Michael Biehl

List of Publications by Year in descending order

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Μιςήλει Βιεμι

#	Article	IF	CITATIONS
1	The Somatic Genomic Landscape of Chromophobe Renal Cell Carcinoma. Cancer Cell, 2014, 26, 319-330.	16.8	665
2	Critical assessment of automated flow cytometry data analysis techniques. Nature Methods, 2013, 10, 228-238.	19.0	509
3	The statistical mechanics of learning a rule. Reviews of Modern Physics, 1993, 65, 499-556.	45.6	376
4	Urine Steroid Metabolomics as a Biomarker Tool for Detecting Malignancy in Adrenal Tumors. Journal of Clinical Endocrinology and Metabolism, 2011, 96, 3775-3784.	3.6	369
5	Adaptive Relevance Matrices in Learning Vector Quantization. Neural Computation, 2009, 21, 3532-3561.	2.2	248
6	MED-NODE: A computer-assisted melanoma diagnosis system using non-dermoscopic images. Expert Systems With Applications, 2015, 42, 6578-6585.	7.6	241
7	Steroid metabolome analysis reveals prevalent glucocorticoid excess in primary aldosteronism. JCI Insight, 2017, 2, .	5.0	187
8	The AdaTron: An Adaptive Perceptron Algorithm. Europhysics Letters, 1989, 10, 687-692.	2.0	174
9	Post-correlation radio frequency interference classification methods. Monthly Notices of the Royal Astronomical Society, 2010, , .	4.4	138
10	Expression of chemokines CXCL4 and CXCL7 by synovial macrophages defines an early stage of rheumatoid arthritis. Annals of the Rheumatic Diseases, 2016, 75, 763-771.	0.9	133
11	Urine steroid metabolomics for the differential diagnosis of adrenal incidentalomas in the EURINE-ACT study: a prospective test validation study. Lancet Diabetes and Endocrinology,the, 2020, 8, 773-781.	11.4	129
12	Learning by on-line gradient descent. Journal of Physics A, 1995, 28, 643-656.	1.6	119
13	Prototypeâ€based models in machine learning. Wiley Interdisciplinary Reviews: Cognitive Science, 2016, 7, 92-111.	2.8	81
14	Stochastic neighbor embedding (SNE) for dimension reduction and visualization using arbitrary divergences. Neurocomputing, 2012, 90, 23-45.	5.9	79
15	Limited Rank Matrix Learning, discriminative dimension reduction and visualization. Neural Networks, 2012, 26, 159-173.	5.9	79
16	A General Framework for Dimensionality-Reducing Data Visualization Mapping. Neural Computation, 2012, 24, 771-804.	2.2	75
17	Distance Learning in Discriminative Vector Quantization. Neural Computation, 2009, 21, 2942-2969.	2.2	71
18	On-Line Learning with a Perceptron. Europhysics Letters, 1994, 28, 525-530.	2.0	69

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19	Regularization in Matrix Relevance Learning. IEEE Transactions on Neural Networks, 2010, 21, 831-840.	4.2	59
20	Learning effective color features for content based image retrieval in dermatology. Pattern Recognition, 2011, 44, 1892-1902.	8.1	58
21	Anthropogenic disturbance changes the structure of arboreal tropical ant communities. Ecography, 2001, 24, 547-554.	4.5	50
22	On-line backpropagation in two-layered neural networks. Journal of Physics A, 1995, 28, L507-L513.	1.6	49
23	Divergence-based classification in learning vector quantization. Neurocomputing, 2011, 74, 1429-1435.	5.9	46
24	Urine Steroid Metabolomics as a Novel Tool for Detection of Recurrent Adrenocortical Carcinoma. Journal of Clinical Endocrinology and Metabolism, 2020, 105, e307-e318.	3.6	45
25	Learning from noisy data: An exactly solvable model. Physical Review E, 1995, 52, R4624-R4627.	2.1	44
26	Simulation of wetting-layer and island formation in heteroepitaxial growth. Europhysics Letters, 2003, 63, 14-20.	2.0	44
27	Neighbor embedding XOM for dimension reduction and visualization. Neurocomputing, 2011, 74, 1340-1350.	5.9	43
28	Transient dynamics of on-line learning in two-layered neural networks. Journal of Physics A, 1996, 29, 4769-4780.	1.6	42
29	Analysis of Flow Cytometry Data by Matrix Relevance Learning Vector Quantization. PLoS ONE, 2013, 8, e59401.	2.5	40
30	Adaptive local dissimilarity measures for discriminative dimension reduction of labeled data. Neurocomputing, 2010, 73, 1074-1092.	5.9	38
31	Statistical mechanics of unsupervised structure recognition. Journal of Physics A, 1994, 27, 1885-1897.	1.6	37
32	Insightful stress detection from physiology modalities using Learning Vector Quantization. Neurocomputing, 2015, 151, 873-882.	5.9	35
33	Learning drifting concepts with neural networks. Journal of Physics A, 1993, 26, 2651-2665.	1.6	32
34	Statistical Mechanics of Unsupervised Learning. Europhysics Letters, 1993, 24, 421-426.	2.0	31
35	On-Line Learning of a Time-Dependent Rule. Europhysics Letters, 1992, 20, 733-738.	2.0	30
36	Functional relevance learning in generalized learning vector quantization. Neurocomputing, 2012, 90, 85-95.	5.9	30

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37	Learning vector quantization: The dynamics of winner-takes-all algorithms. Neurocomputing, 2006, 69, 660-670.	5.9	29
38	Texture feature ranking with relevance learning to classify interstitial lung disease patterns. Artificial Intelligence in Medicine, 2012, 56, 91-97.	6.5	29
39	Hidden unit specialization in layered neural networks: ReLU vs. sigmoidal activation. Physica A: Statistical Mechanics and Its Applications, 2021, 564, 125517.	2.6	29
40	A Kinetic Monte Carlo method for the simulation of heteroepitaxial growth. Computer Physics Communications, 2002, 147, 226-229.	7.5	24
41	Automatic classification of the acrosome status of boar spermatozoa using digital image processing and LVQ. Computers in Biology and Medicine, 2008, 38, 461-468.	7.0	24
42	Kinetic Monte Carlo simulations of heteroepitaxial growth. Thin Solid Films, 2003, 428, 52-55.	1.8	23
43	Performance analysis of LVQ algorithms: A statistical physics approach. Neural Networks, 2006, 19, 817-829.	5.9	23
44	The role of step edge diffusion in epitaxial crystal growth. Surface Science, 1999, 439, 191-198.	1.9	22
45	Tilinglike learning in the parity machine. Physical Review A, 1991, 44, 6888-6894.	2.5	20
46	Kinetic Monte Carlo simulations of dislocations in heteroepitaxial growth. Europhysics Letters, 2001, 56, 791-796.	2.0	20
47	Hyperparameter learning in probabilistic prototype-based models. Neurocomputing, 2010, 73, 1117-1124.	5.9	19
48	Odor recognition in robotics applications by discriminative time-series modeling. Pattern Analysis and Applications, 2016, 19, 207-220.	4.6	19
49	Distance Measures for Prototype Based Classification. Lecture Notes in Computer Science, 2014, , 100-116.	1.3	18
50	Window-Based Example Selection in Learning Vector Quantization. Neural Computation, 2010, 22, 2924-2961.	2.2	17
51	Matrix Relevance Learning From Spectral Data for Diagnosing Cassava Diseases. IEEE Access, 2021, 9, 83355-83363.	4.2	17
52	An Exactly Solvable Model of Unsupervised Learning. Europhysics Letters, 1994, 25, 391-396.	2.0	16
53	Noise robustness in multilayer neural networks. Europhysics Letters, 1997, 37, 427-432.	2.0	16
54	A simple model of epitaxial growth. Europhysics Letters, 1998, 41, 443-448.	2.0	16

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55	Unconventional MBE strategies from computer simulations for optimized growth conditions. Physical Review B, 1999, 60, 2893-2899.	3.2	16
56	Statistical Mechanics of On-Line Learning Under Concept Drift. Entropy, 2018, 20, 775.	2.2	15
57	Interplay of strain relaxation and chemically induced diffusion barriers: Nanostructure formation in 2D alloys. Surface Science, 2005, 586, 157-173.	1.9	14
58	Predicting protein phosphorylation from gene expression: top methods from the IMPROVER Species Translation Challenge. Bioinformatics, 2015, 31, 462-470.	4.1	14
59	Accurate nonâ€invasive diagnosis and staging of nonâ€alcoholic fatty liver disease using the urinary steroid metabolome. Alimentary Pharmacology and Therapeutics, 2020, 51, 1188-1197.	3.7	13
60	Metric Learning for Prototype-Based Classification. Studies in Computational Intelligence, 2009, , 183-199.	0.9	13
61	Supervised Learning from Clustered Input Examples. Europhysics Letters, 1995, 30, 117-122.	2.0	12
62	Stationarity of Matrix Relevance LVQ. , 2015, , .		12
63	Non-Euclidean principal component analysis by Hebbian learning. Neurocomputing, 2015, 147, 107-119.	5.9	12
64	Tissue- and development-stage–specific mRNA and heterogeneous CNV signatures of human ribosomal proteins in normal and cancer samples. Nucleic Acids Research, 2020, 48, 7079-7098.	14.5	12
65	Dynamics of on-line competitive learning. Europhysics Letters, 1997, 38, 73-78.	2.0	11
66	Learnability of periodic activation functions: General results. Physical Review E, 1998, 58, 3606-3609.	2.1	11
67	A lattice gas model of II-VI(001) semiconductor surfaces. Europhysics Letters, 2001, 53, 169-175.	2.0	11
68	Learning dynamics and robustness of vector quantization and neural gas. Neurocomputing, 2008, 71, 1210-1219.	5.9	11
69	Large margin linear discriminative visualization by Matrix Relevance Learning. , 2012, , .		11
70	Phase transitions in soft-committee machines. Europhysics Letters, 1998, 44, 261-267.	2.0	10
71	The dynamics of on-line principal component analysis. Journal of Physics A, 1998, 31, L97-L103.	1.6	10
72	Statistical physics and practical training of soft-committee machines. European Physical Journal B, 1999, 10, 583-588.	1.5	10

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73	Adaptive Matrices and Filters for Color Texture Classification. Journal of Mathematical Imaging and Vision, 2013, 47, 79-92.	1.3	10
74	Regularization and improved interpretation of linear data mappings and adaptive distance measures. , 2013, , .		10
75	Assessment of acrosome state in boar spermatozoa heads using n-contours descriptor and RLVQ. Computer Methods and Programs in Biomedicine, 2013, 111, 525-536.	4.7	10
76	A crowd-sourcing approach for the construction of species-specific cell signaling networks. Bioinformatics, 2015, 31, 484-491.	4.1	10
77	Prototype-Based Classification for Image Analysis and Its Application to Crop Disease Diagnosis. Advances in Intelligent Systems and Computing, 2016, , 329-339.	0.6	10
78	Inter-species prediction of protein phosphorylation in the sbv IMPROVER species translation challenge. Bioinformatics, 2015, 31, 453-461.	4.1	9
79	Fusion of deep learning architectures, multilayer feedforward networks and learning vector quantizers for deep classification learning. , 2017, , .		9
80	An application of generalized matrix learning vector quantization in neuroimaging. Computer Methods and Programs in Biomedicine, 2020, 197, 105708.	4.7	9
81	Formation and consequences of misfit dislocations in heteroepitaxial growth. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 3210-3220.	0.8	8
82	Differentiable Kernels in Generalized Matrix Learning Vector Quantization. , 2012, , .		8
83	Learning vector quantization classifiers for ROC-optimization. Computational Statistics, 2018, 33, 1173-1194.	1.5	8
84	Data-Driven Supervised Learning for Life Science Data. Frontiers in Applied Mathematics and Statistics, 2020, 6, .	1.3	8
85	Analysis of Tiling Microarray Data by Learning Vector Quantization and Relevance Learning. , 2007, , 880-889.		8
86	Generalized Derivative Based Kernelized Learning Vector Quantization. Lecture Notes in Computer Science, 2010, , 21-28.	1.3	8
87	The influence of the crystal lattice on coarsening in unstable epitaxial growth. Surface Science, 2000, 465, 339-346.	1.9	7
88	Kinetic model of II-VI(001) semiconductor surfaces: Growth rates in atomic layer epitaxy. Physical Review B, 2004, 69, .	3.2	7
89	Lattice Gas Models and Kinetic Monte Carlo Simulations of Epitaxial Growth. , 2005, , 3-18.		7
90	Off-lattice Kinetic Monte Carlo Simulations of Strained Heteroepitaxial Growth. , 2005, , 41-56.		7

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91	Dimensionality reduction mappings. , 2011, , .		7
92	Admire LVQ—Adaptive Distance Measures in Relevance Learning Vector Quantization. KI - Kunstliche Intelligenz, 2012, 26, 391-395.	3.2	7
93	Modeling spontaneous activity across an excitable epithelium: Support for a coordination scenario of early neural evolution. Frontiers in Computational Neuroscience, 2015, 9, 110.	2.1	7
94	Modelling sublimation and atomic layer epitaxy in the presence of competing surface reconstructions. Surface Science, 2001, 488, L553-L560.	1.9	6
95	Flat (001) surfaces of Il–VI semiconductors: a lattice gas model. Surface Science, 2002, 505, 124-136.	1.9	6
96	Effect estimate comparison between the prescription sequence symmetry analysis (PSSA) and parallel group study designs: A systematic review. PLoS ONE, 2018, 13, e0208389.	2.5	6
97	Galaxy classification: A machine learning analysis of GAMA catalogue data. Neurocomputing, 2019, 342, 172-190.	5.9	6
98	Supervised learning in the presence of concept drift: a modelling framework. Neural Computing and Applications, 2022, 34, 101-118.	5.6	6
99	Towards Emotion Classification Using Appraisal Modeling. International Journal of Synthetic Emotions, 2015, 6, 40-59.	0.3	6
100	DECORAS: detection and characterization of radio-astronomical sources using deep learning. Monthly Notices of the Royal Astronomical Society, 2022, 510, 5891-5907.	4.4	6
101	Valid interpretation of feature relevance for linear data mappings. , 2014, , .		5
102	Adaptive basis functions for prototype-based classification of functional data. Neural Computing and Applications, 2020, 32, 18213-18223.	5.6	5
103	Early detection of plant diseases using spectral data. , 2020, , .		5
104	The Mathematics of Divergence Based Online Learning in Vector Quantization. Lecture Notes in Computer Science, 2010, , 108-119.	1.3	5
105	A Computer Vision Pipeline that Uses Thermal and RGB Images for the Recognition of Holstein Cattle. Lecture Notes in Computer Science, 2019, , 108-119.	1.3	5
106	Optimization of on-line principal component analysis. Journal of Physics A, 1999, 32, 4061-4067.	1.6	4
107	Learning structured data from unspecific reinforcement. Journal of Physics A, 2000, 33, 6843-6857.	1.6	4
108	Learning Vector Quantization with Adaptive Cost-Based Outlier-Rejection. Lecture Notes in Computer Science, 2015, , 772-782.	1.3	4

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109	Empirical evaluation of gradient methods for matrix learning vector quantization. , 2017, , .		4
110	Feature relevance determination for ordinal regression in the context of feature redundancies and privileged information. Neurocomputing, 2020, 416, 266-279.	5.9	4
111	Steroid metabolomics for accurate and rapid diagnosis of inborn steroidogenic disorders. Endocrine Abstracts, 0, , .	0.0	4
112	Structure Preserving Encoding of Non-euclidean Similarity Data. , 2020, , .		4
113	Non-Euclidean Principal Component Analysis and Oja's Learning Rule – Theoretical Aspects. Advances in Intelligent Systems and Computing, 2013, , 23-33.	0.6	4
114	Statistical physics of learning: Phase transitions in multilayered neural networks. , 2000, , 819-826.		3
115	Inter-species inference of gene set enrichment in lung epithelial cells from proteomic and large transcriptomic datasets. Bioinformatics, 2015, 31, 492-500.	4.1	3
116	Facial Expression Recognition Using Learning Vector Quantization. Lecture Notes in Computer Science, 2015, , 760-771.	1.3	3
117	Predicting recurrence in clear cell Renal Cell Carcinoma: Analysis of TCGA data using outlier analysis and generalized matrix LVQ. , 2016, , .		3
118	Learning vector quantization and relevances in complex coefficient space. Neural Computing and Applications, 2020, 32, 18085-18099.	5.6	3
119	Biomedical Applications of Prototype Based Classifiers and Relevance Learning. Lecture Notes in Computer Science, 2017, , 3-23.	1.3	3
120	Discriminatory Data Mapping by Matrix-Based Supervised Learning Metrics. Lecture Notes in Computer Science, 2008, , 78-89.	1.3	3
121	A General Framework for Dimensionality Reduction for Large Data Sets. Lecture Notes in Computer Science, 2011, , 277-287.	1.3	3
122	Towards Emotion Classification Using Appraisal Modeling. , 0, , 552-572.		3
123	Comment on ``On-Line Gibbs Learning''. Physical Review Letters, 1997, 78, 4305-4305.	7.8	2
124	On-line Learning of Prototypes and Principal Components. , 1999, , 231-250.		2
125	Noisy regression and classification with continuous multilayer networks. Journal of Physics A, 1999, 32, L531-L536.	1.6	2
126	Receiver operating characteristics of perceptrons: Influence of sample size and prevalence. Physical Review E, 1999, 60, 5926-5931.	2.1	2

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127	A simple model of epitaxial growth: the influence of step edge diffusion. Computer Physics Communications, 1999, 121-122, 347-352.	7.5	2
128	Singularity spectra of rough growing surfaces from wavelet analysis. Physical Review E, 2000, 62, 1773-1777.	2.1	2
129	Efficiently Learning Multilayer Perceptrons. Physical Review Letters, 2001, 86, 2166-2169.	7.8	2
130	Particle currents and the distribution of terrace sizes in unstable epitaxial growth. Physical Review B, 2001, 64, .	3.2	2
131	Modeling (001) surfaces of Il–VI semiconductors. Computer Physics Communications, 2002, 147, 107-110.	7.5	2
132	Simulation of self-assembled nanopatterns in strained 2D alloys on the face centered cubic (111) surface. Journal of Physics Condensed Matter, 2008, 20, 265004.	1.8	2
133	Visualization of processes in self-learning systems. , 2012, , .		2
134	Inferring Feature Relevances From Metric Learning. , 2015, , .		2
135	Urine metabolomic phenotyping for detection of adrenocortical carcinoma: still a long way to go – Authors' reply. Lancet Diabetes and Endocrinology,the, 2020, 8, 877-878.	11.4	2
136	Matrix Metric Adaptation Linear Discriminant Analysis of Biomedical Data. Lecture Notes in Computer Science, 2009, , 933-940.	1.3	2
137	Nonlinear Dimension Reduction and Visualization of Labeled Data. Lecture Notes in Computer Science, 2009, , 1162-1170.	1.3	2
138	Urine steroid metabolomics as a diagnostic tool in primary aldosteronism. Endocrine Abstracts, 0, , .	0.0	2
139	Construction algorithm for the parity-machine. Physica A: Statistical Mechanics and Its Applications, 1993, 193, 307-313.	2.6	1
140	Specialization processes in on-line unsupervised learning. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1998, 77, 1487-1494.	0.6	1
141	Weight-decay induced phase transitions in multilayer neural networks. Journal of Physics A, 1999, 32, 5003-5008.	1.6	1
142	Advanced Fluid Information. Terrace Sizes and Particle Currents in Epitaxial Growth JSME International Journal Series B, 2002, 45, 112-116.	0.3	1
143	Efficient training of multilayer perceptrons using principal component analysis. Physical Review E, 2005, 72, 026117.	2.1	1
144	Texture feature selection with relevance learning to classify interstitial lung disease patterns. Proceedings of SPIE, 2011, , .	0.8	1

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145	Developments in computational intelligence and machine learning. Neurocomputing, 2015, 169, 185-186.	5.9	1
146	Prototype-based Models for the Supervised Learning of Classification Schemes. Proceedings of the International Astronomical Union, 2016, 12, 129-138.	0.0	1
147	Adaptive basis functions for prototype-based classification of functional data. , 2017, , .		1
148	Prototypes and matrix relevance learning in complex fourier space. , 2017, , .		1
149	Off-Lattice KMC Simulations of Stranski-Krastanov-Like Growth. , 2005, , 89-102.		1
150	Prototype-Based Classifiers in the Presence of Concept Drift: A Modelling Framework. Advances in Intelligent Systems and Computing, 2020, , 210-221.	0.6	1
151	Analysis of feature relevance using an image quality index applied to digital mammography. , 2019, , .		1
152	Prototype-Based Classifiers and Their Application in the Life Sciences. Advances in Intelligent Systems and Computing, 2014, , 121-121.	0.6	1
153	Urine steroid metabolomics is a highly sensitive tool for post-operative recurrence detection in adrenocortical carcinoma. Endocrine Abstracts, 0, , .	0.0	1
154	The urinary steroid metabolome as a non-invasive tool to stage non-alcoholic fatty liver disease. Endocrine Abstracts, 0, , .	0.0	1
155	Sequence Learning in Unsupervised and Supervised Vector Quantization Using Hankel Matrices. Lecture Notes in Computer Science, 2017, , 131-142.	1.3	1
156	A low-cost 3-D printed smartphone add-on spectrometer for diagnosis of crop diseases in field. , 2020, , .		1
157	A Learning Vector Quantization Architecture for Transfer Learning Based Classification in Case of Multiple Sources by Means of Null-Space Evaluation. Lecture Notes in Computer Science, 2022, , 354-364.	1.3	1
158	Supervised Learning from Clustered Input Examples. Europhysics Letters, 1995, 30, 251-251.	2.0	0
159	Evaporation and step edge diffusion in MBE. Journal of Crystal Growth, 1999, 201-202, 85-87.	1.5	Ο
160	Training multilayer perceptrons by principal component analysis. Physica A: Statistical Mechanics and Its Applications, 2001, 302, 56-63.	2.6	0
161	Advances in computational intelligence and learning. Neurocomputing, 2007, 70, 1117-1119.	5.9	0
162	Progress in modeling, theory, and application of computational intelligence. Neurocomputing, 2008, 71, 1117-1119.	5.9	0

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163	Phase transitions in vector quantization and neural gas. Neurocomputing, 2009, 72, 1390-1397.	5.9	0
164	Marker selection for the detection of trisomy 21 using generalized matrix learning vector quantization. , 2017, , .		0
165	Complex-Valued Embeddings of Generic Proximity Data. Lecture Notes in Computer Science, 2021, , 14-23.	1.3	0
166	The Statistical Physics of Learning Revisited: Typical Learning Curves in Model Scenarios. Lecture Notes in Computer Science, 2021, , 128-142.	1.3	0
167	Comment on "A Modern Assessment of Cancer Risk in Adrenal Incidentalomas: Analysis of 2219 Patients―by Kahramangil B et al Annals of Surgery, 2021, 274, e887-e888.	4.2	0
168	Learning structured data from unspecific reinforcement. Journal of Physics A, 2001, 34, 4267-4267.	1.6	0
169	The Statistical Physics of Learning: Phase Transitions and Dynamical Symmetry Breaking. , 2003, , 89-99.		0
170	Classification of FDG-PET Brain Data by Generalized Matrix Relevance LVQ. Lecture Notes in Computer Science, 2016, , 131-141.	1.3	0