Thomas P Trappenberg

List of Publications by Year
in descending order

86 papers	1,505 citations	471509 17 h-index	330143 37 g-index
92 all docs	92 docs citations	92 times ranked	1802 citing authors

#	Article	IF	Citations
1	A Model of Saccade Initiation Based on the Competitive Integration of Exogenous and Endogenous Signals in the Superior Colliculus. Journal of Cognitive Neuroscience, 2001, 13, 256-271.	2.3	438
2	Using structural MRI to identify bipolar disorders â€“ 13 site machine learning study in 3020 individuals from the ENIGMA Bipolar Disorders Working Group. Molecular Psychiatry, 2020, 25, 2130-2143.	7.9	127
3	A unified model of spatial and episodic memory. Proceedings of the Royal Society B: Biological Sciences, 2002, 269, 1087-1093.	2.6	77
4	Overlap versus Imbalance. Lecture Notes in Computer Science, 2010, , 220-231.	1.3	62
5	Spatial Interactions in the Superior Colliculus Predict Saccade Behavior in a Neural Field Model. Journal of Cognitive Neuroscience, 2012, 24, 315-336.	2.3	56
6	Selecting inputs for modeling using normalized higher order statistics and independent component analysis. IEEE Transactions on Neural Networks, 2001, 12, 612-617.	4.2	51
7	Broken phase of the 4-dimensional Ising model in a finite volume. Nuclear Physics B, 1989, 322, 698-720.	2.5	50
8	Prediction of lithium response using clinical data. Acta Psychiatrica Scandinavica, 2020, 141, 131-141.	4.5	50
9	Self-organizing continuous attractor network models of hippocampal spatial view cells. Neurobiology of Learning and Memory, 2005, 83, 79-92.	1.9	47
10	Modeling inhibition of return as short-term depression of early sensory input to the superior colliculus. Vision Research, 2011, 51, 987-996.	1.4	38
11	Modelling divided visual attention with a winner-take-all network. Neural Networks, 2005, 18, 620-627.	5.9	33
12	Surface tension from finite-volume vacuum tunneling in the 3D Ising model. Journal of Statistical Physics, 1990, 58, 185-198.	1.2	30
13	A rapid event-related potential (ERP) method for point-of-care evaluation of brain function: Development of the Halifax Consciousness Scanner. Journal of Neuroscience Methods, 2015, 245, 64-72.	2.5	26
14	Search for an upper bound of the renormalized Yukawa coupling in a lattice fermion-Higgs model. Nuclear Physics B, 1992, 371, 683-712.	2.5	25
15	On Out-of-Distribution Detection Algorithms with Deep Neural Skin Cancer Classifiers. , 2020, , .		23
16	Computational consequences of experimentally derived spike-time and weight dependent plasticity rules. Biological Cybernetics, 2007, 96, 615-623.	1.3	21
17	The definition and measurement of heterogeneity. Translational Psychiatry, 2020, 10, 299.	4.8	20
18	Detection of event-related potentials in individual subjects using support vector machines. Brain Informatics, 2015, 2, 1-12.	3.0	18

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19	Learning-Regulated Context Relevant Topographical Map. IEEE Transactions on Neural Networks and Learning Systems, 2015, 26, 2323-2335.	11.3	18
20	Exemplar scoring identifies genetically separable phenotypes of lithium responsive bipolar disorder. Translational Psychiatry, 2021, 11, 36.	4.8	16
21	Modeling human target reaching with an adaptive observer implemented with dynamic neural fields. Neural Networks, 2015, 72, 13-30.	5.9	15
22	Rapid learning and robust recall of long sequences in modular associator networks. Neurocomputing, 2006, 69, 634-641.	5.9	14
23	Model-free prostate cancer segmentation from dynamic contrast-enhanced MRI with recurrent convolutional networks: A feasibility study. Computerized Medical Imaging and Graphics, 2019, 75, 14-23.	5.8	14
24	Modeling Saccadic Action Selection: Cortical and Basal Ganglia Signals Coalesce in the Superior Colliculus. Frontiers in Systems Neuroscience, 2019, 13, 3.	2.5	14
25	Calcium-Dependent Calcium Decay Explains STDP in a Dynamic Model of Hippocampal Synapses. PLoS ONE, 2014, 9, e86248.	2.5	14
26	A biological mechanism for Bayesian feature selection: Weight decay and raising the LASSO. Neural Networks, 2015, 67, 121-130.	5.9	13
27	Plankton classification with high-throughput submersible holographic microscopy and transfer learning. Bmc Ecology and Evolution, 2021, 21, 123.	1.6	13
28	The eigenvalue spectra in Z(2) âŠ— Z(2) and SU(2) âŠ— SU(2) fermion-Higgs models. Nuclear Physics B, 1992, 368, 390-412.	2.5	11
29	Are binary synapses superior to graded weight representations in stochastic attractor networks?. Cognitive Neurodynamics, 2009, 3, 243-250.	4.0	11
30	A Deep Learning Based Approach to Skin Lesion Border Extraction With a Novel Edge Detector in Dermoscopy Images. , 2019, , .		11
31	Prediction of lithium response using genomic data. Scientific Reports, 2021, 11, 1155.	3.3	11
32	Multi-packet regions in stabilized continuous attractor networks. Neurocomputing, 2005, 65-66, 617-622.	5.9	10
33	We need an operational framework for heterogeneity in psychiatric research. Journal of Psychiatry and Neuroscience, 2020, 45, 3-6.	2.4	10
34	Asymmetrical reliability of the Alda score favours a dichotomous representation of lithium responsiveness. PLoS ONE, 2020, 15, e0225353.	2.5	8
35	Top-Down Control of Learning in Biological Self-Organizing Maps. Lecture Notes in Computer Science, 2009, , 316-324.	1.3	8
36	An elemental model of retrospective revaluation without within-compound associations. Learning and Behavior, 2014, 42, 22-38.	1.0	7

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37	Supervised Versus Unsupervised Deep Learning Based Methods for Skin Lesion Segmentation in Dermoscopy Images. Lecture Notes in Computer Science, 2019, , 373-379.	1.3	7
38	Tracking population densities using dynamic neural fields with moderately strong inhibition. Cognitive Neurodynamics, 2008, 2, 171-177.	4.0	6
39	Classificability-regulated self-organizing map using restricted RBF. , 2013, , .		6
40	Sparse coding and challenges for Bayesian models of the brain. Behavioral and Brain Sciences, 2013, 36, 232-233.	0.7	6
41	Representational RÃ©nyi Heterogeneity. Entropy, 2020, 22, 417.	2.2	6
42	Improved Path Integration Using a Modified Weight Combination Method. Cognitive Computation, 2013, 5, 295-306.	5.2	5
43	A Novel Model for Arbitration Between Planning and Habitual Control Systems. Frontiers in Neurorobotics, 2019, 13, 52.	2.8	5
44	Quark-hadron phase transition, QCD lattice calculations, and inhomogeneous big-bang nucleosynthesis. Physical Review D, 1994, 50, 4881-4885.	4.7	4
45	Impact of biased mislabeling on learning with deep networks. , 2017, , .		4
46	Development of massively parallel applications. Computer Physics Communications, 1994, 81, 153-162.	7.5	3
47	The Trouble with Weight-Dependent STDP. Neural Networks (IJCNN), International Joint Conference on, 2007, , .	0.0	3
48	Internal topographical structure in training autonomous robot. , 2011, , .		3
49	In vivo classification of inflammation in blood vessels with convolutional neural networks. , 2017, , .		3
50	Learning what matters: A neural explanation for the sparsity bias. International Journal of Psychophysiology, 2018, 127, 62-72.	1.0	3
51	Topographic representation adds robustness to supervised learning. Journal of Intelligent and Fuzzy Systems, 2019, 36, 3249-3262.	1.4	3
52	Learning dynamic weights for an ensemble of deep models applied to medical imaging classification. , 2020, , .		3
53	Comparison of Learned versus Engineered Features for Classification of Mine Like Objects from Raw Sonar Images. Lecture Notes in Computer Science, 2011, , 174-185.	1.3	3
54	Classifier with hierarchical topographical maps as internal representation. , 2015, , .		2

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55	Mixing Habits and Planning for Multi-Step Target Reaching Using Arbitrated Predictive Actor-Critic. , 2018, , .		2
56	Measuring heterogeneity in normative models as the effective number of deviation patterns. PLoS ONE, 2020, 15, e0242320.	2.5	2
57	An efficiently microtasked CRAY Y-MP C90 version of the Kuba-Moriarty SU (3) gauge theory simulation program. Computer Physics Communications, 1993, 76, 87-97.	7.5	1
58	Generating oculomotor and neuronal behavior in a neural field model of the superior colliculus. Behavioral and Brain Sciences, 1999, 22, 700-701.	0.7	1
59	Modeling the integration of expectations in visual search with centre-surround neural fields. Neural Networks, 2008, 21, 1476-1492.	5.9	1
60	Selective attention improves self-organization of cortical maps with multiple inputs. , 2010, , .		1
61	Cognitive neuroscience. , 0, , 235-256.		1
62	Mitigating Overfitting Using Regularization to Defend Networks Against Adversarial Examples. Lecture Notes in Computer Science, 2019, , 400-405.	1.3	1
63	Multiplicative Decomposition of Heterogeneity in Mixtures of Continuous Distributions. Entropy, 2020, 22, 858.	2.2	1
64	Dynamics of Population Decoding with Strong Inhibition. , 2008, , 187-191.		1
65	Visualizing Hierarchical Representation in a Multilayered Restricted RBF Network. Lecture Notes in Computer Science, 2014, , 339-346.	1.3	1
66	A Neural Field Approach to Obstacle Avoidance. Lecture Notes in Computer Science, 2016, , 69-87.	1.3	1
67	A scoping review and comparison of approaches for measuring genetic heterogeneity in psychiatric disorders. Psychiatric Genetics, 2021, Publish Ahead of Print, .	1.1	1
68	Bank conflict resolution. Computer Physics Communications, 1994, 83, 125-129.	7.5	0
69	Learning intialized by topologically correct representation. , 2009, , .		0
70	A new functional role for lateral inhibition in the striatum: Pavlovian conditioning. Nature Precedings, 2011, , .	0.1	0
71	Internal representation of sensory information for training autonomous robot. , 2012, , .		0
72	Biologically plausible feature selection through relative correlation. , 2013, , .		0

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73	Bubbles in the robot. , 2013, , .		0
74	Words Are Not Temporal Sequences of Characters. , 2018, , .		0
75	Using a Deep CNN for Automatic Classification of Sleep Spindles: A Preliminary Study. Lecture Notes in Computer Science, 2019, , 570-575.	1.3	0
76	Learning Adaptive Weight Masking for Adversarial Examples. , 2019, , .		0
77	Detection of Mine-Like Objects Using Restricted Boltzmann Machines. Lecture Notes in Computer Science, 2010, , 362-365.	1.3	0
78	A Brief Introduction to Probabilistic Machine Learning and Its Relation to Neuroscience. Studies in Computational Intelligence, 2014, , 61-108.	0.9	0
79	Title is missing!. , 2020, 15, e0225353.		0
80	Title is missing!. , 2020, 15, e0225353.		0
81	Title is missing!. , 2020, 15, e0225353.		0
82	Title is missing!. , 2020, 15, e0225353.		0
83	Measuring heterogeneity in normative models as the effective number of deviation patterns. , 2020, 15, e0242320.		0
84	Measuring heterogeneity in normative models as the effective number of deviation patterns. , 2020, 15, e0242320.		0
85	Measuring heterogeneity in normative models as the effective number of deviation patterns. , 2020, 15, e0242320.		0
86	Measuring heterogeneity in normative models as the effective number of deviation patterns. , 2020, 15, e0242320.		0