in the Development of Long-Range Horizontal Connections in Area 17Âof the Ferret. Journal of Neuroscience, 1996, 16, 7253-7269.	3.6	218
4	Stabilization of Axon Branch Dynamics by Synaptic Maturation. Journal of Neuroscience, 2006, 26, 3594-3603.	3.6	175
5	On and off domains of geniculate afferents in cat primary visual cortex. Nature Neuroscience, 2008, 11, 88-94.	14.8	159
6	Insights into activityâ€dependent map formation from the retinotectal system: A middleâ€ofâ€theâ€brain perspective. Journal of Neurobiology, 2004, 59, 134-146.	3.6	150
7	Development of Single Retinofugal Axon Arbors in Normal and Î²2 Knock-Out Mice. Journal of Neuroscience, 2011, 31, 3384-3399.	3.6	119
8	DCC Expression by Neurons Regulates Synaptic Plasticity in the Adult Brain. Cell Reports, 2013, 3, 173-185.	6.4	118
9	Relationship between the Ocular Dominance and Orientation Maps in Visual Cortex of Monocularly Deprived Cats. Neuron, 1997, 19, 307-318.	8.1	114
10	Activity Dependence of Cortical Axon Branch Formation: A Morphological and Electrophysiological Study Using Organotypic Slice Cultures. Journal of Neuroscience, 2005, 25, 1-9.	3.6	113
11	Netrin-1 Promotes Excitatory Synaptogenesis between Cortical Neurons by Initiating Synapse Assembly. Journal of Neuroscience, 2013, 33, 17278-17289.	3.6	107
12	Maternal immune activation in neurodevelopmental disorders. Developmental Dynamics, 2018, 247, 588-619.	1.8	107
13	Ocular Dominance Peaks at Pinwheel Center Singularities of the Orientation Map in Cat Visual Cortex. Journal of Neurophysiology, 1997, 77, 3381-3385.	1.8	100
14	D-serine as a gliotransmitter and its roles in brain development and disease. Frontiers in Cellular Neuroscience, 2013, 7, 39.	3.7	89
15	Neural Activity Regulates Synaptic Properties and Dendritic Structure In Vivo through Calcineurin/NFAT Signaling. Neuron, 2009, 62, 655-669.	8.1	83
16	A long Stokes shift red fluorescent Ca2+ indicator protein for two-photon and ratiometric imaging. Nature Communications, 2014, 5, 5262.	12.8	75
17	Rapid Hebbian axonal remodeling mediated by visual stimulation. Science, 2014, 344, 904-909.	12.6	75
18	Radial Glia: Progenitor, Pathway, and Partner. Neuroscientist, 2011, 17, 288-302.	3.5	68

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19	Inhibitory Mechanism by Polysialic Acid for Lamina-Specific Branch Formation of Thalamocortical Axons. Journal of Neuroscience, 2000, 20, 9145-9151.	3.6	62
20	Improved genetically encoded near-infrared fluorescent calcium ion indicators for in vivo imaging. PLoS Biology, 2020, 18, e3000965.	5.6	62
21	Neurodevelopmental effects of chronic exposure to elevated levels of pro-inflammatory cytokines in a developing visual system. Neural Development, 2010, 5, 2.	2.4	59
22	Activity-Dependent Netrin-1 Secretion Drives Synaptic Insertion of GluA1-Containing AMPA Receptors in the Hippocampus. Cell Reports, 2018, 25, 168-182.e6.	6.4	59
23	Microglial trogocytosis and the complement system regulate axonal pruning in vivo. ELife, 2021, 10, .	6.0	59
24	A CANDLE for a deeper in vivo insight. Medical Image Analysis, 2012, 16, 849-864.	11.6	58
25	Receptor protein tyrosine phosphatase sigma regulates synapse structure, function and plasticity. Journal of Neurochemistry, 2012, 122, 147-161.	3.9	52
26	White Matter Plasticity Keeps the Brain in Tune: Axons Conduct While Glia Wrap. Frontiers in Cellular Neuroscience, 2018, 12, 428.	3.7	49
27	Rules for Shaping Neural Connections in the Developing Brain. Frontiers in Neural Circuits, 2016, 10, 111.	2.8	46
28	Development and organization of ocular dominance bands in primary visual cortex of the sable ferret. , 1999, 407, 151-165.		42
29	Activity-Dependent Transcription of BDNF Enhances Visual Acuity during Development. Neuron, 2011, 70, 455-467.	8.1	42
30	Approaches and Limitations in the Investigation of Synaptic Transmission and Plasticity. Frontiers in Synaptic Neuroscience, 2019, 11, 20.	2.5	41
31	Major depressive disorder and anxiety disorders from the glial perspective: Etiological mechanisms, intervention and monitoring. Neuroscience and Biobehavioral Reviews, 2017, 83, 474-488.	6.1	40
32	Inhibition of nitric oxide synthase does not prevent ocular dominance plasticity in kitten visual cortex.. Journal of Physiology, 1996, 494, 519-527.	2.9	38
33	Learning to see: patterned visual activity and the development of visual function. Trends in Neurosciences, 2010, 33, 183-192.	8.6	38
34	Regulation of Radial Glial Motility by Visual Experience. Journal of Neuroscience, 2009, 29, 14066-14076.	3.6	35
35	Guiding synaptic plasticity: Novel roles for netrinâ€1 in synaptic plasticity and memory formation in the adult brain. Journal of Physiology, 2021, 599, 493-505.	2.9	35
36	Multiphoton Imaging of Neurons in Living Tissue: Acquisition and Analysis of Time-Lapse Morphological Data. Real Time Imaging, 2002, 8, 175-188.	1.6	34

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37	The Role of Neural Activity in Cortical Axon Branching. Neuroscientist, 2006, 12, 102-106.	3.5	34
38	Pre- and post-synaptic roles for DCC in memory consolidation in the adult mouse hippocampus. Molecular Brain, 2020, 13, 56.	2.6	32
39	Disk-Shaped Amperometric Enzymatic Biosensor for in Vivo Detection of <scp>d</scp>-serine. Analytical Chemistry, 2014, 86, 3501-3507.	6.5	31
40	Neural Activity-Dependent Regulation of Radial Glial Filopodial Motility Is Mediated by Glial cGMP-Dependent Protein Kinase 1 and Contributes to Synapse Maturation in the Developing Visual System. Journal of Neuroscience, 2016, 36, 5279-5288.	3.6	27
41	Glial regulation of synapse maturation and stabilization in the developing nervous system. Current Opinion in Neurobiology, 2019, 54, 113-119.	4.2	26
42	Nâ€cadherin prodomain cleavage regulates synapse formation in vivo. Developmental Neurobiology, 2009, 69, 518-529.	3.0	25
43	The Gliotransmitter d-Serine Promotes Synapse Maturation and Axonal Stabilization In Vivo. Journal of Neuroscience, 2017, 37, 6277-6288.	3.6	23
44	GABA Expression and Regulation by Sensory Experience in the Developing Visual System. PLoS ONE, 2012, 7, e29086.	2.5	21
45	Spatial memory formation requires netrin-1 expression by neurons in the adult mammalian brain. Learning and Memory, 2019, 26, 77-83.	1.3	20
46	Youâ€™re Perfect, Now Changeâ€‰â€” Redefining the Role of Developmental Plasticity. Neuron, 2005, 45, 825-828.	8.1	17
47	Postsynaptic and Presynaptic NMDARs Have Distinct Roles in Visual Circuit Development. Cell Reports, 2020, 32, 107955.	6.4	17
48	Endocannabinoid signaling enhances visual responses through modulation of intracellular chloride levels in retinal ganglion cells. ELife, 2016, 5, .	6.0	17
49	A developmental sensitive period for spike timing-dependent plasticity in the retinotectal projection. Frontiers in Synaptic Neuroscience, 2010, 2, 13.	2.5	16
50	Expression patterns of Ephs and ephrins throughout retinotectal development in Xenopus laevis. Developmental Neurobiology, 2012, 72, 547-563.	3.0	16
51	Stentian structural plasticity in the developing visual system. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 10636-10638.	7.1	16
52	Cellular response to micropatterned growth promoting and inhibitory substrates. BMC Biotechnology, 2013, 13, 86.	3.3	14
53	Bulk Electroporation of Retinal Ganglion Cells in Live Xenopus Tadpoles. Cold Spring Harbor Protocols, 2013, 2013, pdb.prot076471.	0.3	13
54	In Vivo Time-Lapse Imaging of Neuronal Development inXenopus. Cold Spring Harbor Protocols, 2013, 2013, pdb.top077156.	0.3	12

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55	Topographic map formation and the effects of NMDA receptor blockade in the developing visual system. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	11
56	Improved Method for the Quantification of Motility in Glia and Other Morphologically Complex Cells. Neural Plasticity, 2013, 2013, 1-11.	2.2	10
57	A Simple and Efficient Method for Visualizing Individual Cells in vivo by Cre-Mediated Single-Cell Labeling by Electroporation (CREMSCLE). Frontiers in Neural Circuits, 2020, 14, 47.	2.8	10
58	Role of interstitial branching in the development of visual corticocortical connections: A timeâ€lapse and fixedâ€tissue analysis. Journal of Comparative Neurology, 2010, 518, 4963-4979.	1.6	9
59	Sodium-calcium exchanger mediates sensory-evoked glial calcium transients in the developing retinotectal system. Cell Reports, 2021, 37, 109791.	6.4	9
60	Editorsâ€™ Choiceâ€”A Miniaturized Enzymatic Biosensor for Detection of Sensory-Evoked D-serine Release in the Brain. Journal of the Electrochemical Society, 2021, 168, 025502.	2.9	8
61	Glia Regulate the Development, Function, and Plasticity of the Visual System From Retina to Cortex. Frontiers in Neural Circuits, 2022, 16, 826664.	2.8	7
62	Labeling Individual Neurons in the Brains of Live Xenopus Tadpoles by Electroporation of Dyes or DNA. Cold Spring Harbor Protocols, 2013, 2013, pdb.prot077149.	0.3	5
63	Editorial: Spontaneous Activity in Sensory Systems. Frontiers in Neural Circuits, 2018, 12, 27.	2.8	4
64	Early Inflammation Dysregulates Neuronal Circuit Formation In Vivo via Upregulation of IL-1Î². Journal of Neuroscience, 2021, 41, 6353-6366.	3.6	4
65	Layers upon Layers: MHC Class I Acts in the Retina to Influence Thalamic Segregation. Neuron, 2010, 65, 439-441.	8.1	3
66	Dye Labeling Retinal Ganglion Cell Axons in Live Xenopus Tadpoles. Cold Spring Harbor Protocols, 2013, 2013, pdb.prot076463.	0.3	3
67	TORC1 selectively regulates synaptic maturation and input convergence in the developing visual system. Developmental Neurobiology, 2020, 80, 332-350.	3.0	2
68	Activityâ€dependent alteration of early myelin ensheathment in a developing sensory circuit. Journal of Comparative Neurology, 2022, 530, 871-885.	1.6	2
69	Listening to Npas4: a transcription factor is the prescription for restoring youthful plasticity in the mature brain. Journal of Physiology, 2012, 590, 4637-4638.	2.9	1
70	Formula for Unsilencing Plasticity: Spike with GABA. Neuron, 2015, 87, 915-917.	8.1	1
71	Semi-Automated Image Analysis of Xenopus Laevis Behavioral Response to Visual Stimuli. Biophysical Journal, 2013, 104, 511a.	0.5	0
72	In Vivo Imaging of Synaptogenesis. , 2013, , 521-536.		0

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73	Plasticity in visual connections: retinal ganglion cell axonal development and regeneration. , 0, , 114-124.		0
74	Identifying Active Neurons from In Vivo 2-Photon Calcium Imaging of the Brain via Pixel Correlation Analysis and Region-Growing Segmentation. Biophysical Journal, 2014, 106, 643a-644a.	0.5	0
75	Using Twoâ€“Photon Intravital Imaging to Study Developmental Plasticity of Neural Circuits. Microscopy and Microanalysis, 2014, 20, 1342-1343.	0.4	0
76	InÂvivo imaging of synaptogenesis. , 2020, , 33-53.		0
77	Activity in Visual Development. , 2009, , 47-51.		0
78	Editorial: Shedding Light on the Nervous System: Progress in Neurophotonics Research. Frontiers in Neural Circuits, 2022, 16, .	2.8	0