

Michel Verleysen

List of Publications by Year in descending order

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129
papers

5,709
citations

126858

33
h-index

82499

72
g-index

132
all docs

132
docs citations

132
times ranked

5911
citing authors

#	ARTICLE	IF	CITATIONS
1	Classification in the Presence of Label Noise: A Survey. IEEE Transactions on Neural Networks and Learning Systems, 2014, 25, 845-869.	7.2	1,067
2	Unique in the Crowd: The privacy bounds of human mobility. Scientific Reports, 2013, 3, 1376.	1.6	983
3	The Concentration of Fractional Distances. IEEE Transactions on Knowledge and Data Engineering, 2007, 19, 873-886.	4.0	214
4	Quality assessment of dimensionality reduction: Rank-based criteria. Neurocomputing, 2009, 72, 1431-1443.	3.5	212
5	K nearest neighbours with mutual information for simultaneous classification and missing data imputation. Neurocomputing, 2009, 72, 1483-1493.	3.5	181
6	Weighted Conditional Random Fields for Supervised Interpatient Heartbeat Classification. IEEE Transactions on Biomedical Engineering, 2012, 59, 241-247.	2.5	166
7	Nonlinear projection with curvilinear distances: Isomap versus curvilinear distance analysis. Neurocomputing, 2004, 57, 49-76.	3.5	142
8	Clustering Smart Card Data for Urban Mobility Analysis. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 712-728.	4.7	131
9	Mutual information-based feature selection for multilabel classification. Neurocomputing, 2013, 122, 148-155.	3.5	113
10	Resampling methods for parameter-free and robust feature selection with mutual information. Neurocomputing, 2007, 70, 1276-1288.	3.5	110
11	On the Kernel Widths in Radial-Basis Function Networks. Neural Processing Letters, 2003, 18, 139-154.	2.0	100
12	Representation of functional data in neural networks. Neurocomputing, 2005, 64, 183-210.	3.5	91
13	Robust Bayesian clustering. Neural Networks, 2007, 20, 129-138.	3.3	80
14	Parameter-insensitive kernel in extreme learning for non-linear support vector regression. Neurocomputing, 2011, 74, 2526-2531.	3.5	80
15	Nonlinear dimensionality reduction of data manifolds with essential loops. Neurocomputing, 2005, 67, 29-53.	3.5	71
16	Multivariate statistics process control for dimensionality reduction in structural assessment. Mechanical Systems and Signal Processing, 2008, 22, 155-171.	4.4	71
17	Feature selection for nonlinear models with extreme learning machines. Neurocomputing, 2013, 102, 111-124.	3.5	69
18	Scale-independent quality criteria for dimensionality reduction. Pattern Recognition Letters, 2010, 31, 2248-2257.	2.6	68

#	ARTICLE	IF	CITATIONS
19	Type 1 and 2 mixtures of Kullback-Leibler divergences as cost functions in dimensionality reduction based on similarity preservation. Neurocomputing, 2013, 112, 92-108.	3.5	66
20	Multi-scale similarities in stochastic neighbour embedding: Reducing dimensionality while preserving both local and global structure. Neurocomputing, 2015, 169, 246-261.	3.5	61
21	Feature selection with missing data using mutual information estimators. Neurocomputing, 2012, 90, 3-11.	3.5	60
22	Is mutual information adequate for feature selection in regression?. Neural Networks, 2013, 48, 1-7.	3.3	59
23	A graph Laplacian based approach to semi-supervised feature selection for regression problems. Neurocomputing, 2013, 121, 5-13.	3.5	59
24	Feature Selection for Multi-label Classification Problems. Lecture Notes in Computer Science, 2011, , 9-16.	1.0	59
25	DD-HDS: A Method for Visualization and Exploration of High-Dimensional Data. IEEE Transactions on Neural Networks, 2007, 18, 1265-1279.	4.8	55
26	Mixtures of robust probabilistic principal component analyzers. Neurocomputing, 2008, 71, 1274-1282.	3.5	52
27	Information-theoretic feature selection for functional data classification. Neurocomputing, 2009, 72, 3580-3589.	3.5	51
28	Robust probabilistic projections. , 2006, , .		50
29	Comparison of some chemometric tools for metabonomics biomarker identification. Chemometrics and Intelligent Laboratory Systems, 2008, 91, 54-66.	1.8	50
30	Time series forecasting: Obtaining long term trends with self-organizing maps. Pattern Recognition Letters, 2005, 26, 1795-1808.	2.6	45
31	Clustering Patterns of Urban Built-up Areas with Curves of Fractal Scaling Behaviour. Environment and Planning B: Planning and Design, 2010, 37, 942-954.	1.7	41
32	Fast selection of spectral variables with B-spline compression. Chemometrics and Intelligent Laboratory Systems, 2007, 86, 208-218.	1.8	40
33	Distance estimation in numerical data sets with missing values. Information Sciences, 2013, 240, 115-128.	4.0	38
34	Time series prediction competition: The CATS benchmark. Neurocomputing, 2007, 70, 2325-2329.	3.5	36
35	Statistical treatment of 2D NMR COSY spectra in metabolomics: data preparation, clustering-based evaluation of the Metabolomic Informative Content and comparison with 1H-NMR. Metabolomics, 2015, 11, 1756-1768.	1.4	34
36	On the use of self-organizing maps to accelerate vector quantization. Neurocomputing, 2004, 56, 187-203.	3.5	31

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37	Benchmarking of Document Image Analysis Tasks for Palm Leaf Manuscripts from Southeast Asia. Journal of Imaging, 2018, 4, 43.	1.7	31
38	Residual variance estimation in machine learning. Neurocomputing, 2009, 72, 3692-3703.	3.5	27
39	A Minimum-Range Approach to Blind Extraction of Bounded Sources. IEEE Transactions on Neural Networks, 2007, 18, 809-822.	4.8	26
40	Theoretical and empirical study on the potential inadequacy of mutual information for feature selection in classification. Neurocomputing, 2013, 112, 64-78.	3.5	25
41	Unsupervised dimensionality reduction: Overview and recent advances. , 2010, , .		24
42	Estimating mutual information for feature selection in the presence of label noise. Computational Statistics and Data Analysis, 2014, 71, 832-848.	0.7	24
43	Weighted SVMs and Feature Relevance Assessment in Supervised Heart Beat Classification. Communications in Computer and Information Science, 2011, , 212-223.	0.4	22
44	Unfolding preprocessing for meaningful time series clustering. Neural Networks, 2006, 19, 877-888.	3.3	21
45	Advances in Feature Selection with Mutual Information. Lecture Notes in Computer Science, 2009, , 52-69.	1.0	21
46	On the entropy minimization of a linear mixture of variables for source separation. Signal Processing, 2005, 85, 1029-1044.	2.1	20
47	Fault Prediction in Aircraft Engines Using Self-Organizing Maps. Lecture Notes in Computer Science, 2009, , 37-44.	1.0	20
48	Generalized kernel framework for unsupervised spectral methods of dimensionality reduction. , 2014, , .		19
49	A Mutual Information estimator for continuous and discrete variables applied to Feature Selection and Classification problems. International Journal of Computational Intelligence Systems, 2016, 9, 726.	1.6	18
50	Nonlinear Dimensionality Reduction With Missing Data Using Parametric Multiple Imputations. IEEE Transactions on Neural Networks and Learning Systems, 2019, 30, 1166-1179.	7.2	18
51	Dimension reduction of technical indicators for the prediction of financial time series - Application to the BEL20 Market Index. European Journal of Economic and Social Systems, 2001, 15, 31-48.	0.2	18
52	Shift-invariant similarities circumvent distance concentration in stochastic neighbor embedding and variants. Procedia Computer Science, 2011, 4, 538-547.	1.2	17
53	Reinforced Extreme Learning Machines for Fast Robust Regression in the Presence of Outliers. IEEE Transactions on Cybernetics, 2016, 46, 3351-3363.	6.2	17
54	Dynamics of the perception and EEG signals triggered by tonic warm and cool stimulation. PLoS ONE, 2020, 15, e0231698.	1.1	17

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55	Double quantization of the regressor space for long-term time series prediction: method and proof of stability. <i>Neural Networks</i> , 2004, 17, 1169-1181.	3.3	16
56	EEG feature selection using mutual information and support vector machine: A comparative analysis. , 2010, 2010, 4946-9.		16
57	Two key properties of dimensionality reduction methods. , 2014, , .		16
58	Character and Text Recognition of Khmer Historical Palm Leaf Manuscripts. , 2018, , .		16
59	Short Review of Dimensionality Reduction Methods Based on Stochastic Neighbour Embedding. <i>Advances in Intelligent Systems and Computing</i> , 2014, , 65-74.	0.5	16
60	Mixing and Non-Mixing Local Minima of the Entropy Contrast for Blind Source Separation. <i>IEEE Transactions on Information Theory</i> , 2007, 53, 1030-1042.	1.5	15
61	Kernel-based dimensionality reduction using Renyi's \hat{H}_\pm -entropy measures of similarity. <i>Neurocomputing</i> , 2017, 222, 36-46.	3.5	15
62	A New Khmer Palm Leaf Manuscript Dataset for Document Analysis and Recognition. , 2017, , .		15
63	Aircraft Engine Health Monitoring Using Self-Organizing Maps. <i>Lecture Notes in Computer Science</i> , 2010, , 405-417.	1.0	15
64	Prediction of visual perceptions with artificial neural networks in a visual prosthesis for the blind. <i>Artificial Intelligence in Medicine</i> , 2004, 32, 183-194.	3.8	13
65	High-dimensional delay selection for regression models with mutual information and distance-to-diagonal criteria. <i>Neurocomputing</i> , 2007, 70, 1265-1275.	3.5	13
66	On the Risk of Using Renyi's Entropy for Blind Source Separation. <i>IEEE Transactions on Signal Processing</i> , 2008, 56, 4611-4620.	3.2	13
67	Collaborative filtering with interlaced generalized linear models. <i>Neurocomputing</i> , 2008, 71, 1300-1310.	3.5	12
68	Modelling the quality of enantiomeric separations using Mutual Information as an alternative variable selection technique. <i>Analytica Chimica Acta</i> , 2007, 602, 37-46.	2.6	11
69	ICFHR 2018 Competition On Document Image Analysis Tasks for Southeast Asian Palm Leaf Manuscripts. , 2018, , .		11
70	Nonlinear Projection with the Isotop Method. <i>Lecture Notes in Computer Science</i> , 2002, , 933-938.	1.0	11
71	Forecasting the CATS benchmark with the Double Vector Quantization method. <i>Neurocomputing</i> , 2007, 70, 2400-2409.	3.5	10
72	LASSO multi-objective learning algorithm for feature selection. <i>Soft Computing</i> , 2020, 24, 13209-13217.	2.1	10

#	ARTICLE	IF	CITATIONS
73	Improving projection-based data analysis by feature space transformations. Proceedings of SPIE, 2013, , .	0.8	9
74	Multi-Objective Semi-Supervised Feature Selection and Model Selection Based on Pearson's Correlation Coefficient. Lecture Notes in Computer Science, 2010, , 509-516.	1.0	9
75	A Comparative Study of Various Probability Density Estimation Methods for Data Analysis. International Journal of Computational Intelligence Systems, 2008, 1, 188-201.	1.6	8
76	Nonlinear data projection on non-Euclidean manifolds with controlled trade-off between trustworthiness and continuity. Neurocomputing, 2009, 72, 1444-1454.	3.5	8
77	Line Segmentation Approach for Ancient Palm Leaf Manuscripts Using Competitive Learning Algorithm. , 2016, , .		8
78	Data Augmentation and Text Recognition on Khmer Historical Manuscripts. , 2020, , .		8
79	Graph Laplacian for Semi-supervised Feature Selection in Regression Problems. Lecture Notes in Computer Science, 2011, , 248-255.	1.0	8
80	A Performance Evaluation of Mutual Information Estimators for Multivariate Feature Selection. Advances in Intelligent Systems and Computing, 2013, , 51-63.	0.5	8
81	Nonlinear Dimensionality Reduction for Visualization. Lecture Notes in Computer Science, 2013, , 617-622.	1.0	8
82	A principled approach to image denoising with similarity kernels involving patches. Neurocomputing, 2010, 73, 1199-1209.	3.5	7
83	Mode estimation in high-dimensional spaces with flat-top kernels: Application to image denoising. Neurocomputing, 2011, 74, 1402-1410.	3.5	7
84	Inference of node attributes from social network assortativity. Neural Computing and Applications, 2020, 32, 18023-18043.	3.2	7
85	Label Noise-Tolerant Hidden Markov Models for Segmentation: Application to ECGs. Lecture Notes in Computer Science, 2011, , 455-470.	1.0	7
86	Aircraft Engine Fleet Monitoring Using Self-Organizing Maps and Edit Distance. Lecture Notes in Computer Science, 2011, , 298-307.	1.0	6
87	Fast Multiscale Neighbor Embedding. IEEE Transactions on Neural Networks and Learning Systems, 2022, 33, 1546-1560.	7.2	6
88	Filtering-Free Blind Separation of Correlated Images. Lecture Notes in Computer Science, 2005, , 1091-1099.	1.0	5
89	The delta test: The 1-NN estimator as a feature selection criterion. , 2014, , .		5
90	Line segmentation for grayscale text images of khmer palm leaf manuscripts. , 2017, , .		5

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91	Improving the Robustness to Outliers of Mixtures of Probabilistic PCAs. , 2008, , 527-535.		5
92	Choosing the Metric: A Simple Model Approach. Studies in Computational Intelligence, 2011, , 97-115.	0.7	5
93	A Least Absolute Bound Approach to ICA Â; Application to the MLSP 2006 Competition. IEEE International Workshop on Machine Learning for Signal Processing, 2006, , .	0.0	4
94	Dimensionality reduction by rank preservation. , 2010, , .		4
95	Dimensionality reduction for EEG classification using Mutual Information and SVM. , 2011, , .		4
96	Improving individual predictions using social networks assortativity. , 2017, , .		4
97	Trajectory Clustering for Vibration Detection in Aircraft Engines. Lecture Notes in Computer Science, 2010, , 362-375.	1.0	4
98	On the Role and Impact of the Metaparameters in t-distributed Stochastic Neighbor Embedding. , 2010, , 337-346.		4
99	A CMOS/SOI Single-input PWM Discriminator for Low-voltage Body-implanted Applications. VLSI Design, 2002, 15, 469-476.	0.5	4
100	Minimum Support ICA Using Order Statistics. Part II: Performance Analysis. Lecture Notes in Computer Science, 2006, , 270-277.	1.0	4
101	Placing spline knots in neural networks using splines as activation functions. Neurocomputing, 1997, 17, 159-166.	3.5	3
102	Blind source separation based on endpoint estimation with application to the MLSP 2006 data competition. Neurocomputing, 2008, 72, 47-56.	3.5	3
103	Incremental classification of objects in scenes: Application to the delineation of images. Neurocomputing, 2015, 152, 45-57.	3.5	3
104	Combining strong sparsity and competitive predictive power with the L-sOPLS approach for biomarker discovery in metabolomics. Metabolomics, 2017, 13, 1.	1.4	3
105	Semi-supervised relevance index for feature selection. Neural Computing and Applications, 2019, 31, 989-997.	3.2	3
106	Simbed: Similarity-Based Embedding. Lecture Notes in Computer Science, 2009, , 95-104.	1.0	3
107	Text Recognition on Khmer Historical Documents using Glyph Class Map Generation with Encoder-Decoder Model. , 2019, , .		3
108	Is the General Form of Renyiâ€™s Entropy a Contrast for Source Separation?. , 2007, , 129-136.		3

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109	Feature ranking in changing environments where new features are introduced. , 2015, , .		2
110	Multi-step-ahead forecasting using kernel adaptive filtering. , 2016, , .		2
111	Spatial Filtering of EEG Signals to Identify Periodic Brain Activity Patterns. Lecture Notes in Computer Science, 2018, , 524-533.	1.0	2
112	About Filter Criteria for Feature Selection in Regression. Lecture Notes in Computer Science, 2019, , 579-590.	1.0	2
113	A Functional Approach to Variable Selection in Spectrometric Problems. Lecture Notes in Computer Science, 2006, , 11-20.	1.0	2
114	Zero-Entropy Minimization for Blind Extraction of Bounded Sources (BEBS). Lecture Notes in Computer Science, 2006, , 747-754.	1.0	2
115	An Unsupervised Gaussian Mixture Classification Mechanism Based on Statistical Learning Analysis. , 2008, , .		1
116	Pointwise probability reinforcements for robust statistical inference. Neural Networks, 2014, 50, 124-141.	3.3	1
117	Reading grid for feature selection relevance criteria in regression. Pattern Recognition Letters, 2021, 148, 92-99.	2.6	1
118	Information-Theoretic Feature Selection for the Classification of Hysteresis Curves. , 2007, , 522-529.		1
119	Long-Distance Running Routesâ€™ Flat Equivalent Distances from Race Results and Elevation Profiles. , 2018, , .		1
120	Support Vector Machines for Improved IP Detection with Soft Physical Hash Functions. Lecture Notes in Computer Science, 2014, , 112-128.	1.0	1
121	Single Trial Classification for Mobile BCI - A Multiway Kernel Approach. , 2015, , .		1
122	SQuadMDS: A lean Stochastic Quartet MDS improving global structure preservation in neighbor embedding like t-SNE and UMAP. Neurocomputing, 2022, 503, 17-27.	3.5	1
123	Smoothness Bias in Relevance Estimators for Feature Selection in Regression. IFIP Advances in Information and Communication Technology, 2018, , 285-294.	0.5	0
124	A Comparative Study of Various Probability Density Estimation Methods for Data Analysis. International Journal of Computational Intelligence Systems, 2008, 1, 188.	1.6	0
125	An Alternative to Center-Based Clustering Algorithm Via Statistical Learning Analysis. Lecture Notes in Computer Science, 2008, , 693-700.	1.0	0
126	Segmentation with Incremental Classifiers. Lecture Notes in Computer Science, 2013, , 81-90.	1.0	0

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127	Running Race Times Prediction and Runner Performances Comparison using a Matrix Factorization Approach. , 2017, , .		0
128	Linear Periodic Discriminant Analysis of Multidimensional Signals. Lecture Notes in Computer Science, 2018, , 476-487.	1.0	0
129	Comparison Between Filter Criteria for Feature Selection in Regression. Lecture Notes in Computer Science, 2019, , 59-71.	1.0	0