Fionn Murtagh

List of Publications by Citations

90 papers	4,468 citations	25 h-index	66 g-index
106 ext. papers	5,757 ext. citations	3 avg, IF	6.2 L-index

#	Paper	IF	Citations
90	Ward's Hierarchical Agglomerative Clustering Method: Which Algorithms Implement Ward's Criterion?. *Journal of Classification*, **2014**, 31, 274-295	1.2	1468
89	Algorithms for hierarchical clustering: an overview. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, **2012**, 2, 86-97	6.9	357
88	Gray and color image contrast enhancement by the curvelet transform. *IEEE Transactions on Image Processing*, **2003**, 12, 706-17	8.7	302
87	The undecimated wavelet decomposition and its reconstruction. *IEEE Transactions on Image Processing*, **2007**, 16, 297-309	8.7	273
86	Three Types of Gamma-Ray Bursts. *Astrophysical Journal*, **1998**, 508, 314-327	4.7	214
85	Multivariate Data Analysis. *Astrophysics and Space Science Library*, **1987**,	0.3	186
84	Multilayer perceptrons for classification and regression. *Neurocomputing*, **1991**, 2, 183-197	5.4	184
83	Wavelets and curvelets for image deconvolution: a combined approach. *Signal Processing*, **2003**, 83, 2279-2283	4.4	114
82	Astronomical Image and Data Analysis. *Astronomy and Astrophysics Library*, **2002**,	0.2	102
81	Correspondence Analysis and Data Coding with Java and R		86
80	Algorithms for hierarchical clustering: an overview, II. *Wiley Interdisciplinary Reviews: Data Mining and Knowledge Discovery*, **2017**, 7, e1219	6.9	80
79	Automatic Noise Estimation from the Multiresolution Support. *Publications of the Astronomical Society of the Pacific*, **1998**, 110, 193-199	5	73
78	Combining Neural Network Forecasts on Wavelet-transformed Time Series. *Connection Science*, **1997**, 9, 113-122	2.8	63
77	On Ultrametricity, Data Coding, and Computation. *Journal of Classification*, **2004**, 21, 167-184	1.2	63
76	Wavelet and curvelet moments for image classification: Application to aggregate mixture grading. *Pattern Recognition Letters*, **2008**, 29, 1557-1564	4.7	46
75	Counting dendrograms: A survey. *Discrete Applied Mathematics*, **1984**, 7, 191-199	1	43
74	The Haar Wavelet Transform of a Dendrogram. *Journal of Classification*, **2007**, 24, 3-32	1.2	42

73	Public software for the astronomer - an overview. *Publications of the Astronomical Society of the Pacific*, **1992**, 104, 574	5	41
72	Bayesian inference for multiband image segmentation via model-based cluster trees. *Image and Vision Computing*, **2005**, 23, 587-596	3.7	35
71	The structure of narrative: The case of film scripts. *Pattern Recognition*, **2009**, 42, 302-312	7.7	31
70	Clustering of XML documents. *Computer Physics Communications*, **2000**, 127, 215-227	4.2	29
69	Hierarchical Clustering of Massive, High Dimensional Data Sets by Exploiting Ultrametric Embedding. *SIAM Journal of Scientific Computing*, **2008**, 30, 707-730	2.6	27
68	Astronomical Image Compression Based on Noise Suppression. *Publications of the Astronomical Society of the Pacific*, **1996**, 108, 446	5	26
67	Ultrametric model of mind, I: Review. *P-Adic Numbers, Ultrametric Analysis, and Applications*, **2012**, 4, 193-206	0.7	25
66	The Remarkable Simplicity of Very High Dimensional Data: Application of Model-Based Clustering. *Journal of Classification*, **2009**, 26, 249-277	1.2	25
65	Dynamical recurrent neural networks--towards environmental time series prediction. *International Journal of Neural Systems*, **1995**, 6, 145-70	6.2	25
64	SedLog: A shareware program for drawing graphic logs and log data manipulation. *Computers and Geosciences*, **2009**, 35, 2151-2159	4.5	24
63	Ultrametric model of mind, II: Application to text content analysis. *P-Adic Numbers, Ultrametric Analysis, and Applications*, **2012**, 4, 207-221	0.7	22
62	Multiband segmentation based on a hierarchical Markov model. *Pattern Recognition*, **2004**, 37, 2337-2347	7.7	19
61	Web traffic demand forecasting using wavelet-based multiscale decomposition. *International Journal of Intelligent Systems*, **2001**, 16, 215-236	8.4	18
60	Biologically Inspired Tensor Features. *Cognitive Computation*, **2009**, 1, 327-341	4.4	17
59	Symmetry in data mining and analysis: A unifying view based on hierarchy. *Proceedings of the Steklov Institute of Mathematics*, **2009**, 265, 177-198	0.5	17
58	A new data clustering algorithm based on critical distance methodology. *Expert Systems With Applications*, **2019**, 129, 296-310	7.8	16
57	Fast, Linear Time Hierarchical Clustering using the Baire Metric. *Journal of Classification*, **2012**, 29, 118-143	2	16
56	Cognitive Informatics and Computational Intelligence. *International Journal of Software Science and Computational Intelligence*, **2015**, 7, 50-69	1.4	15

55	Pattern clustering based on noise modeling in wavelet space. *Pattern Recognition*, **1998**, 31, 847-855	7.7	15
54	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	0.7	14
53	Data Science Foundations		14
52	A novel data clustering algorithm based on gravity center methodology. *Expert Systems With Applications*, **2020**, 156, 113435	7.8	12
51	Very-high-quality image compression based on noise modeling. *International Journal of Imaging Systems and Technology*, **1998**, 9, 38-45	2.5	10
50	Wedding the Wavelet Transform and Multivariate Data Analysis. *Journal of Classification*, **1998**, 15, 161-183	1.2	10
49	A machine vision approach to the grading of crushed aggregate. *Machine Vision and Applications*, **2005**, 16, 229-235	2.8	10
48	Semantic mapping of discourse and activity, using Habermas' theory of communicative action to analyze process. *Quality and Quantity*, **2016**, 50, 1675-1694	2.4	9
47	Formal foundations for the origins of human consciousness. *P-Adic Numbers, Ultrametric Analysis, and Applications*, **2016**, 8, 249-279	0.7	9
46	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	4	9
45	Maps of information spaces: Assessments from astronomy. *Journal of the Association for Information Science and Technology*, **2000**, 51, 1081-1089		8
44	A Machine Learning Framework for Predicting Dementia and Mild Cognitive Impairment **2018**,		8
43	A Study of the Neighborhood Counting Similarity. *IEEE Transactions on Knowledge and Data Engineering*, **2008**, 20, 449-461	4.2	7
42	Overview of the CLEF 2016 Cultural Micro-blog Contextualization Workshop. *Lecture Notes in Computer Science*, **2016**, 371-378	0.9	7
41	Sparse p-adic data coding for computationally efficient and effective big data analytics. *P-Adic Numbers, Ultrametric Analysis, and Applications*, **2016**, 8, 236-247	0.7	6
40	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	6
39	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		6
38	From data to the p-adic or ultrametric model. *P-Adic Numbers, Ultrametric Analysis, and Applications*, **2009**, 1, 58-68	0.7	6

37	Multiresolution in astronomical image processing: A general framework. *International Journal of Imaging Systems and Technology*, **1995**, 6, 332-338	2.5	6
36	Thinking Ultrametrically **2004**, 3-14		6
35	Nowcasting astronomical seeing - A study of ESO La Silla and Paranal. *Publications of the Astronomical Society of the Pacific*, **1993**, 105, 932	5	6
34	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	0.7	5
33	Perceptual simplification for model-based binaural room auralisation. *Applied Acoustics*, **2008**, 69, 715-727	3.1	5
32	A wavelet, fourier, and PCA data analysis pipeline: application to distinguishing mixtures of liquids. *Journal of Chemical Information and Computer Sciences*, **2003**, 43, 587-94		5
31	Grading of construction aggregate through machine vision: Results and prospects. *Computers in Industry*, **2005**, 56, 905-917	11.6	5
30	Random Projection Towards the Baire Metric for High Dimensional Clustering. *Lecture Notes in Computer Science*, **2015**, 424-431	0.9	5
29	Nowcasting Astronomical Seeing: Towards an Operational Approach. *Publications of the Astronomical Society of the Pacific*, **1995**, 107, 702	5	5
28	The Classification Society Bibliography Over Four Decades: History and Content Analysis. *Journal of Classification*, **2016**, 33, 6-29	1.2	5
27	New methods of analysis of narrative and semantics in support of interactivity. *Entertainment Computing*, **2011**, 2, 115-121	1.9	4
26	Tag Clouds for Displaying Semantics: The Case of Filmscripts. *Information Visualization*, **2010**, 9, 253-262	2.4	4
25	From Data to the Physics Using Ultrametrics: New Results in High Dimensional Data Analysis. *AIP Conference Proceedings*, **2006**,	0	4
24	Fast Hierarchical Clustering from the Baire Distance. *Studies in Classification, Data Analysis, and Knowledge Organization*, **2010**, 235-243	0.2	4
23	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	3.5	4
22	Image super-resolution for outdoor digital forensics. Usability and legal aspects. *Computers in Industry*, **2018**, 98, 34-47	11.6	3
21	Scale-Based Gaussian Coverings: Combining Intra and Inter Mixture Models in Image Segmentation. *Entropy*, **2009**, 11, 513-528	2.8	3
20	Spatial representation of economic and financial measures used in agriculture via wavelet analysis. *International Journal of Geographical Information Science*, **1999**, 13, 557-576	4.1	3

19	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	0.9	2
18	Pattern recognition in mental processes: Determining vestiges of the subconscious through ultrametric component analysis **2014**,		2
17	Fuzzy astronomical seeing nowcasts with a dynamical and recurrent connectionist network. *Neurocomputing*, **1996**, 13, 359-373	5.4	2
16	Computational Properties of Fiction Writing and Collaborative Work. *Lecture Notes in Computer Science*, **2013**, 369-379	0.9	2
15	Thinking Ultrametrically, Thinking p-Adically. *Springer Optimization and Its Applications*, **2014**, 249-272	0.4	2
14	Report on CLEF 2018. *ACM SIGIR Forum*, **2019**, 52, 72-82	0.9	1
13	Theme Articles on Classification and Geometric Data Analysis. *Journal of Classification*, **2014**, 31, 1-1	1.2	1
12	Linear Storage and Potentially Constant Time Hierarchical Clustering Using the Baire Metric and Random Spanning Paths. *Studies in Classification, Data Analysis, and Knowledge Organization*, **2016**, 43-52	0.2	1
11	Hierarchical Clustering for Finding Symmetries and Other Patterns in Massive, High Dimensional Datasets. *Intelligent Systems Reference Library*, **2012**, 95-130	0.8	0
10	A diversified shared latent variable model for efficient image characteristics extraction and modelling. *Neurocomputing*, **2021**, 421, 244-259	5.4	0
9	Hierarchical Matching and Regression with Application to Photometric Redshift Estimation. *Proceedings of the International Astronomical Union*, **2016**, 12, 145-155	0.1	
8	New Image Modeling Approaches. *Surveys in Geophysics*, **2000**, 21, 229-239	7.6	
7	Text Mining and Big Textual Data: Relevant Statistical Models. *Springer Proceedings in Mathematics and Statistics*, **2019**, 39-52	0.2	
6	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		
5	The Structure of Argument: Semantic Mapping of US Supreme Court Cases. *Lecture Notes in Computer Science*, **2015**, 397-405	0.9	
4	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	0.2	
3	Direct Reading Algorithm for Hierarchical Clustering. *Electronic Notes in Discrete Mathematics*, **2016**, 56, 37-42	0.3	
2	Hierarchy, Symmetry and Scale in Mathematics and Bi-Logic in Psychoanalysis, with Consequences. *European Review*, **2021**, 29, 197-209	0.3	

1 An Analysis of the Relationships among Computation-Related Skills Using a Hierarchical-Clustering Technique. *Journal for Research in Mathematics Education*, **1986**, 17, 112-129 1.2