Juyang Weng

List of Publications by Year
in descending order

107 papers	1,476 citations	516710 16 h-index	377865 34 g-index
107 all docs	107 docs citations	107 times ranked	712 citing authors

#	Article	IF	Citations
1	Developmental Network-2: The Autonomous Generation of Optimal Internal-Representation Hierarchy. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 6867-6880.	11.3	1
2	3D-to-2D-to-3D Conscious Learning. , 2022, , .		3
3	An Algorithmic Theory for Conscious Learning. , 2022, , .		4
4	On Machine Thinking. , 2021, , .		5
5	Learning to recognize while learning to speak: Self-supervision and developing a speaking motor. Neural Networks, 2021, 143, 28-41.	5.9	3
6	Muscle Vectors as Temporally Dense "Labels". , 2020, , .		3
7	Autonomous Programming for General Purposes: Theory. International Journal of Humanoid Robotics, 2020, 17, 2050016.	1.1	7
8	Autonomous Programming for General Purposes: Theory and Experiments. , 2020, , .		2
9	User Flagging for Posts at 3DTube.org: the First Social Platform for 3D-Exclusive Contents. , 2020, , .		0
10	Conscious Intelligence Requires Developmental Autonomous Programming For General Purposes. , 2020, , .		4
11	Fast Developmental Stereo-Disparity Detectors. , 2020, , .		1
12	Emergent Multilingual Language Acquisition Using Developmental Networks. , 2019, , .		5
13	The Emergent-Context Emergent-Input Framework for Temporal Processing. , 2019, , .		3
14	Neuron-Wise Inhibition Zones and Auditory Experiments. IEEE Transactions on Industrial Electronics, 2019, 66, 9581-9590.	7.9	8
15	Emergent neural turing machine and its visual navigation. Neural Networks, 2019, 110, 116-130.	5.9	16
16	Motivated Optimal Developmental Learning for Sequential Tasks Without Using Rigid Time-Discounts. IEEE Transactions on Neural Networks and Learning Systems, 2018, 29, 4917-4931.	11.3	24
17	Entropy as Temporal Information Density. , 2018, , .		0
18	Sensorimotor in Space and Time: Audition. , 2018, , .		3

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19	Emergent Turing Machine as a General Purpose Approximator. , 2018, , .		1
20	Information-dense actions as contexts. Neurocomputing, 2018, 311, 164-175.	5.9	9
21	Editorial: Representation in the Brain. Frontiers in Psychology, 2018, 9, 1410.	2.1	5
22	Actions as contexts. , 2017, , .		2
23	Challenges in visual parking and how a developmental network approaches the problem. , 2016, , .		6
24	Brains as optimal emergent Turing Machines. , 2016, , .		2
25	Approaching Camera-based Real-World Navigation Using Object Recognition. Procedia Computer Science, 2015, 53, 428-436.	2.0	6
26	Cross-domain and within-domain synaptic maintenance for autonomous development of visual areas. , 2015, , .		8
27	Guest Editorial Multimodal Modeling and Analysis Informed by Brain Imagingâ€"Part I. IEEE Transactions on Autonomous Mental Development, 2015, 7, 158-161.	1.6	0
28	Guest Editorial Multimodal Modeling and Analysis Informed by Brain Imagingâ€"Part II. IEEE Transactions on Autonomous Mental Development, 2015, 7, 269-272.	1.6	0
29	WWN-8: Incremental Online Stereo with Shape-from-X Using Life-Long Big Data from Multiple Modalities. Procedia Computer Science, 2015, 53, 316-326.	2.0	3
30	Brains as naturally emerging turing machines. , 2015, , .		1
31	Types, Locations, and Scales from Cluttered Natural Video and Actions. IEEE Transactions on Autonomous Mental Development, 2015, 7, 273-286.	1.6	3
32	A developmental whereâ€"what network for concurrent and interactive visual attention and recognition. Robotics and Autonomous Systems, 2015, 71, 35-48.	5.1	2
33	Brain as an Emergent Finite Automaton: A Theory and Three Theorems. International Journal of Intelligence Science, 2015, 05, 112-131.	0.8	36
34	A bridge-islands model for brains: Developing numeric circuits for logic and motivation. , 2014, , .		2
35	WWN-9: Cross-domain synaptic maintenance and its application to object groups recognition. , 2014, , .		8
36	Brain-Like Emergent Temporal Processing: Emergent Open States. IEEE Transactions on Autonomous Mental Development, 2013, 5, 89-116.	1.6	10

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37	Stereo where-what networks: Unsupervised binocular feature learning. , 2013, , .		1
38	Skull-closed autonomous development: WWN-6 using natural video. , 2012, , .		3
39	Developing dually optimal LCA features in sensory and action spaces for classification. , 2012, , .		0
40	Brain-Like Emergent Spatial Processing. IEEE Transactions on Autonomous Mental Development, 2012, 4, 161-185.	1.6	13
41	Symbolic Models and Emergent Models: A Review. IEEE Transactions on Autonomous Mental Development, 2012, 4, 29-53.	1.6	42
42	Incremental Online Object Learning in a Vehicular Radar-Vision Fusion Framework. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 402-411.	8.0	24
43	Guest Editorial Special Issue on Computational Modeling of Neural and Brain Development. IEEE Transactions on Autonomous Mental Development, 2011, 3, 273-275.	1.6	1
44	Three theorems: Brain-like networks logically reason and optimally generalize. , 2011, , .		5
45	Spatioâ€“Temporal Multimodal Developmental Learning. IEEE Transactions on Autonomous Mental Development, 2010, 2, 149-166.	1.6	9
46	Topâ€“Down Connections in Self-Organizing Hebbian Networks: Topographic Class Grouping. IEEE Transactions on Autonomous Mental Development, 2010, 2, 248-261.	1.6	14
47	Cognitive Science Meets Autonomous Mental Development. Cognitive Science, 2010, 34, 533-534.	1.7	0
48	WWN-2: A biologically inspired neural network for concurrent visual attention and recognition. , 2010, , .		16
49	Where-What Network 3: Developmental top-down attention for multiple foregrounds and complex backgrounds. , 2010, , .		15
50	WWN-text: Cortex-like language acquisition with “what” and “where”. , 2010, , .		7
51	Where-what network-4: The effect of multiple internal areas. , 2010, , .		11
52	Online learning for attention, recognition, and tracking by a single developmental framework. , 2010, , .		1
53	Dually Optimal Neuronal Layers: Lobe Component Analysis. IEEE Transactions on Autonomous Mental Development, 2009, 1, 68-85.	1.6	85
54	Developmental Stereo: Emergence of Disparity Preference in Models of the Visual Cortex. IEEE Transactions on Autonomous Mental Development, 2009, 1, 238-252.	1.6	20

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55	Task Muddiness, Intelligence Metrics, and the Necessity of Autonomous Mental Development. Minds and Machines, 2009, 19, 93-115.	4.8	17
56	Laterally connected lobe component analysis: Precision and topography. , 2009, , .		8
57	Spatioâ€"Temporal Adaptation in the Unsupervised Development of Networked Visual Neurons. IEEE Transactions on Neural Networks, 2009, 20, 992-1008.	4.2	10
58	Multilayer in-place learning networks for modeling functional layers in the laminar cortex. Neural Networks, 2008, 21, 150-159.	5.9	27
59	Motor initiated expectation through top-down connections as abstract context in a physical world. , 2008, , .		13
60	The architecture and body of FUWA developmental humanoid. , 2008, , .		1
61	Topographic Class Grouping with applications to 3D object recognition. , 2008, , .		14
62	Learning of sensorimotor behaviors by a SASE agent for vision-based navigation. , 2008, , .		0
63	Epigenetic sensorimotor pathways and its application to developmental object learning. , 2008, , .		0
64	INHERENT VALUE SYSTEMS FOR AUTONOMOUS MENTAL DEVELOPMENT. International Journal of Humanoid Robotics, 2007, 04, 407-433.	1.1	20
65	A system for epigenetic concept development through autonomous associative learning. , 2007, , .		2
66	The Multilayer In-Place Learning Network for the Development of General Invariances and Multi-Task Learning. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	2
67	Developmental learning for avoiding dynamic obstacles using attention. , 2007, , .		2
68	Task Transfer by a Developmental Robot. IEEE Transactions on Evolutionary Computation, 2007, 11, 226-248.	10.0	18
69	Guest Editorial: Convergent Approaches to the Understanding of Autonomous Mental Development. IEEE Transactions on Evolutionary Computation, 2007, 11, 133-136.	10.0	1
70	Incremental Hierarchical Discriminant Regression. IEEE Transactions on Neural Networks, 2007, 18, 397-415.	4.2	51
71	On developmental mental architectures. Neurocomputing, 2007, 70, 2303-2323.	5.9	30
72	Online-learning and Attention-based Approach to Obstacle Avoidance Using a Range Finder. Journal of Intelligent and Robotic Systems: Theory and Applications, 2007, 50, 219-239.	3.4	13

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73	Optimal In-Place Learning and the Lobe Component Analysis. , 2006, , .		13
74	Auditory Learning: A Developmental Method. IEEE Transactions on Neural Networks, 2005, 16, 601-616.	4.2	8
75	A THEORY OF DEVELOPMENTAL MENTAL ARCHITECTURE AND THE DAV ARCHITECTURE DESIGN. International Journal of Humanoid Robotics, 2005, 02, 145-179.	1.1	10
76	Adaptive Part Inspection Through Developmental Vision. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2005, 127, 846-856.	2.2	5
77	Obstacle avoidance through incremental learning with attention selection. , 2004, , .		7
78	Online image classification using IHDR. International Journal on Document Analysis and Recognition, 2003, 5, 118-125.	3.4	9
79	Candid covariance-free incremental principal component analysis. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2003, 25, 1034-1040.	13.9	384
80	Visual motion based behavior learning using hierarchical discriminant regression. Pattern Recognition Letters, 2002, 23, 1031-1038.	4.2	1
81	Developmental Vision, Audition, Robots and Beyond. Series in Machine Perception and Artificial Intelligence, 2002, , 1-37.	0.1	0
82	Three-dimensional sound localization from a compact non-coplanar array of microphones using tree-based learning. Journal of the Acoustical Society of America, 2001, 110, 310-323.	1.1	32
83	Appearance-Based Hand Sign Recognition from Intensity Image Sequences. Computer Vision and Image Understanding, 2000, 78, 157-176.	4.7	77
84	State-based SHOSLIF for indoor visual navigation. IEEE Transactions on Neural Networks, 2000, 11, 1300-1314.	4.2	11
85	The developmental approach to multimedia speech learning. , 1999, , .		1
86	Hierarchical discriminant analysis for image retrieval. IEEE Transactions on Pattern Analysis and Machine Intelligence, 1999, 21, 386-401.	13.9	82
87	Vision-guided navigation using SHOSLIF. Neural Networks, 1998, 11, 1511-1529.	5.9	18
88	Octrees of objects in arbitrary motion: Representation and efficiency. Computer Vision, Graphics, and Image Processing, 1987, 39, 167-185.	1.0	36
89	Office presence detection using multimodal context information. , 0, , .		2
90	An incremental learning method for face recognition under continuous video stream. , 0, , .		23

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91	Developing auditory skills by the SAIL robot. , 0, , .		0
92	Grounded auditory development by a developmental robot. , 0, , .		6
93	Incremental hierarchical discriminating regression for indoor visual navigation. , 0, , .		3
94	Autonomous speech acquisition of a robot. , 0, , .		1
95	Incremental hierarchical discriminant regression for online image classification. , 0, , .		5
96	Action chaining by a developmental robot with a value system. , 0, , .		4
97	A theory for mentally developing robots. , 0, , .		26
98	Chained action learning through real-time interactions. , 0, , .		2
99	Autonomous mental development in high dimensional state and action spaces. , 0, , .		0
100	Developing early senses about the world "object permanence" and visuoauditory real-time learning. , 0, , .		3
101	Dav developmental humanoid: the control architecture and body. , 0, , .		5
102	Sparse representation from a winner-take-all neural network. , 0, , .		7
103	Value system development for a robot. , 0, , .		3
104	Object permanence: results from developmental robotics. , 0, , .		0
105	Gradient Sparse Optimization via Competitive Learning. , 0, , .		0
106	Online Injection of TeacherÂ,È–s Abstract Concepts into a Real-time Developmental Robot with Autonomous Navigation as Example. , 0, , .		0
107	Optimal In-Place Learning and the Lobe Component Analysis. , 0, , .		0