

Michael E Hasselmo

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270
papers

20,047
citations

76
h-index

137
g-index

354
ext. papers

22,874
ext. citations

5.8
avg, IF

7.3
L-index

#	Paper	IF	Citations
270	The role of acetylcholine in learning and memory. <i>Current Opinion in Neurobiology</i> , 2006 , 16, 710-5	7.6	975
269	Neuromodulation: acetylcholine and memory consolidation. <i>Trends in Cognitive Sciences</i> , 1999 , 3, 351-352	4	700
268	Graded persistent activity in entorhinal cortex neurons. <i>Nature</i> , 2002 , 420, 173-8	50.4	620
267	A proposed function for hippocampal theta rhythm: separate phases of encoding and retrieval enhance reversal of prior learning. <i>Neural Computation</i> , 2002 , 14, 793-817	2.9	573
266	Unraveling the attentional functions of cortical cholinergic inputs: interactions between signal-driven and cognitive modulation of signal detection. <i>Brain Research Reviews</i> , 2005 , 48, 98-111		557
265	The role of expression and identity in the face-selective responses of neurons in the temporal visual cortex of the monkey. <i>Behavioural Brain Research</i> , 1989 , 32, 203-18	3.4	497
264	Modes and models of forebrain cholinergic neuromodulation of cognition. <i>Neuropsychopharmacology</i> , 2011 , 36, 52-73	8.7	489
263	Gamma frequency-range abnormalities to auditory stimulation in schizophrenia. <i>Archives of General Psychiatry</i> , 1999 , 56, 1001-5		474
262	Neuromodulation and cortical function: modeling the physiological basis of behavior. <i>Behavioural Brain Research</i> , 1995 , 67, 1-27	3.4	433
261	The hippocampus as an associator of discontiguous events. <i>Trends in Neurosciences</i> , 1998 , 21, 317-23	13.3	405
260	High acetylcholine levels set circuit dynamics for attention and encoding and low acetylcholine levels set dynamics for consolidation. <i>Progress in Brain Research</i> , 2004 , 145, 207-31	2.9	378
259	Acetylcholine and memory. <i>Trends in Neurosciences</i> , 1993 , 16, 218-22	13.3	342
258	What is the function of hippocampal theta rhythm?--Linking behavioral data to phasic properties of field potential and unit recording data. <i>Hippocampus</i> , 2005 , 15, 936-49	3.5	326
257	Free recall and recognition in a network model of the hippocampus: simulating effects of scopolamine on human memory function. <i>Behavioural Brain Research</i> , 1997 , 89, 1-34	3.4	314
256	Reduction of theta rhythm dissociates grid cell spatial periodicity from directional tuning. <i>Science</i> , 2011 , 332, 595-9	33.3	303
255	Hippocampal "time cells": time versus path integration. <i>Neuron</i> , 2013 , 78, 1090-101	13.9	302
254	Temporal frequency of subthreshold oscillations scales with entorhinal grid cell field spacing. <i>Science</i> , 2007 , 315, 1719-22	33.3	300

253	Stimulation in hippocampal region CA1 in behaving rats yields long-term potentiation when delivered to the peak of theta and long-term depression when delivered to the trough. <i>Journal of Neuroscience</i> , 2003 , 23, 11725-31	6.6	270
252	Properties and role of I(h) in the pacing of subthreshold oscillations in entorhinal cortex layer II neurons. <i>Journal of Neurophysiology</i> , 2000 , 83, 2562-79	3.2	258
251	Encoding and retrieval of episodic memories: role of cholinergic and GABAergic modulation in the hippocampus. <i>Hippocampus</i> , 1996 , 6, 693-708	3.5	256
250	GABAergic modulation of hippocampal population activity: sequence learning, place field development, and the phase precession effect. <i>Journal of Neurophysiology</i> , 1997 , 78, 393-408	3.2	251
249	Grid cell firing may arise from interference of theta frequency membrane potential oscillations in single neurons. <i>Hippocampus</i> , 2007 , 17, 1252-71	3.5	230
248	Mechanisms underlying working memory for novel information. <i>Trends in Cognitive Sciences</i> , 2006 , 10, 487-93	14	230
247	Medial prefrontal cortex cells show dynamic modulation with the hippocampal theta rhythm dependent on behavior. <i>Hippocampus</i> , 2005 , 15, 739-49	3.5	228
246	Mechanism of graded persistent cellular activity of entorhinal cortex layer v neurons. <i>Neuron</i> , 2006 , 49, 735-46	13.9	219
245	Hippocampal mechanisms for the context-dependent retrieval of episodes. <i>Neural Networks</i> , 2005 , 18, 1172-90	9.1	217
244	The temporal context model in spatial navigation and relational learning: toward a common explanation of medial temporal lobe function across domains. <i>Psychological Review</i> , 2005 , 112, 75-116	6.3	213
243	Medial temporal and prefrontal contributions to working memory tasks with novel and familiar stimuli. <i>Hippocampus</i> , 2001 , 11, 337-46	3.5	208
242	Plaque-induced neurite abnormalities: implications for disruption of neural networks in Alzheimer's disease. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1999 , 96, 5274-9	11.5	194
241	Noradrenergic suppression of synaptic transmission may influence cortical signal-to-noise ratio. <i>Journal of Neurophysiology</i> , 1997 , 77, 3326-39	3.2	189
240	Neuromodulation, theta rhythm and rat spatial navigation. <i>Neural Networks</i> , 2002 , 15, 689-707	9.1	163
239	The effect of learning on the face selective responses of neurons in the cortex in the superior temporal sulcus of the monkey. <i>Experimental Brain Research</i> , 1989 , 76, 153-64	2.3	163
238	Grid cell mechanisms and function: contributions of entorhinal persistent spiking and phase resetting. <i>Hippocampus</i> , 2008 , 18, 1213-29	3.5	162
237	Object-centered encoding by face-selective neurons in the cortex in the superior temporal sulcus of the monkey. <i>Experimental Brain Research</i> , 1989 , 75, 417-29	2.3	160
236	Working Memory Performance Correlates with Prefrontal-Hippocampal Theta Interactions but not with Prefrontal Neuron Firing Rates. <i>Frontiers in Integrative Neuroscience</i> , 2010 , 4, 2	3.2	157

235	Persistence of parahippocampal representation in the absence of stimulus input enhances long-term encoding: a functional magnetic resonance imaging study of subsequent memory after a delayed match-to-sample task. <i>Journal of Neuroscience</i> , 2004 , 24, 11088-97	6.6	157
234	During Running in Place, Grid Cells Integrate Elapsed Time and Distance Run. <i>Neuron</i> , 2015 , 88, 578-89	13.9	143
233	Theta rhythm and the encoding and retrieval of space and time. <i>NeuroImage</i> , 2014 , 85 Pt 2, 656-66	7.9	140
232	Cholinergic modulation of cortical function. <i>Journal of Molecular Neuroscience</i> , 2006 , 30, 133-5	3.3	138
231	Gradual translocation of spatial correlates of neuronal firing in the hippocampus toward prospective reward locations. <i>Neuron</i> , 2006 , 51, 639-50	13.9	124
230	DC-shifts in amplitude in-field generated by an oscillatory interference model of grid cell firing. <i>Frontiers in Systems Neuroscience</i> , 2014 , 8, 1	3.5	122
229	Neuromodulation by glutamate and acetylcholine can change circuit dynamics by regulating the relative influence of afferent input and excitatory feedback. <i>Molecular Neurobiology</i> , 2007 , 36, 184-200	6.2	121
228	Phase precession and variable spatial scaling in a periodic attractor map model of medial entorhinal grid cells with realistic after-spike dynamics. <i>Hippocampus</i> , 2012 , 22, 772-89	3.5	116
227	Scopolamine reduces persistent activity related to long-term encoding in the parahippocampal gyrus during delayed matching in humans. <i>Journal of Neuroscience</i> , 2005 , 25, 9112-23	6.6	113
226	Simulations of the role of the muscarinic-activated calcium-sensitive nonspecific cation current INCM in entorhinal neuronal activity during delayed matching tasks. <i>Journal of Neuroscience</i> , 2002 , 22, 1081-97	6.6	112
225	A unified mathematical framework for coding time, space, and sequences in the hippocampal region. <i>Journal of Neuroscience</i> , 2014 , 34, 4692-707	6.6	111
224	Blockade of central cholinergic receptors impairs new learning and increases proactive interference in a word paired-associate memory task. <i>Behavioral Neuroscience</i> , 2004 , 118, 223-36	2.1	110
223	Ionic mechanisms in the generation of subthreshold oscillations and action potential clustering in entorhinal layer II stellate neurons. <i>Hippocampus</i> , 2004 , 14, 368-84	3.5	109
222	Acetylcholine and Learning in a Cortical Associative Memory. <i>Neural Computation</i> , 1993 , 5, 32-44	2.9	109
221	Hippocampal CA1 spiking during encoding and retrieval: relation to theta phase. <i>Neurobiology of Learning and Memory</i> , 2007 , 87, 9-20	3.1	108
220	A model of episodic memory: mental time travel along encoded trajectories using grid cells. <i>Neurobiology of Learning and Memory</i> , 2009 , 92, 559-73	3.1	106
219	A goal-directed spatial navigation model using forward trajectory planning based on grid cells. <i>European Journal of Neuroscience</i> , 2012 , 35, 916-31	3.5	105
218	Modeling goal-directed spatial navigation in the rat based on physiological data from the hippocampal formation. <i>Neural Networks</i> , 2003 , 16, 577-84	9.1	100

217	Hippocampus and retrosplenial cortex combine path integration signals for successful navigation. <i>Journal of Neuroscience</i> , 2013 , 33, 19304-13	6.6	97
216	Multiple Running Speed Signals in Medial Entorhinal Cortex. <i>Neuron</i> , 2016 , 91, 666-79	13.9	94
215	Knock-out of HCN1 subunit flattens dorsal-ventral frequency gradient of medial entorhinal neurons in adult mice. <i>Journal of Neuroscience</i> , 2009 , 29, 7625-30	6.6	94
214	Time constants of h current in layer ii stellate cells differ along the dorsal to ventral axis of medial entorhinal cortex. <i>Journal of Neuroscience</i> , 2008 , 28, 9414-25	6.6	94
213	Switching between "On" and "Off" states of persistent activity in lateral entorhinal layer III neurons. <i>Hippocampus</i> , 2007 , 17, 257-63	3.5	94
212	Neural models of memory. <i>Current Opinion in Neurobiology</i> , 1999 , 9, 184-8	7.6	93
211	Which way was I going? Contextual retrieval supports the disambiguation of well learned overlapping navigational routes. <i>Journal of Neuroscience</i> , 2010 , 30, 7414-22	6.6	91
210	Cholinergic modulation of cognitive processing: insights drawn from computational models. <i>Frontiers in Behavioral Neuroscience</i> , 2012 , 6, 24	3.5	90
209	Encoding and retrieval in the CA3 region of the hippocampus: a model of theta-phase separation. <i>Journal of Neurophysiology</i> , 2005 , 94, 70-82	3.2	90
208	Coupled noisy spiking neurons as velocity-controlled oscillators in a model of grid cell spatial firing. <i>Journal of Neuroscience</i> , 2010 , 30, 13850-60	6.6	88
207	Runaway synaptic modification in models of cortex: Implications for Alzheimer's disease. <i>Neural Networks</i> , 1994 , 7, 13-40	9.1	88
206	Modulation of inhibition in a model of olfactory bulb reduces overlap in the neural representation of olfactory stimuli. <i>Behavioural Brain Research</i> , 1997 , 84, 117-27	3.4	87
205	Spatial representations of hippocampal CA1 neurons are modulated by behavioral context in a hippocampus-dependent memory task. <i>Journal of Neuroscience</i> , 2007 , 27, 2416-23	6.6	86
204	The Same Hippocampal CA1 Population Simultaneously Codes Temporal Information over Multiple Timescales. <i>Current Biology</i> , 2018 , 28, 1499-1508.e4	6.3	84
203	Cholinergic modulation of the resonance properties of stellate cells in layer II of medial entorhinal cortex. <i>Journal of Neurophysiology</i> , 2010 , 104, 258-70	3.2	82
202	Cholinergic blockade reduces theta-gamma phase amplitude coupling and speed modulation of theta frequency consistent with behavioral effects on encoding. <i>Journal of Neuroscience</i> , 2013 , 33, 19635-46	6.6	80
201	Modeling the role of working memory and episodic memory in behavioral tasks. <i>Hippocampus</i> , 2008 , 18, 193-209	3.5	80
200	Role of ICAN in rate, spike time, and theta phase coding by persistent spiking neurons of the medial entorhinal cortex. <i>BMC Neuroscience</i> , 2011 , 12,	3.2	78

199	Network dynamics of encoding and retrieval of behavioural spike sequences during theta and ripples in a CA1 model of the hippocampus. <i>BMC Neuroscience</i> , 2010 , 11,	3.2	78
198	mGluR-dependent persistent firing in entorhinal cortex layer III neurons. <i>European Journal of Neuroscience</i> , 2008 , 28, 1116-26	3.5	78
197	Cholinergic deafferentation of the entorhinal cortex in rats impairs encoding of novel but not familiar stimuli in a delayed nonmatch-to-sample task. <i>Journal of Neuroscience</i> , 2005 , 25, 10273-81	6.6	78
196	Selective loss of cholinergic neurons projecting to the olfactory system increases perceptual generalization between similar, but not dissimilar, odorants.. <i>Behavioral Neuroscience</i> , 2001 , 115, 826-833 ¹	3.1	76
195	Muscarinic cholinergic neuromodulation reduces proactive interference between stored odor memories during associative learning in rats.. <i>Behavioral Neuroscience</i> , 2000 , 114, 32-41	2.1	76
194	Bat and rat neurons differ in theta-frequency resonance despite similar coding of space. <i>Science</i> , 2013 , 340, 363-7	33.3	75
193	Persistent firing supported by an intrinsic cellular mechanism in a component of the head direction system. <i>Journal of Neuroscience</i> , 2009 , 29, 4945-52	6.6	74
192	Analysis of theta power in hippocampal EEG during bar pressing and running behavior in rats during distinct behavioral contexts. <i>Hippocampus</i> , 2004 , 14, 662-74	3.5	70
191	Segregation of cortical head direction cell assemblies on alternating cycles. <i>Nature Neuroscience</i> , 2013 , 16, 739-48	25.5	69
190	Differences in time course of ACh and GABA modulation of excitatory synaptic potentials in slices of rat hippocampus. <i>Journal of Neurophysiology</i> , 2001 , 86, 1792-802	3.2	69
189	Cholinergic agonist carbachol enables associative long-term potentiation in piriform cortex slices. <i>Journal of Neurophysiology</i> , 1998 , 80, 2467-74	3.2	69
188	Changes in GABAB modulation during a theta cycle may be analogous to the fall of temperature during annealing. <i>Neural Computation</i> , 1998 , 10, 869-82	2.9	68
187	There and Back Again: Hippocampus and Retrosplenial Cortex Track Homing Distance during Human Path Integration. <i>Journal of Neuroscience</i> , 2015 , 35, 15442-52	6.6	66
186	The role of hippocampal regions CA3 and CA1 in matching entorhinal input with retrieval of associations between objects and context: theoretical comment on Lee et al. (2005). <i>Behavioral Neuroscience</i> , 2005 , 119, 342-5	2.1	66
185	Behavioral responses to aliphatic aldehydes can be predicted from known electrophysiological responses of mitral cells in the olfactory bulb. <i>Physiology and Behavior</i> , 1999 , 66, 497-502	3.5	66
184	A model of prefrontal cortical mechanisms for goal-directed behavior. <i>Journal of Cognitive Neuroscience</i> , 2005 , 17, 1115-29	3.1	63
183	Specific Basal Forebrain-Cortical Cholinergic Circuits Coordinate Cognitive Operations. <i>Journal of Neuroscience</i> , 2018 , 38, 9446-9458	6.6	63
182	Reconciling the different faces of hippocampal theta: The role of theta oscillations in cognitive, emotional and innate behaviors. <i>Neuroscience and Biobehavioral Reviews</i> , 2018 , 85, 65-80	9	62

181	Scopolamine impairs human recognition memory: data and modeling. <i>Behavioral Neuroscience</i> , 2003 , 117, 526-39	2.1	62
180	Computation by oscillations: implications of experimental data for theoretical models of grid cells. <i>Hippocampus</i> , 2008 , 18, 1186-99	3.5	60
179	Size of CA1-evoked synaptic potentials is related to theta rhythm phase in rat hippocampus. <i>Journal of Neurophysiology</i> , 2000 , 83, 2138-44	3.2	59
178	A computational model of cholinergic disruption of septohippocampal activity in classical eyeblink conditioning. <i>Neurobiology of Learning and Memory</i> , 1996 , 66, 51-66	3.1	56
177	GABAergic contributions to gating, timing, and phase precession of hippocampal neuronal activity during theta oscillations. <i>Hippocampus</i> , 2012 , 22, 1597-621	3.5	55
176	The responses of neurons in the cortex in the superior temporal sulcus of the monkey to band-pass spatial frequency filtered faces. <i>Vision Research</i> , 1987 , 27, 311-26	2.1	55
175	Selective suppression of intrinsic but not afferent fiber synaptic transmission by baclofen in the piriform (olfactory) cortex. <i>Brain Research</i> , 1994 , 659, 75-81	3.7	54
174	Greater working memory load results in greater medial temporal activity at retrieval. <i>Cerebral Cortex</i> , 2009 , 19, 2561-71	5.1	53
173	Suppression of synaptic transmission may allow combination of associative feedback and self-organizing feedforward connections in the neocortex. <i>Behavioural Brain Research</i> , 1996 , 79, 153-61	3.4	53
172	Possible role of acetylcholine in regulating spatial novelty effects on theta rhythm and grid cells. <i>Frontiers in Neural Circuits</i> , 2012 , 6, 5	3.5	52
171	Egocentric boundary vector tuning of the retrosplenial cortex. <i>Science Advances</i> , 2020 , 6, eaaz2322	14.3	51
170	Phase coding by grid cells in unconstrained environments: two-dimensional phase precession. <i>European Journal of Neuroscience</i> , 2013 , 38, 2526-41	3.5	51
169	Contribution of the cholinergic basal forebrain to proactive interference from stored odor memories during associative learning in rats. <i>Behavioral Neuroscience</i> , 2001 , 115, 314-327	2.1	51
168	Modulation of inhibitory synaptic potentials in the piriform cortex. <i>Journal of Neurophysiology</i> , 1999 , 81, 2103-18	3.2	51
167	Evaluation of the oscillatory interference model of grid cell firing through analysis and measured period variance of some biological oscillators. <i>PLoS Computational Biology</i> , 2009 , 5, e1000573	5	49
166	Linking cellular mechanisms to behavior: entorhinal persistent spiking and membrane potential oscillations may underlie path integration, grid cell firing, and episodic memory. <i>Neural Plasticity</i> , 2008 , 2008, 658323	3.3	49
165	Computational modeling of entorhinal cortex. <i>Annals of the New York Academy of Sciences</i> , 2000 , 911, 418-46	6.5	48
164	Muscarinic suppression in stratum radiatum of CA1 shows dependence on presynaptic M1 receptors and is not dependent on effects at GABA(B) receptors. <i>Neurobiology of Learning and Memory</i> , 2006 , 85, 153-63	3.1	46

163	A biologically inspired hierarchical goal directed navigation model. <i>Journal of Physiology (Paris)</i> , 2014 , 108, 28-37		44
162	A model combining oscillations and attractor dynamics for generation of grid cell firing. <i>Frontiers in Neural Circuits</i> , 2012 , 6, 30	3.5	44
161	Electrical stimulation of the horizontal limb of the diagonal band of broca modulates population EPSPs in piriform cortex. <i>Journal of Neurophysiology</i> , 1999 , 81, 2737-42	3.2	44
160	Head direction is coded more strongly than movement direction in a population of entorhinal neurons. <i>Brain Research</i> , 2015 , 1621, 355-67	3.7	42
159	Hippocampal Place Fields Maintain a Coherent and Flexible Map across Long Timescales. <i>Current Biology</i> , 2018 , 28, 3578-3588.e6	6.3	42
158	Modulation of Hippocampal Circuits by Muscarinic and Nicotinic Receptors. <i>Frontiers in Neural Circuits</i> , 2017 , 11, 102	3.5	41
157	Frequency of subthreshold oscillations at different membrane potential voltages in neurons at different anatomical positions on the dorsoventral axis in the rat medial entorhinal cortex. <i>Journal of Neuroscience</i> , 2011 , 31, 12683-94	6.6	41
156	Enhanced cholinergic suppression of previously strengthened synapses enables the formation of self-organized representations in olfactory cortex. <i>Neurobiology of Learning and Memory</i> , 2003 , 80, 302-341	3.1	41
155	Nicotinic modulation of glutamatergic synaptic transmission in region CA3 of the hippocampus. <i>European Journal of Neuroscience</i> , 2005 , 22, 1349-56	3.5	40
154	Effects of acetylcholine on neuronal properties in entorhinal cortex. <i>Frontiers in Behavioral Neuroscience</i> , 2012 , 6, 32	3.5	39
153	GABA(B) modulation improves sequence disambiguation in computational models of hippocampal region CA3. <i>Hippocampus</i> , 1998 , 8, 171-93	3.5	39
152	Bridging the gap: integrating cellular and functional magnetic resonance imaging studies of the hippocampus. <i>Hippocampus</i> , 1999 , 9, 45-53	3.5	39
151	A model for experience-dependent changes in the responses of inferotemporal neurons. <i>Network: Computation in Neural Systems</i> , 2000 , 11, 169-190	0.7	37
150	A simple biophysically plausible model for long time constants in single neurons. <i>Hippocampus</i> , 2015 , 25, 27-37	3.5	36
149	A high-resolution study of hippocampal and medial temporal lobe correlates of spatial context and prospective overlapping route memory. <i>Hippocampus</i> , 2014 , 24, 819-39	3.5	36
148	GABA(B) presynaptic inhibition has an in vivo time constant sufficiently rapid to allow modulation at theta frequency. <i>Journal of Neurophysiology</i> , 2002 , 87, 1196-205	3.2	36
147	Neural activity in the horizontal limb of the diagonal band of broca can be modulated by electrical stimulation of the olfactory bulb and cortex in rats. <i>Neuroscience Letters</i> , 2000 , 282, 157-60	3.3	36
146	Neuronal representation of environmental boundaries in egocentric coordinates. <i>Nature Communications</i> , 2019 , 10, 2772	17.4	35

145	First-in-first-out item replacement in a model of short-term memory based on persistent spiking. <i>Cerebral Cortex</i> , 2007 , 17, 1766-81	5.1	35
144	Modeling of context-dependent retrieval in hippocampal region CA1: implications for cognitive function in schizophrenia. <i>Schizophrenia Research</i> , 2007 , 89, 177-90	3.6	34
143	Cholinergic suppression of glutamatergic synaptic transmission in hippocampal region CA3 exhibits laminar selectivity: Implication for hippocampal network dynamics. <i>Neuroscience</i> , 2007 , 149, 760-7	3.9	34
142	Functional connections between optic flow areas and navigationally responsive brain regions during goal-directed navigation. <i>NeuroImage</i> , 2015 , 118, 386-96	7.9	33
141	Decoding movement trajectories through a T-maze using point process filters applied to place field data from rat hippocampal region CA1. <i>Neural Computation</i> , 2009 , 21, 3305-34	2.9	33
140	Arc length coding by interference of theta frequency oscillations may underlie context-dependent hippocampal unit data and episodic memory function. <i>Learning and Memory</i> , 2007 , 14, 782-94	2.8	33
139	An integrate-and-fire model of prefrontal cortex neuronal activity during performance of goal-directed decision making. <i>Cerebral Cortex</i> , 2005 , 15, 1964-81	5.1	33
138	Neuromodulation and the hippocampus: memory function and dysfunction in a network simulation. <i>Progress in Brain Research</i> , 1999 , 121, 3-18	2.9	33
137	Grid cell spatial tuning reduced following systemic muscarinic receptor blockade. <i>Hippocampus</i> , 2014 , 24, 643-55	3.5	32
136	Cellular dynamical mechanisms for encoding the time and place of events along spatiotemporal trajectories in episodic memory. <i>Behavioural Brain Research</i> , 2010 , 215, 261-74	3.4	32
135	Theta rhythmic stimulation of stratum lacunosum-moleculare in rat hippocampus contributes to associative LTP at a phase offset in stratum radiatum. <i>Journal of Neurophysiology</i> , 2004 , 92, 1615-24	3.2	32
134	Selective suppression of afferent but not intrinsic fiber synaptic transmission by 2-amino-4-phosphonobutyric acid (AP4) in piriform cortex. <i>Brain Research</i> , 1991 , 548, 248-55	3.7	32
133	Neuromodulation of I(h) in layer II medial entorhinal cortex stellate cells: a voltage-clamp study. <i>Journal of Neuroscience</i> , 2012 , 32, 9066-72	6.6	31
132	Neuronal rebound spiking, resonance frequency and theta cycle skipping may contribute to grid cell firing in medial entorhinal cortex. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2014 , 369, 20120523	5.8	30
131	Functional transitions between epileptiform-like activity and associative memory in hippocampal region CA3. <i>Brain Research Bulletin</i> , 1997 , 43, 485-93	3.9	29
130	Using connectionist models to guide assessment of psychological disorder.. <i>Psychological Assessment</i> , 2002 , 14, 263-278	5.3	28
129	Individual Differences in Human Path Integration Abilities Correlate with Gray Matter Volume in Retrosplenial Cortex, Hippocampus, and Medial Prefrontal Cortex. <i>ENeuro</i> , 2017 , 4,	3.9	28
128	How We Remember 2011 ,		28

127	A neural microcircuit model for a scalable scale-invariant representation of time. <i>Hippocampus</i> , 2019 , 29, 260-274	3.5	28
126	Temporally structured replay of neural activity in a model of entorhinal cortex, hippocampus and postsubiculum. <i>European Journal of Neuroscience</i> , 2008 , 28, 1301-15	3.5	26
125	Coincidence detection of place and temporal context in a network model of spiking hippocampal neurons. <i>PLoS Computational Biology</i> , 2007 , 3, e234	5	26
124	From biophysics to behavior: Catacomb2 and the design of biologically-plausible models for spatial navigation. <i>Neuroinformatics</i> , 2003 , 1, 3-42	3.2	26
123	Modeling boundary vector cell firing given optic flow as a cue. <i>PLoS Computational Biology</i> , 2012 , 8, e1002553	2.5	25
122	Grid cell firing properties vary as a function of theta phase locking preferences in the rat medial entorhinal cortex. <i>Frontiers in Systems Neuroscience</i> , 2014 , 8, 193	3.5	24
121	Reversed and forward buffering of behavioral spike sequences enables retrospective and prospective retrieval in hippocampal regions CA3 and CA1. <i>Neural Networks</i> , 2008 , 21, 276-88	9.1	24
120	Neural mechanisms of navigation involving interactions of cortical and subcortical structures. <i>Journal of Neurophysiology</i> , 2018 , 119, 2007-2029	3.2	23
119	Head direction cells in the postsubiculum do not show replay of prior waking sequences during sleep. <i>Hippocampus</i> , 2012 , 22, 604-18	3.5	23
118	Spatial Memory Sequence Encoding and Replay During Modeled Theta and Ripple Oscillations. <i>Cognitive Computation</i> , 2011 , 3, 554-574	4.4	23
117	Voltage dependence of subthreshold resonance frequency in layer II of medial entorhinal cortex. <i>Hippocampus</i> , 2012 , 22, 1733-49	3.5	22
116	The Firing Rate Speed Code of Entorhinal Speed Cells Differs across Behaviorally Relevant Time Scales and Does Not Depend on Medial Septum Inputs. <i>Journal of Neuroscience</i> , 2019 , 39, 3434-3453	6.6	22
115	Examination of rhythmicity of extracellularly recorded neurons in the entorhinal cortex. <i>Hippocampus</i> , 2015 , 25, 460-73	3.5	20
114	Distinct Functional Groups Emerge from the Intrinsic Properties of Molecularly Identified Entorhinal Interneurons and Principal Cells. <i>Cerebral Cortex</i> , 2017 , 27, 3186-3207	5.1	20
113	Rebound spiking in layer II medial entorhinal cortex stellate cells: Possible mechanism of grid cell function. <i>Neurobiology of Learning and Memory</i> , 2016 , 129, 83-98	3.1	19
112	In vivo cholinergic modulation of the cellular properties of medial entorhinal cortex neurons. <i>Journal of Physiology</i> , 2013 , 591, 2611-27	3.9	19
111	A phase code for memory could arise from circuit mechanisms in entorhinal cortex. <i>Neural Networks</i> , 2009 , 22, 1129-38	9.1	19
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