Fionn Murtagh

List of Publications by Year
in descending order

96 papers	6,926 citations	185998 28 h-index	64668 79 g-index
106 all docs	106 docs citations	106 times ranked	9576 citing authors

#	Article	IF	Citations
1	Ward's Hierarchical Agglomerative Clustering Method: Which Algorithms Implement Ward's Criterion?. Journal of Classification, 2014, 31, 274-295.	1.2	2,398
2	Algorithms for hierarchical clustering: an overview. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2012, 2, 86-97.	4.6	787
3	Multilayer perceptrons for classification and regression. Neurocomputing, 1991, 2, 183-197.	3.5	461
4	Gray and color image contrast enhancement by the curvelet transform. IEEE Transactions on Image Processing, 2003, 12, 706-717.	6.0	422
5	The Undecimated Wavelet Decomposition and its Reconstruction. IEEE Transactions on Image Processing, 2007, 16, 297-309.	6.0	396
6	Three Types of Gamma-Ray Bursts. Astrophysical Journal, 1998, 508, 314-327.	1.6	245
7	Multivariate Data Analysis. Astrophysics and Space Science Library, 1987, , .	1.0	229
8	Algorithms for hierarchical clustering: an overview, <scp>II</scp>. Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery, 2017, 7, e1219.	4.6	159
9	Wavelets and curvelets for image deconvolution: a combined approach. Signal Processing, 2003, 83, 2279-2283.	2.1	134
10	Astronomical Image and Data Analysis. Astronomy and Astrophysics Library, 2002, , .	0.2	129
11	Hierarchical cluster analysis in clinical research with heterogeneous study population: highlighting its visualization with R. Annals of Translational Medicine, 2017, 5, 75-75.	0.7	94
12	On Ultrametricity, Data Coding, and Computation. Journal of Classification, 2004, 21, 167-184.	1.2	81
13	Combining Neural Network Forecasts on Wavelet-transformed Time Series. Connection Science, 1997, 9, 113-122.	1.8	80
14	Automatic Noise Estimation from the Multiresolution Support. Publications of the Astronomical Society of the Pacific, 1998, 110, 193-199.	1.0	78
15	Counting dendrograms: A survey. Discrete Applied Mathematics, 1984, 7, 191-199.	0.5	53
16	Wavelet and curvelet moments for image classification: Application to aggregate mixture grading. Pattern Recognition Letters, 2008, 29, 1557-1564.	2.6	51
17	The Haar Wavelet Transform of a Dendrogram. Journal of Classification, 2007, 24, 3-32.	1.2	47
18	The structure of narrative: The case of film scripts. Pattern Recognition, 2009, 42, 302-312.	5.1	45

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19	Bayesian inference for multiband image segmentation via model-based cluster trees. Image and Vision Computing, 2005, 23, 587-596.	2.7	44
20	Public software for the astronomer - an overview. Publications of the Astronomical Society of the Pacific, 1992, 104, 574.	1.0	41
21	SedLog: A shareware program for drawing graphic logs and log data manipulation. Computers and Geosciences, 2009, 35, 2151-2159.	2.0	39
22	DYNAMICAL RECURRENT NEURAL NETWORKS â€" TOWARDS ENVIRONMENTAL TIME SERIES PREDICTION. International Journal of Neural Systems, 1995, 06, 145-170.	3.2	37
23	Clustering of XML documents. Computer Physics Communications, 2000, 127, 215-227.	3.0	36
24	Hierarchical Clustering of Massive, High Dimensional Data Sets by Exploiting Ultrametric Embedding. SIAM Journal of Scientific Computing, 2008, 30, 707-730.	1.3	35
25	A novel data clustering algorithm based on gravity center methodology. Expert Systems With Applications, 2020, 156, 113435.	4.4	33
26	Ultrametric model of mind, I: Review. P-Adic Numbers, Ultrametric Analysis, and Applications, 2012, 4, 193-206.	0.1	32
27	The Remarkable Simplicity of Very High Dimensional Data: Application of Model-Based Clustering. Journal of Classification, 2009, 26, 249-277.	1.2	31
28	Astronomical Image Compression Based on Noise Suppression. Publications of the Astronomical Society of the Pacific, 1996, 108, 446.	1.0	30
29	Ultrametric model of mind, II: Application to text content analysis. P-Adic Numbers, Ultrametric Analysis, and Applications, 2012, 4, 207-221.	0.1	29
30	A new data clustering algorithm based on critical distance methodology. Expert Systems With Applications, 2019, 129, 296-310.	4.4	28
31	Web traffic demand forecasting using wavelet-based multiscale decomposition. International Journal of Intelligent Systems, 2001, 16, 215-236.	3.3	21
32	Multiband segmentation based on a hierarchical Markov model. Pattern Recognition, 2004, 37, 2337-2347.	5.1	20
33	Biologically Inspired Tensor Features. Cognitive Computation, 2009, 1, 327-341.	3.6	19
34	Fast, Linear Time Hierarchical Clustering using the Baire Metric. Journal of Classification, 2012, 29, 118-143.	1.2	19
35	Symmetry in data mining and analysis: A unifying view based on hierarchy. Proceedings of the Steklov Institute of Mathematics, 2009, 265, 177-198.	0.1	18
36	The new science of complex systems through ultrametric analysis: Application to search and discovery, to narrative and to thinking. P-Adic Numbers, Ultrametric Analysis, and Applications, 2013, 5, 326-337.	0.1	18

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37	Cognitive Informatics and Computational Intelligence. International Journal of Software Science and Computational Intelligence, 2015, 7, 50-69.	1.8	18
38	Formal foundations for the origins of human consciousness. P-Adic Numbers, Ultrametric Analysis, and Applications, 2016, 8, 249-279.	0.1	18
39	Pattern clustering based on noise modeling in wavelet space. Pattern Recognition, 1998, 31, 847-855.	5.1	17
40	Data Science Foundations. , 0, , .		16
41	Maps of information spaces: Assessments from astronomy. Journal of the Association for Information Science and Technology, 2000, 51, 1081-1089.	1.2	14
42	A machine vision approach to the grading of crushed aggregate. Machine Vision and Applications, 2005, 16, 229-235.	1.7	14
43	Mathematical Representations of Matte Blanco's Bi- Logic, based on Metric Space and Ultrametric or Hierarchical Topology: Towards Practical Application. Language and Psychoanalysis, 2014, 3, 40-63.	0.2	13
44	Very-high-quality image compression based on noise modeling. International Journal of Imaging Systems and Technology, 1998, 9, 38-45.	2.7	12
45	A Machine Learning Framework for Predicting Dementia and Mild Cognitive Impairment. , 2018, , .		12
46	Wedding the Wavelet Transform and Multivariate Data Analysis. Journal of Classification, 1998, 15, 161-183.	1.2	11
47	A Study of the Neighborhood Counting Similarity. IEEE Transactions on Knowledge and Data Engineering, 2008, 20, 449-461.	4.0	10
48	The Development of Data Science: Implications for Education, Employment, Research, and the Data Revolution for Sustainable Development. Big Data and Cognitive Computing, 2018, 2, 14.	2.9	10
49	Semantic mapping of discourse and activity, using Habermas's theory of communicative action to analyze process. Quality and Quantity, 2016, 50, 1675-1694.	2.0	9
50	Multiresolution in astronomical image processing: A general framework. International Journal of Imaging Systems and Technology, 1995, 6, 332-338.	2.7	8
51	From data to the p-adic or ultrametric model. P-Adic Numbers, Ultrametric Analysis, and Applications, 2009, 1, 58-68.	0.1	8
52	Sparse p-adic data coding for computationally efficient and effective big data analytics. P-Adic Numbers, Ultrametric Analysis, and Applications, 2016, 8, 236-247.	0.1	8
53	Qualitative Judgement of Research Impact: Domain Taxonomy as a Fundamental Framework for Judgement of the Quality of Research. Journal of Classification, 2018, 35, 5-28.	1.2	8
54	Overview of the CLEF 2016 Cultural Micro-blog Contextualization Workshop. Lecture Notes in Computer Science, 2016, , 371-378.	1.0	8

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55	Perceptual simplification for model-based binaural room auralisation. Applied Acoustics, 2008, 69, 715-727.	1.7	7
56	Ultrametric Wavelet Regression of Multivariate Time Series: Application to Colombian Conflict Analysis. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2011, 41, 254-263.	3.4	7
57	Pattern recognition in mental processes: Determining vestiges of the subconscious through ultrametric component analysis. , 2014, , .		7
58	Fast Hierarchical Clustering from the Baire Distance. Studies in Classification, Data Analysis, and Knowledge Organization, 2010, , 235-243.	0.1	7
59	Nowcasting astronomical seeing - A study of ESO La Silla and Paranal. Publications of the Astronomical Society of the Pacific, 1993, 105, 932.	1.0	7
60	A Wavelet, Fourier, and PCA Data Analysis Pipeline:â€‰ Application to Distinguishing Mixtures of Liquids. Journal of Chemical Information and Computer Sciences, 2003, 43, 587-594.	2.8	6
61	Grading of construction aggregate through machine vision: Results and prospects. Computers in Industry, 2005, 56, 905-917.	5.7	6
62	From Data to the Physics Using Ultrametrics: New Results in High Dimensional Data Analysis. AIP Conference Proceedings, 2006, , .	0.3	6
63	Tag Clouds for Displaying Semantics: The Case of Filmscripts. Information Visualization, 2010, 9, 253-262.	1.2	6
64	New methods of analysis of narrative and semantics in support of interactivity. Entertainment Computing, 2011, 2, 115-121.	1.8	6
65	Fast, linear time, m-adic hierarchical clustering for search and retrieval using the Baire metric, with linkages to generalized ultrametrics, hashing, formal concept analysis, and precision of data measurement. P-Adic Numbers, Ultrametric Analysis, and Applications, 2012, 4, 46-56.	0.1	6
66	Pattern Recognition of Subconscious Underpinnings of Cognition using Ultrametric Topological Mapping of Thinking and Memory. International Journal of Cognitive Informatics and Natural Intelligence, 2014, 8, 1-16.	0.4	6
67	Random Projection Towards the Baire Metric for High Dimensional Clustering. Lecture Notes in Computer Science, 2015, , 424-431.	1.0	6
68	Thinking Ultrametrically. , 2004, , 3-14.		6
69	Human behaviour, benign or malevolent: understanding the human psyche, performing therapy, based on affective mentalization and Matte-Blancoâ€™s bi-logic. Annals of Translational Medicine, 2016, 4, 486-486.	0.7	6
70	Spatial representation of economic and financial measures used in agriculture via wavelet analysis. International Journal of Geographical Information Science, 1999, 13, 557-576.	2.2	5
71	The Classification Societyâ€™s Bibliography Over Four Decades: History and Content Analysis. Journal of Classification, 2016, 33, 6-29.	1.2	5
72	Nowcasting Astronomical Seeing: Towards an Operational Approach. Publications of the Astronomical Society of the Pacific, 1995, 107, 702.	1.0	5

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73	Scale-Based Gaussian Coverings: Combining Intra and Inter Mixture Models in Image Segmentation. Entropy, 2009, 11, 513-528.	1.1	4
74	A diversified shared latent variable model for efficient image characteristics extraction and modelling. Neurocomputing, 2021, 421, 244-259.	3.5	4
75	Hierarchical Clustering for Finding Symmetries and Other Patterns in Massive, High Dimensional Datasets. Intelligent Systems Reference Library, 2012, , 95-130.	1.0	4
76	Theme Articles on Classification and Geometric Data Analysis. Journal of Classification, 2014, 31, 1-1.	1.2	3
77	Image super-resolution for outdoor digital forensics. Usability and legal aspects. Computers in Industry, 2018, 98, 34-47.	5.7	3
78	Computational Properties of Fiction Writing and Collaborative Work. Lecture Notes in Computer Science, 2013, , 369-379.	1.0	3
79	Fuzzy astronomical seeing nowcasts with a dynamical and recurrent connectionist network. Neurocomputing, 1996, 13, 359-373.	3.5	2
80	Statistics and Trends. Computer Journal, 2002, 45, 259-259.	1.5	2
81	Thinking Ultrametrically, Thinking p-Adically. Springer Optimization and Its Applications, 2014, , 249-272.	0.6	2
82	Editorial for the special issue on astrostatistics. Statistical Methodology, 2012, 9, 1-3.	0.5	1
83	Data mining in human activity analysis. Signal Processing, 2018, 147, 247-248.	2.1	1
84	Report on CLEF 2018. ACM SIGIR Forum, 2019, 52, 72-82.	0.4	1
85	Hierarchy, Symmetry and Scale in Mathematics and Bi-Logic in Psychoanalysis, with Consequences. European Review, 2021, 29, 197-209.	0.4	1
86	The Geometry and Topology of Data and Information for Analytics of Processes and Behaviours: Building on Bourdieu and Addressing New Societal Challenges. , 2019, , 345-357.		1
87	Foreword to articles on â€œFrom information to knowledge using astronomical databasesâ€ Computer Physics Communications, 2000, 127, 175-176.	3.0	0
88	New Image Modeling Approaches. Surveys in Geophysics, 2000, 21, 229-239.	2.1	0
89	Direct Reading Algorithm for Hierarchical Clustering. Electronic Notes in Discrete Mathematics, 2016, 56, 37-42.	0.4	0
90	Hierarchical Matching and Regression with Application to Photometric Redshift Estimation. Proceedings of the International Astronomical Union, 2016, 12, 145-155.	0.0	0

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91	TOPOLOGICAL APPROACHES TO SEARCH AND MATCHING IN MASSIVE DATA SETS. , 2007, , .		0
92	The Structure of Argument: Semantic Mapping of US Supreme Court Cases. Lecture Notes in Computer Science, 2015, , 397-405.	1.0	0
93	Big Data Scaling Through Metric Mapping: Exploiting the Remarkable Simplicity of Very High Dimensional Spaces Using Correspondence Analysis. Studies in Classification, Data Analysis, and Knowledge Organization, 2017, , 295-306.	0.1	0
94	Core Conflictual Relationship. Language and Psychoanalysis, 2018, 7, 4-28.	0.2	0
95	Text Mining and Big Textual Data: Relevant Statistical Models. Springer Proceedings in Mathematics and Statistics, 2019, , 39-52.	0.1	0
96	An Analysis of the Relationships among Computation-Related Skills Using a Hierarchical-Clustering Technique. Journal for Research in Mathematics Education, 1986, 17, 112-129.	1.0	0