Tom M Heskes

List of Publications by Year
in descending order

175 papers	6,550 citations	126907 33 h-index	95266 68 g-index
186 all docs	186 docs citations	186 times ranked	13378 citing authors

#	Article	IF	Citations
1	MAGMA: Generalized Gene-Set Analysis of GWAS Data. PLoS Computational Biology, 2015, 11, e1004219.	3.2	2,344
2	The statistical properties of gene-set analysis. Nature Reviews Genetics, 2016, 17, 353-364.	16.3	230
3	Location Sensitive Deep Convolutional Neural Networks for Segmentation of White Matter Hyperintensities. Scientific Reports, 2017, 7, 5110.	3.3	171
4	Self-organizing maps, vector quantization, and mixture modeling. IEEE Transactions on Neural Networks, 2001, 12, 1299-1305.	4.2	132
5	10.1162/153244304322765658. Applied Physics Letters, 2000, 1, .	3.3	121
6	Energy functions for self-organizing maps. , 1999, , 303-315.		116
7	MSH3 modifies somatic instability and disease severity in Huntington's and myotonic dystrophy type 1. Brain, 2019, 142, 1876-1886.	7.6	114
8	RankProd 2.0: a refactored bioconductor package for detecting differentially expressed features in molecular profiling datasets. Bioinformatics, 2017, 33, 2774-2775.	4.1	113
9	Clustering ensembles of neural network models. Neural Networks, 2003, 16, 261-269.	5.9	108
10	Linear reconstruction of perceived images from human brain activity. NeuroImage, 2013, 83, 951-961.	4.2	103
11	Measuring Parkinson's disease over time: The real‐world within‐subject reliability of the MDS‐UPDRS. Movement Disorders, 2019, 34, 1480-1487.	3.9	100
12	Deep multi-scale location-aware 3D convolutional neural networks for automated detection of lacunes of presumed vascular origin. NeuroImage: Clinical, 2017, 14, 391-399.	2.7	99
13	Cognitive behavioural therapy with optional graded exercise therapy in patients with severe fatigue with myotonic dystrophy type 1: a multicentre, single-blind, randomised trial. Lancet Neurology, The, 2018, 17, 671-680.	10.2	95
14	A Causal and Mediation Analysis of the Comorbidity Between Attention Deficit Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD). Journal of Autism and Developmental Disorders, 2017, 47, 1595-1604.	2.7	86
15	Learning processes in neural networks. Physical Review A, 1991, 44, 2718-2726.	2.5	82
16	Exact p-values for pairwise comparison of Friedman rank sums, with application to comparing classifiers. BMC Bioinformatics, 2017, 18, 68.	2.6	82
17	On the Uniqueness of Loopy Belief Propagation Fixed Points. Neural Computation, 2004, 16, 2379-2413.	2.2	76
18	Additive Dose Response Models: Explicit Formulation and the Loewe Additivity Consistency Condition. Frontiers in Pharmacology, 2018, 9, 31.	3.5	75

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19	Premise Selection for Mathematics by Corpus Analysis and Kernel Methods. Journal of Automated Reasoning, 2014, 52, 191-213.	1.4	67
20	Bias/Variance Decompositions for Likelihood-Based Estimators. Neural Computation, 1998, 10, 1425-1433.	2.2	66
21	Efficient Bayesian multivariate fMRI analysis using a sparsifying spatio-temporal prior. NeuroImage, 2010, 50, 150-161.	4.2	65
22	Task-Dependent Learning of Attention. Neural Networks, 1997, 10, 981-992.	5.9	64
23	A theoretical comparison of batch-mode, on-line, cyclic, and almost-cyclic learning. IEEE Transactions on Neural Networks, 1996, 7, 919-925.	4.2	63
24	Covert attention allows for continuous control of brain–computer interfaces. European Journal of Neuroscience, 2010, 31, 1501-1508.	2.6	63
25	Hierarchical Bayesian inference for concurrent model fitting and comparison for group studies. PLoS Computational Biology, 2019, 15, e1007043.	3.2	63
26	Automated detection of white matter hyperintensities of all sizes in cerebral small vessel disease. Medical Physics, 2016, 43, 6246-6258.	3.0	59
27	Neural Decoding with Hierarchical Generative Models. Neural Computation, 2010, 22, 3127-3142.	2.2	57
28	Conditional and interaction gene-set analysis reveals novel functional pathways for blood pressure. Nature Communications, 2018, 9, 3768.	12.8	50
29	Cognitive behaviour therapy plus aerobic exercise training to increase activity in patients with myotonic dystrophy type 1 (DM1) compared to usual care (OPTIMISTIC): study protocol for randomised controlled trial. Trials, 2015, 16, 224.	1.6	49
30	Selecting features for BCI control based on a covert spatial attention paradigm. Neural Networks, 2009, 22, 1271-1277.	5.9	46
31	Structurally-informed Bayesian functional connectivity analysis. NeuroImage, 2014, 86, 294-305.	4.2	42
32	Non-uniform patch sampling with deep convolutional neural networks for white matter hyperintensity segmentation. , 2016, , .		41
33	On-line learning processes in artificial neural networks. North-Holland Mathematical Library, 1993, 51, 199-233.	0.1	40
34	Understanding the assumptions underlying Mendelian randomization. European Journal of Human Genetics, 2022, 30, 653-660.	2.8	40
35	Real-Life Gait Performance as a Digital Biomarker for Motor Fluctuations: The Parkinson@Home Validation Study. Journal of Medical Internet Research, 2020, 22, e19068.	4.3	39
36	Interpreting single trial data using groupwise regularisation. NeuroImage, 2009, 46, 665-676.	4.2	37

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37	PREDICTION OF BLADDER OUTLET OBSTRUCTION IN MEN WITH LOWER URINARY TRACT SYMPTOMS USING ARTIFICIAL NEURAL NETWORKS. Journal of Urology, 2000, 163, 300-305.	0.4	35
38	The exact probability distribution of the rank product statistics for replicated experiments. FEBS Letters, 2013, 587, 677-682.	2.8	33
39	Convolutional neural networks for transient candidate vetting in large-scale surveys. Monthly Notices of the Royal Astronomical Society, 2017, 472, 3101-3114.	4.4	32
40	Additive Dose Response Models: Defining Synergy. Frontiers in Pharmacology, 2019, 10, 1384.	3.5	29
41	Overview and Evaluation of Premise Selection Techniques for Large Theory Mathematics. Lecture Notes in Computer Science, 2012, , 378-392.	1.3	28
42	Learning in neural networks with local minima. Physical Review A, 1992, 46, 5221-5231.	2.5	27
43	Automatic Categorization of Web Pages and User Clustering with Mixtures of Hidden Markov Models. Lecture Notes in Computer Science, 2003, , 35-49.	1.3	27
44	Approximate inference techniques with expectation constraints. Journal of Statistical Mechanics: Theory and Experiment, 2005, 2005, P11015-P11015.	2.3	27
45	Learning from Multiple Annotators with Gaussian Processes. Lecture Notes in Computer Science, 2011, , 159-164.	1.3	27
46	PARTIAL RETRAINING: A NEW APPROACH TO INPUT RELEVANCE DETERMINATION. International Journal of Neural Systems, 1999, 09, 75-85.	5.2	26
47	On "Natural"Learning and Pruning in Multilayered Perceptrons. Neural Computation, 2000, 12, 881-901.	2.2	26
48	Bayesian inference of structural brain networks. NeuroImage, 2013, 66, 543-552.	4.2	25
49	Probabilistic Clustering of the Human Connectome Identifies Communities and Hubs. PLoS ONE, 2015, 10, e0117179.	2.5	25
50	Multi-Domain Transfer Component Analysis for Domain Generalization. Neural Processing Letters, 2017, 46, 845-855.	3.2	25
51	Retrieval of pattern sequences at variable speeds in a neural network with delays. Neural Networks, 1992, 5, 145-152.	5.9	23
52	Predicting carcinoid heart disease with the noisy-threshold classifier. Artificial Intelligence in Medicine, 2007, 40, 45-55.	6.5	23
53	A fast algorithm for determining bounds and accurate approximate p-values of the rank product statistic for replicate experiments. BMC Bioinformatics, 2014, 15, 367.	2.6	23
54	Convexity Arguments for Efficient Minimization of the Bethe and Kikuchi Free Energies. Journal of Artificial Intelligence Research, 0, 26, 153-190.	7.0	23

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55	Multi-task preference learning with an application to hearing aid personalization. Neurocomputing, 2010, 73, 1177-1185.	5.9	22
56	On Fokker-Planck approximations of on-line learning processes. Journal of Physics A, 1994, 27, 5145-5160.	1.6	21
57	Pruning Using Parameter and Neuronal Metrics. Neural Computation, 1999, 11, 977-993.	2.2	21
58	Composite Survival Index to Compare Virulence Changes in Azole-Resistant Aspergillus fumigatus Clinical Isolates. PLoS ONE, 2013, 8, e72280.	2.5	20
59	Empirical Bayesian Random Censoring Threshold Model Improves Detection of Differentially Abundant Proteins. Journal of Proteome Research, 2014, 13, 3871-3880.	3.7	20
60	Stochastic dynamics of learning with momentum in neural networks. Journal of Physics A, 1994, 27, 4425-4437.	1.6	19
61	Lateralized responses during covert attention are modulated by target eccentricity. Neuroscience Letters, 2011, 491, 35-39.	2.1	19
62	Causal discovery in an adult ADHD data set suggests indirect link between *DAT1* genetic variants and striatal brain activation during reward processing. American Journal of Medical Genetics Part B: Neuropsychiatric Genetics, 2015, 168, 508-515.	1.7	19
63	On the decoding of intracranial data using sparse orthonormalized partial least squares. Journal of Neural Engineering, 2012, 9, 026017.	3.5	18
64	Error potentials for self-organization. , 0, , .		17
65	Improving Cox survival analysis with a neural-Bayesian approach. Statistics in Medicine, 2004, 23, 2989-3012.	1.6	17
66	Bayesian Sparse Partial Least Squares. Neural Computation, 2013, 25, 3318-3339.	2.2	17
67	Gaussian mixture models and semantic gating improve reconstructions from human brain activity. Frontiers in Computational Neuroscience, 2014, 8, 173.	2.1	17
68	Copula PC Algorithm for Causal Discovery from Mixed Data. Lecture Notes in Computer Science, 2016, , 377-392.	1.3	17
69	Statistical Evidence Suggests that Inattention Drives Hyperactivity/Impulsivity in Attention Deficit-Hyperactivity Disorder. PLoS ONE, 2016, 11, e0165120.	2.5	17
70	Inferring the direction of a causal link and estimating its effect via a Bayesian Mendelian randomization approach. Statistical Methods in Medical Research, 2020, 29, 1081-1111.	1.5	16
71	Learning-parameter adjustment in neural networks. Physical Review A, 1992, 45, 8885-8893.	2.5	15
72	Efficiently learning the preferences of people. Machine Learning, 2013, 90, 1-28.	5.4	15

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73	Automatic sign language identification. , 2013, , .		15
74	Novel approximations for inference in nonlinear dynamical systems using expectation propagation. Neurocomputing, 2005, 69, 85-99.	5.9	14
75	Gene regulation in the intraerythrocytic cycle of Plasmodium falciparum. Bioinformatics, 2009, 25, 1484-1491.	4.1	14
76	The gesturer is the speaker. , 2013, , .		14
77	Bayesian Estimation of Conditional Independence Graphs Improves Functional Connectivity Estimates. PLoS Computational Biology, 2015, 11, e1004534.	3.2	14
78	Sparse Approximate Inference for Spatio-Temporal Point Process Models. Journal of the American Statistical Association, 2016, 111, 1746-1763.	3.1	13
79	Causality on cross-sectional data: Stable specification search in constrained structural equation modeling. Applied Soft Computing Journal, 2017, 52, 687-698.	7.2	13
80	Disentangling drivers of spatial autocorrelation in species distribution models. Ecography, 2020, 43, 1741-1751.	4.5	13
81	Cooling schedules for learning in neural networks. Physical Review E, 1993, 47, 4457-4464.	2.1	12
82	Input selection based on an ensemble. Neurocomputing, 2000, 34, 227-238.	5.9	12
83	A comparative study of cell classifiers for image-based high-throughput screening. BMC Bioinformatics, 2014, 15, 342.	2.6	12
84	BCM: toolkit for Bayesian analysis of Computational Models using samplers. BMC Systems Biology, 2016, 10, 100.	3.0	12
85	Semantic Graph Kernels for Automated Reasoning. , 2011, , .		12
86	How Dependencies between Successive Examples Affect On-Line Learning. Neural Computation, 1996, 8, 1743-1765.	2.2	11
87	A Bayesian Framework for Combining Protein and Network Topology Information for Predicting Protein-Protein Interactions. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2015, 12, 538-550.	3.0	11
88	Constraining the parameters of high-dimensional models with active learning. European Physical Journal C, 2019, 79, 1.	3.9	11
89	Learning causal structure from mixed data with missing values using Gaussian copula models. Statistics and Computing, 2019, 29, 311-333.	1.5	11
90	Potential mechanisms of the fatigue†reducing effect of cognitive†behavioral therapy in cancer survivors: Three randomized controlled trials. Psycho-Oncology, 2021, 30, 1476-1484.	2.3	11

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91	Domain Generalization Based on Transfer Component Analysis. Lecture Notes in Computer Science, 2015, , 325-334.	1.3	11
92	Neighborhood Co-regularized Multi-view Spectral Clustering of Microbiome Data. Lecture Notes in Computer Science, 2013, , 80-90.	1.3	11
93	Haplotype Inference in General Pedigrees Using the Cluster Variation Method. Genetics, 2007, 177, 1101-1116.	2.9	10
94	Dynamic decoding of ongoing perception. NeuroImage, 2011, 57, 950-957.	4.2	10
95	Hierarchical visualization of time-series data using switching linear dynamical systems. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2003, 25, 1202-1214.	13.9	9
96	Quantifying uncertainty in brain network measures using Bayesian connectomics. Frontiers in Computational Neuroscience, 2014, 8, 126.	2.1	9
97	Causal Discovery from Databases with Discrete and Continuous Variables. Lecture Notes in Computer Science, 2014, , 442-457.	1.3	9
98	Transition times in self-organizing maps. Biological Cybernetics, 1996, 75, 49-57.	1.3	8
99	Deterministic approximate inference techniques for conditionally Gaussian state space models. Statistics and Computing, 2006, 16, 279-292.	1.5	8
100	Role of conduct problems in the relation between Attention-Deficit Hyperactivity disorder, substance use, and gaming. European Neuropsychopharmacology, 2020, 30, 102-113.	0.7	8
101	PrimaVera: Synergising Predictive Maintenance. Applied Sciences (Switzerland), 2020, 10, 8348.	2.5	8
102	Probabilistic Modelling of Gait for Robust Passive Monitoring in Daily Life. IEEE Journal of Biomedical and Health Informatics, 2021, 25, 2293-2304.	6.3	8
103	Methodology of the DCCSS later fatigue study: a model to investigate chronic fatigue in long-term survivors of childhood cancer. BMC Medical Research Methodology, 2021, 21, 106.	3.1	8
104	Motion history images for online speaker/signer diarization. , 2014, , .		7
105	Causality on longitudinal data: Stable specification search in constrained structural equation modeling. Statistical Methods in Medical Research, 2018, 27, 3814-3834.	1.5	7
106	Structural and functional MRI of altered brain development in a novel adolescent rat model of quinpirole-induced compulsive checking behavior. European Neuropsychopharmacology, 2020, 33, 58-70.	0.7	7
107	Identification and validation of risk factors for antisocial behaviour involving police. Psychiatry Research, 2020, 291, 113208.	3.3	7
108	Online Co-regularized Algorithms. Lecture Notes in Computer Science, 2012, , 184-193.	1.3	7

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109	Molecular Machines in the Synapse: Overlapping Protein Sets Control Distinct Steps in Neurosecretion. PLoS Computational Biology, 2012, 8, e1002450.	3.2	6
110	Efficient sampling of Gaussian graphical models using conditional Bayes factors. Stat, 2014, 3, 326-336.	0.4	6
111	Handling hybrid and missing data in constraint-based causal discovery to study the etiology of ADHD. International Journal of Data Science and Analytics, 2017, 3, 105-119.	4.1	6
112	Bayesian data integration for quantifying the contribution of diverse measurements to parameter estimates. Bioinformatics, 2018, 34, 803-811.	4.1	6
113	Properties of Bethe Free Energies and Message Passing in Gaussian Models. Journal of Artificial Intelligence Research, 0, 41, 1-24.	7.0	6
114	On-Line Learning with Time-Correlated Patterns. Europhysics Letters, 1994, 28, 451-455.	2.0	5
115	The Use of Being Stubborn and Introspective. Studies in Cognitive Systems, 2000, , 1184-1200.	0.1	5
116	Learning and approximate inference in dynamic hierarchical models. Computational Statistics and Data Analysis, 2007, 52, 821-839.	1.2	5
117	Learning symmetric causal independence models. Machine Learning, 2008, 71, 133-153.	5.4	5
118	Editorial: One Year as EiC, and Editorial-Board Changes at TNN. IEEE Transactions on Neural Networks, 2011, 22, 1-7.	4.2	5
119	A novel Bayesian approach for latent variable modeling from mixed data with missing values. Statistics and Computing, 2019, 29, 977-993.	1.5	5
120	Estimating the Effect of Early Treatment Initiation in Parkinson's Disease Using Observational Data. Movement Disorders, 2021, 36, 407-414.	3.9	5
121	Causal Discovery from Medical Data: Dealing with Missing Values and a Mixture of Discrete and Continuous Data. Lecture Notes in Computer Science, 2015, , 177-181.	1.3	5
122	Expectation Propagation for Rating Players in Sports Competitions. Lecture Notes in Computer Science, 2007, , 374-381.	1.3	5
123	Unsupervised Feature Learning for Visual Sign Language Identification. , 2014, , .		5
124	Towards individualized monitoring of cognition in multiple sclerosis in the digital era: A one-year cohort study. Multiple Sclerosis and Related Disorders, 2022, 60, 103692.	2.0	5
125	Learning in two-layered networks with correlated examples. Journal of Physics A, 1997, 30, 4983-4992.	1.6	4
126	Optimising newspaper sales using neural-Bayesian technology. Neural Computing and Applications, 2003, 12, 212-219.	5.6	4

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127	A direct comparison of visual discrimination of shape and size on a large range of aspect ratios. Vision Research, 2013, 91, 84-92.	1.4	4
128	A scalable preference model for autonomous decision-making. Machine Learning, 2018, 107, 1039-1068.	5.4	4
129	Using Topology Information for Protein-Protein Interaction Prediction. Lecture Notes in Computer Science, 2014, , 10-22.	1.3	3
130	Gaussian mixture models improve fMRI-based image reconstruction. , 2014, , .		3
131	Small white matter lesion detection in cerebral small vessel disease. Proceedings of SPIE, 2015, , .	0.8	3
132	Robust Estimation of Gaussian Copula Causal Structure from Mixed Data with Missing Values. , 2017, , .		3
133	Stable Specification Search in Structural Equation Models with Latent Variables. ACM Transactions on Intelligent Systems and Technology, 2019, 10, 1-23.	4.5	3
134	Semiâ€automated Rasch analysis using inâ€plusâ€outâ€ofâ€questionnaire log likelihood. British Journal of Mathematical and Statistical Psychology, 2021, 74, 313-339.	1.4	3
135	Non-parametric synergy modeling of chemical compounds with Gaussian processes. BMC Bioinformatics, 2022, 23, 14.	2.6	3
136	Iterated extended Kalman smoothing with expectation-propagation. , 0, , .		2
137	Automatic Signer Diarization - The Mover Is the Signer Approach. , 2013, , .		2
138	The stablespec package for causal discovery on cross-sectional and longitudinal data in R. Neurocomputing, 2018, 275, 2440-2443.	5.9	2
139	Large-scale local causal inference of gene regulatory relationships. International Journal of Approximate Reasoning, 2019, 115, 50-68.	3.3	2
140	Application of A Causal Discovery Model to Study The Effect of Iron Supplementation in Children with Iron Deficiency Anemia. , 2019, , .		2
141	Speaker diarization using gesture and speech. , 0, , .		2
142	Discovering Ecological Relationships in Flowing Freshwater Ecosystems. Frontiers in Ecology and Evolution, 2022, 9, .	2.2	2
143	Development and validation of the patient-reported â€œFacial Function Scaleâ€for facioscapulohumeral muscular dystrophy. Disability and Rehabilitation, 2023, 45, 1530-1535.	1.8	2
144	Input selection with partial retraining. Lecture Notes in Computer Science, 1997, , 469-474.	1.3	1

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145	Semi-blind identification of movement-related magnetoencephalogram components using a classification approach. , 2008, 2008, 2618-21.		1
146	Predicting Preference Judgments of Individual Normal and Hearing-Impaired Listeners With Gaussian Processes. IEEE Transactions on Audio Speech and Language Processing, 2011, 19, 811-821.	3.2	1
147	A Bayesian psychophysical model for angular variables. Journal of Mathematical Psychology, 2013, 57, 134-139.	1.8	1
148	A single-layer network unsupervised feature learning method for white matter hyperintensity segmentation. , 2016, , .		1
149	Massively-parallel best subset selection for ordinary least-squares regression. , 2017, , .		1
150	Spectral Ranking of Causal Influence in Complex Systems. Entropy, 2021, 23, 369.	2.2	1
151	Batch Steepest-Descent-Mildest-Ascent for Interactive Maximum Margin Clustering. Lecture Notes in Computer Science, 2015, , 95-107.	1.3	1
152	The Dynamic Beamformer. Lecture Notes in Computer Science, 2012, , 148-155.	1.3	1
153	EM Algorithm for Symmetric Causal Independence Models. Lecture Notes in Computer Science, 2006, , 234-245.	1.3	1
154	A Markov Random Field Approach to Neural Encoding and Decoding. Lecture Notes in Computer Science, 2011, , 1-8.	1.3	1
155	Mutual Information Estimation with Random Forests. Lecture Notes in Computer Science, 2014, , 524-531.	1.3	1
156	Scaling properties of on-line learning with momentum. , 1994, , .		0
157	On-line Learning with Time-Correlated Examples. , 1999, , 251-278.		0
158	Approximate algorithms for neural-Bayesian approaches. Theoretical Computer Science, 2002, 287, 219-238.	0.9	0
159	Deterministic and Stochastic Gaussian Particle Smoothing. , 2006, , .		0
160	Expectation propagation and generalised EP methods for inference in switching linear dynamical systems. , 0, , 141-165.		0
161	A Linear Gaussian Framework for Decoding of Perceived Images. , 2012, , .		0
162	Hidden Markov Models for Reading Words from the Human Brain. , 2015, , .		0

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163	Investigating the effect of dependence between conditions with Bayesian Linear Mixed Models for motif activity analysis. PLoS ONE, 2020, 15, e0231824.	2.5	0
164	Survival Analysis: A Neural-Bayesian Approach. Perspectives in Neural Computing, 2000, , 162-167.	0.1	0
165	Model Clustering for Neural Network Ensembles. Lecture Notes in Computer Science, 2002, , 383-388.	1.3	0
166	Multi-scale Switching Linear Dynamical Systems. Lecture Notes in Computer Science, 2003, , 562-569.	1.3	0
167	Learning2Reason. Lecture Notes in Computer Science, 2011, , 298-300.	1.3	0
168	Covert Attention as a Paradigm for Subject-Independent Brain-Computer Interfacing. Lecture Notes in Computer Science, 2012, , 156-163.	1.3	0
169	Multi-view Multi-class Classification for Identification of Pathogenic Bacterial Strains. Lecture Notes in Computer Science, 2013, , 61-72.	1.3	0
170	Guaranteed Convergence of Learning in Neural Networks. , 1993, , 533-538.		0
171	KeCo: Kernel-Based Online Co-agreement Algorithm. Lecture Notes in Computer Science, 2015, , 308-315.	1.3	0
172	Exploring Constraint: Simulating Self-Organization and Autogenesis in the Autogenic Automaton. , 2016, , .		0
173	Expectation Propagation. , 2016, , 1-6.		0
174	Bigger Buffer k-d Trees on Multi-Many-Core Systems. Lecture Notes in Computer Science, 2019, , 202-214.	1.3	0
175	Transition times in self-organizing maps. Biological Cybernetics, 1996, 75, 49-57.	1.3	0