Angelo Arleo

List of Publications by Year
in descending order

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68 papers	1,998 citations	361413 20 h-index	276875 41 g-index
80 all docs	80 docs citations	80 times ranked	2242 citing authors

#	Article	IF	Citations
1	Partial recovery of visual function in a blind patient after optogenetic therapy. Nature Medicine, 2021, 27, 1223-1229.	30.7	335
2	Spatial cognition and neuro-mimetic navigation: a model of hippocampal place cell activity. Biological Cybernetics, 2000, 83, 287-299.	1.3	240
3	Rapid Spatial Reorientation and Head Direction Cells. Journal of Neuroscience, 2003, 23, 3478-3482.	3.6	115
4	Is there a geometric module for spatial orientation? Insights from a rodent navigation model.. Psychological Review, 2009, 116, 540-566.	3.8	100
5	Spatial navigation impairment in mice lacking cerebellar LTD: a motor adaptation deficit?. Nature Neuroscience, 2005, 8, 1292-1294.	14.8	86
6	Cognitive Navigation Based on Nonuniform Gabor Space Sampling, Unsupervised Growing Networks, and Reinforcement Learning. IEEE Transactions on Neural Networks, 2004, 15, 639-652.	4.2	78
7	MULTIMODAL SENSORY INTEGRATION AND CONCURRENT NAVIGATION STRATEGIES FOR SPATIAL COGNITION IN REAL AND ARTIFICIAL ORGANISMS. Journal of Integrative Neuroscience, 2007, 06, 327-366.	1.7	72
8	Spatial Learning and Action Planning in a Prefrontal Cortical Network Model. PLoS Computational Biology, 2011, 7, e1002045.	3.2	67
9	Integration of Sensory Quanta in Cuneate Nucleus Neurons In Vivo. PLoS ONE, 2013, 8, e56630.	2.5	62
10	A Continuous Attractor Network Model Without Recurrent Excitation: Maintenance and Integration in the Head Direction Cell System. Journal of Computational Neuroscience, 2005, 18, 205-227.	1.0	53
11	Vision loss and 12-year risk of dementia in older adults: the 3C cohort study. European Journal of Epidemiology, 2019, 34, 141-152.	5.7	53
12	Efficient learning of variable-resolution cognitive maps for autonomous indoor navigation. IEEE Transactions on Automation Science and Engineering, 1999, 15, 990-1000.	2.3	51
13	How Synaptic Release Probability Shapes Neuronal Transmission: Information-Theoretic Analysis in a Cerebellar Granule Cell. Neural Computation, 2010, 22, 2031-2058.	2.2	51
14	Age-related preference for geometric spatial cues during real-world navigation. Nature Human Behaviour, 2020, 4, 88-99.	12.0	44
15	A closed-loop neurobotic system for fine touch sensing. Journal of Neural Engineering, 2013, 10, 046019.	3.5	40
16	Dopaminergic Control of Long-Term Depression/Long-Term Potentiation Threshold in Prefrontal Cortex. Journal of Neuroscience, 2013, 33, 13914-13926.	3.6	39
17	Insensitivity of place cells to the value of spatial goals in a two-choice flexible navigation task. Journal of Neuroscience, 2019, 39, 1578-18.	3.6	37
18	Mobile brain/body imaging of landmarkâ€based navigation with highâ€density EEG. European Journal of Neuroscience, 2021, 54, 8256-8282.	2.6	28

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19	Optic Flow Stimuli Update Anterodorsal Thalamus Head Direction Neuronal Activity in Rats. Journal of Neuroscience, 2013, 33, 16790-16795.	3.6	26
20	Age-Related Differences in Functional and Structural Connectivity in the Spatial Navigation Brain Network. Frontiers in Neural Circuits, 2019, 13, 69.	2.8	26
21	Contribution of Cerebellar Sensorimotor Adaptation to Hippocampal Spatial Memory. PLoS ONE, 2012, 7, e32560.	2.5	25
22	VOR Adaptation on a Humanoid iCub Robot Using a Spiking Cerebellar Model. IEEE Transactions on Cybernetics, 2020, 50, 4744-4757.	9.5	24
23	Rat anterodorsal thalamic head direction neurons depend upon dynamic visual signals to select anchoring landmark cues. European Journal of Neuroscience, 2004, 20, 530-536.	2.6	22
24	Spatial orientation in navigating agents: Modeling head-direction cells. Neurocomputing, 2001, 38-40, 1059-1065.	5.9	21
25	Spike burst-pause dynamics of Purkinje cells regulate sensorimotor adaptation. PLoS Computational Biology, 2019, 15, e1006298.	3.2	20
26	Visual Impairment, Undercorrected Refractive Errors, and Activity Limitations in Older Adults: Findings From the Three-City Alienor Study. , 2017, 58, 2359.		19
27	Differential Brain Activity in Regions Linked to Visuospatial Processing During Landmark-Based Navigation in Young and Healthy Older Adults. Frontiers in Human Neuroscience, 2020, 14, 552111.	2.0	19
28	Modeling place cells and grid cells in multi-compartment environments: Entorhinalâ€“hippocampal loop as a multisensory integration circuit. Neural Networks, 2020, 121, 37-51.	5.9	18
29	Encoding/decoding of first and second order tactile afferents in a neurorobotic application. Journal of Physiology (Paris), 2011, 105, 25-35.	2.1	17
30	Quantifying Neurotransmission Reliability Through Metrics-Based Information Analysis. Neural Computation, 2011, 23, 852-881.	2.2	17
31	Prevalence and Associated Factors of Uncorrected Refractive Error in Older Adults in a Population-Based Study in France. JAMA Ophthalmology, 2019, 137, 3.	2.5	16
32	The role of tonic and phasic dopamine for long-term synaptic plasticity in the prefrontal cortex: A computational model. Journal of Physiology (Paris), 2011, 105, 45-52.	2.1	12
33	Spatiotemporal Spike Coding of Behavioral Adaptation in the Dorsal Anterior Cingulate Cortex. PLoS Biology, 2015, 13, e1002222.	5.6	11
34	Coupling internal cerebellar models enhances online adaptation and supports offline consolidation in sensorimotor tasks. Frontiers in Computational Neuroscience, 2013, 7, 95.	2.1	10
35	Internal noise sources limiting contrast sensitivity. Scientific Reports, 2018, 8, 2596.	3.3	9
36	Healthy Aging Impairs Photon Absorption Efficiency of Cones. , 2019, 60, 544.		9

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37	Modeling Synaptic Transmission and Quantifying Information Transfer in the Granular Layer of the Cerebellum. Lecture Notes in Computer Science, 2005, , 107-114.	1.3	8
38	A Navigation Analysis Tool (NAT) to assess spatial behavior in open-field and structured mazes. Journal of Neuroscience Methods, 2013, 215, 196-209.	2.5	8
39	Persistent activity in limbic system neurons: neurophysiological and modeling perspectives. Journal of Physiology (Paris), 2003, 97, 547-555.	2.1	7
40	26th Annual Computational Neuroscience Meeting (CNS*2017): Part 2. BMC Neuroscience, 2017, 18, .	1.9	7
41	Unsupervised detection of microsaccades in a high-noise regime. Journal of Vision, 2018, 18, 19.	0.3	7
42	Rapid response of head direction cells to reorienting visual cues: a computational model. Neurocomputing, 2004, 58-60, 675-682.	5.9	6
43	A reinforcement learning approach to model interactions between landmarks and geometric cues during spatial learning. Brain Research, 2010, 1365, 35-47.	2.2	6
44	Maximizing noise energy for noise-masking studies. Behavior Research Methods, 2017, 49, 1278-1290.	4.0	6
45	Map-Based Spatial Navigation: A Cortical Column Model for Action Planning. Lecture Notes in Computer Science, 2008, , 39-55.	1.3	6
46	Selective neural coding of object, feature, and geometry spatial cues in humans. Human Brain Mapping, 2022, 43, 5281-5295.	3.6	6
47	Adding temporally localized noise can enhance the contribution of target knowledge on contrast detection. Journal of Vision, 2017, 17, 5.	0.3	5
48	Category Structure and Categorical Perception Jointly Explained by Similarity-Based Information Theory. Entropy, 2018, 20, 527.	2.2	5
49	Postural Control While Walking Interferes With Spatial Learning in Older Adults Navigating in a Real Environment. Frontiers in Aging Neuroscience, 2020, 12, 588653.	3.4	5
50	Recording properties of an electrode implanted in the peripheral nervous system: A human computational model. , 2015, , .		4
51	Age-related decline in motion contrast sensitivity due to lower absorption rate of cones and calculation efficiency. Scientific Reports, 2020, 10, 16521.	3.3	4
52	Neuromimetic encoding/decoding of spatiotemporal spiking signals from an artificial touch sensor. , 2010, , .		3
53	Convis: A Toolbox to Fit and Simulate Filter-Based Models of Early Visual Processing. Frontiers in Neuroinformatics, 2018, 12, 9.	2.5	3
54	Isometric Coding of Spiking Haptic Signals by Peripheral Somatosensory Neurons. Lecture Notes in Computer Science, 2011, , 528-536.	1.3	3

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55	Computational epidemiology study of homeostatic compensation during sensorimotor aging. Neural Networks, 2022, 146, 316-333.	5.9	3
56	Reducing luminance intensity can improve motion perception in noise. Scientific Reports, 2017, 7, 43140.	3.3	2
57	Factorizing the motion sensitivity function into equivalent input noise and calculation efficiency. Journal of Vision, 2017, 17, 17.	0.3	2
58	Internal Models in the Cerebellum: A Coupling Scheme for Online and Offline Learning in Procedural Tasks. Lecture Notes in Computer Science, 2010, , 435-446.	1.3	2
59	An Appraisal of the Role of the Neocerebellum for Spatial Navigation in Healthy Aging. Cerebellum, 2022, , 1.	2.5	2
60	Modulation of a decision-making process by spatiotemporal spike patterns decoding: evidence from spike-train metrics analysis and spiking neural network modeling. BMC Neuroscience, 2013, 14, .	1.9	1
61	Modelling the Cortical Columnar Organisation for Topological State-Space Representation, and Action Planning. Lecture Notes in Computer Science, 2008, , 137-147.	1.3	1
62	Future trends in brain aging research: Visuo-cognitive functions at stake during mobility and spatial navigation. Aging Brain, 2022, 2, 100034.	1.3	1
63	The false aperture problem: Global motion perception without integration of local motion signals.. Psychological Review, 2022, 129, 732-741.	3.8	1
64	Modeling cerebellar learning for spatial cognition. BMC Neuroscience, 2009, 10, .	1.9	0
65	Active tactile sensing in a neurorobotic Braille-reading system. , 2012, , .		0
66	A Cortical Column Model for Multiscale Spatial Planning. Lecture Notes in Computer Science, 2010, , 347-358.	1.3	0
67	A Closed-Loop Neurorobotic System for Investigating Braille-Reading Finger Kinematics. Lecture Notes in Computer Science, 2012, , 407-418.	1.3	0
68	Functionally Assessing the Age-Related Decline in the Detection Rate of Photons by Cone Photoreceptors. Frontiers in Aging Neuroscience, 2021, 13, 744444.	3.4	0