Greg J Stuart

List of Publications by Citations

84 papers	12,431 citations	50 h-index	91 g-index
91 ext. papers	14,050 ext. citations	10.7 avg, IF	6.55 L-index

#	Paper	IF	Citations
84	Active propagation of somatic action potentials into neocortical pyramidal cell dendrites. *Nature*, **1994**, 367, 69-72	50.4	1064
83	Patch-clamp recordings from the soma and dendrites of neurons in brain slices using infrared video microscopy. *Pflugers Archiv European Journal of Physiology*, **1993**, 423, 511-8	4.6	684
82	Activity-dependent action potential invasion and calcium influx into hippocampal CA1 dendrites. *Science*, **1995**, 268, 297-300	33.3	680
81	Diversity and dynamics of dendritic signaling. *Science*, **2000**, 290, 739-44	33.3	599
80	Action potential initiation and backpropagation in neurons of the mammalian CNS. *Trends in Neurosciences*, **1997**, 20, 125-31	13.3	579
79	Action potential generation requires a high sodium channel density in the axon initial segment. *Nature Neuroscience*, **2008**, 11, 178-86	25.5	450
78	Action potential initiation and propagation in rat neocortical pyramidal neurons. *Journal of Physiology*, **1997**, 505 (Pt 3), 617-32	3.9	420
77	Determinants of voltage attenuation in neocortical pyramidal neuron dendrites. *Journal of Neuroscience*, **1998**, 18, 3501-10	6.6	404
76	Calcium action potentials restricted to distal apical dendrites of rat neocortical pyramidal neurons. *Journal of Physiology*, **1997**, 505 (Pt 3), 605-16	3.9	384
75	Amplification of EPSPs by axosomatic sodium channels in neocortical pyramidal neurons. *Neuron*, **1995**, 15, 1065-76	13.9	371
74	Excitatory actions of GABA in the cortex. *Neuron*, **2003**, 37, 299-309	13.9	320
73	Axon initial segment Kv1 channels control axonal action potential waveform and synaptic efficacy. *Neuron*, **2007**, 55, 633-47	13.9	301
72	Direct measurement of specific membrane capacitance in neurons. *Biophysical Journal*, **2000**, 79, 314-20	2.9	296
71	Signal processing in the axon initial segment. *Neuron*, **2012**, 73, 235-47	13.9	285
70	Site independence of EPSP time course is mediated by dendritic I(h) in neocortical pyramidal neurons. *Journal of Neurophysiology*, **2000**, 83, 3177-82	3.2	284
69	Dependence of EPSP efficacy on synapse location in neocortical pyramidal neurons. *Science*, **2002**, 295, 1907-10	33.3	282
68	Initiation and spread of sodium action potentials in cerebellar Purkinje cells. *Neuron*, **1994**, 13, 703-12	13.9	271

67	Dendritic coincidence detection of EPSPs and action potentials. *Nature Neuroscience*, **2001**, 4, 63-71	25.5	267
66	Dendritic integration: 60 years of progress. *Nature Neuroscience*, **2015**, 18, 1713-21	25.5	237
65	Axonal initiation and active dendritic propagation of action potentials in substantia nigra neurons. *Neuron*, **1995**, 15, 637-47	13.9	236
64	Site of action potential initiation in layer 5 pyramidal neurons. *Journal of Neuroscience*, **2006**, 26, 1854-63	6.6	231
63	Learning rules for spike timing-dependent plasticity depend on dendritic synapse location. *Journal of Neuroscience*, **2006**, 26, 10420-9	6.6	211
62	Mechanisms and consequences of action potential burst firing in rat neocortical pyramidal neurons. *Journal of Physiology*, **1999**, 521 Pt 2, 467-82	3.9	202
61	Synaptic integration in dendritic trees. *Journal of Neurobiology*, **2005**, 64, 75-90		191
60	Single Ih channels in pyramidal neuron dendrites: properties, distribution, and impact on action potential output. *Journal of Neuroscience*, **2006**, 26, 1677-87	6.6	172
59	Role of dendritic synapse location in the control of action potential output. *Trends in Neurosciences*, **2003**, 26, 147-54	13.3	166
58	Heterogeneity of phasic cholinergic signaling in neocortical neurons. *Journal of Neurophysiology*, **2007**, 97, 2215-29	3.2	156
57	Membrane potential bistability is controlled by the hyperpolarization-activated current I(H) in rat cerebellar Purkinje neurons in vitro. *Journal of Physiology*, **2002**, 539, 469-83	3.9	141
56	Action potential backpropagation and somato-dendritic distribution of ion channels in thalamocortical neurons. *Journal of Neuroscience*, **2000**, 20, 1307-17	6.6	139
55	Requirement of dendritic calcium spikes for induction of spike-timing-dependent synaptic plasticity. *Journal of Physiology*, **2006**, 574, 283-90	3.9	135
54	Kinetics of Mg2+ unblock of NMDA receptors: implications for spike-timing dependent synaptic plasticity. *Journal of Physiology*, **2004**, 556, 337-45	3.9	132
53	Cholinergic inhibition of neocortical pyramidal neurons. *Journal of Neuroscience*, **2005**, 25, 10308-20	6.6	132
52	Dendritic patch-clamp recording. *Nature Protocols*, **2006**, 1, 1235-47	18.8	123
51	Inherited cortical HCN1 channel loss amplifies dendritic calcium electrogenesis and burst firing in a rat absence epilepsy model. *Journal of Physiology*, **2007**, 578, 507-25	3.9	118
50	Membrane potential changes in dendritic spines during action potentials and synaptic input. *Journal of Neuroscience*, **2009**, 29, 6897-903	6.6	109

49	Is action potential threshold lowest in the axon?. *Nature Neuroscience*, **2008**, 11, 1253-5	25.5	107
48	Dendritic mechanisms controlling spike-timing-dependent synaptic plasticity. *Trends in Neurosciences*, **2007**, 30, 456-63	13.3	107
47	Cortical feed-forward networks for binding different streams of sensory information. *Nature Neuroscience*, **2006**, 9, 1472-3	25.5	105
46	State and location dependence of action potential metabolic cost in cortical pyramidal neurons. *Nature Neuroscience*, **2012**, 15, 1007-14	25.5	97
45	Calcium spikes in basal dendrites of layer 5 pyramidal neurons during action potential bursts. *Journal of Neuroscience*, **2006**, 26, 7424-32	6.6	94
44	Voltage- and site-dependent control of the somatic impact of dendritic IPSPs. *Journal of Neuroscience*, **2003**, 23, 7358-67	6.6	90
43	The role of GABAA and GABAB receptors in presynaptic inhibition of Ia EPSPs in cat spinal motoneurones. *Journal of Physiology*, **1992**, 447, 675-92	3.9	86
42	Differential shunting of EPSPs by action potentials. *Science*, **2001**, 291, 138-41	33.3	83
41	Backpropagation of physiological spike trains in neocortical pyramidal neurons: implications for temporal coding in dendrites. *Journal of Neuroscience*, **2000**, 20, 8238-46	6.6	71
40	Action potential initiation and propagation in layer 5 pyramidal neurons of the rat prefrontal cortex: absence of dopamine modulation. *Journal of Neuroscience*, **2003**, 23, 11363-72	6.6	66
39	Initiation of simple and complex spikes in cerebellar Purkinje cells. *Journal of Physiology*, **2010**, 588, 1709-17	5.1	65
38	Voltage-activated sodium channels amplify inhibition in neocortical pyramidal neurons. *Nature Neuroscience*, **1999**, 2, 144-50	25.5	61
37	Loss of sensory input increases the intrinsic excitability of layer 5 pyramidal neurons in rat barrel cortex. *Journal of Physiology*, **2009**, 587, 5107-19	3.9	54
36	Electrical advantages of dendritic spines. *PLoS ONE*, **2012**, 7, e36007	3.7	53
35	Dendritic synapse location and neocortical spike-timing-dependent plasticity. *Frontiers in Synaptic Neuroscience*, **2010**, 2, 29	3.5	53
34	Voltage dependence of Ia reciprocal inhibitory currents in cat spinal motoneurones. *Journal of Physiology*, **1990**, 420, 111-25	3.9	44
33	Patch-Pipette Recordings from the Soma, Dendrites, and Axon of Neurons in Brain Slices **1995**, 199-211		40
32	Sublinear integration underlies binocular processing in primary visual cortex. *Nature Neuroscience*, **2013**, 16, 714-23	25.5	34

31	Mechanisms of presynaptic inhibition studied using paired-pulse facilitation. *Neuroscience Letters*, **1991**, 126, 179-83	3.3	31
30	Imaging membrane potential in dendrites and axons of single neurons. *Pflugers Archiv European Journal of Physiology*, **2006**, 453, 403-10	4.6	30
29	Different calcium sources control somatic versus dendritic SK channel activation during action potentials. *Journal of Neuroscience*, **2013**, 33, 19396-405	6.6	25
28	Does spike timing-dependent synaptic plasticity underlie memory formation?. *Clinical and Experimental Pharmacology and Physiology*, **2007**, 34, 1070-6	3	23
27	Probing dendritic function with patch pipettes. *Current Opinion in Neurobiology*, **1995**, 5, 389-94	7.6	23
26	Four-dimensional multi-site photolysis of caged neurotransmitters. *Frontiers in Cellular Neuroscience*, **2013**, 7, 231	6.1	22
25	The Impact of BK Channels on Cellular Excitability Depends on their Subcellular Location. *Frontiers in Cellular Neuroscience*, **2016**, 10, 206	6.1	22
24	Dendritic small conductance calcium-activated potassium channels activated by action potentials suppress EPSPs and gate spike-timing dependent synaptic plasticity. *ELife*, **2017**, 6,	8.9	20
23	The initial burst of impulses in responses of toad muscle spindles during stretch. *Journal of Physiology*, **1985**, 368, 1-17	3.9	20
22	Superior colliculus modulates cortical coding of somatosensory information. *Nature Communications*, **2020**, 11, 1693	17.4	19
21	Somatic and dendritic GABA(B) receptors regulate neuronal excitability via different mechanisms. *Journal of Neurophysiology*, **2012**, 108, 2810-8	3.2	18
20	Characterisation and functional mapping of surface potentials in the rat dorsal column nuclei. *Journal of Physiology*, **2017**, 595, 4507-4524	3.9	11
19	Information Processing in Dendrites and Spines **2013**, 231-260		10
18	Impact of calcium-activated potassium channels on NMDA spikes in cortical layer 5 pyramidal neurons. *Journal of Neurophysiology*, **2016**, 115, 1740-8	3.2	10
17	Characteristics of reflex excitation in close synergist muscles evoked by muscle vibration. *Experimental Brain Research*, **1986**, 65, 127-34	2.3	8
16	Paradoxical Excitatory Impact of SK Channels on Dendritic Excitability. *Journal of Neuroscience*, **2019**, 39, 7826-7839	6.6	7
15	GABA receptors in neocortical and hippocampal pyramidal neurons are coupled to different potassium channels. *European Journal of Neuroscience*, **2017**, 46, 2859-2866	3.5	6
14	Peripheral Nerve Activation Evokes Machine-Learnable Signals in the Dorsal Column Nuclei. *Frontiers in Systems Neuroscience*, **2019**, 13, 11	3.5	5

13	A Neuroethics Framework for the Australian Brain Initiative. *Neuron*, **2019**, 101, 365-369	13.9	5
12	Determinants of spike timing-dependent synaptic plasticity. *Neuron*, **2001**, 32, 966-8	13.9	5
11	Dendritic integration **2007**, 350-399		5
10	Holographic Functional Calcium Imaging of Neuronal Circuit Activity. *Progress in Optical Science and Photonics*, **2019**, 143-165	0.3	4
9	Patch-pipet recording in brain slices. *Current Protocols in Neuroscience*, **2001**, Chapter 6, Unit 6.7	2.7	3
8	Superior colliculus modulates cortical coding of somatosensory information		3
7	Local versus Global Dendritic Integration. *Neuron*, **2019**, 103, 173-174	13.9	2
6	Building Bridges through Science. *Neuron*, **2017**, 96, 730-735	13.9	2
5	Dendritic spikes veto inhibition. *Neuron*, **2012**, 75, 744-6	13.9	2
4	Auditory input enhances somatosensory encoding and tactile goal-directed behavior. *Nature Communications*, **2021**, 12, 4509	17.4	2
3	Dendritic spikes in apical oblique dendrites of cortical layer 5 pyramidal neurons		1
2	All asleep-but inhibition is wide awake. *Neuron*, **2008**, 57, 804-6	13.9	
1	NMDA receptor kinetics are tuned for spike-timing dependent synaptic plasticity **2005**, 29-30		