Norman W Paton

List of Publications by Year
in descending order

133 papers	5,433 citations	147801 31 h-index	88630 70 g-index
138 all docs	138 docs citations	138 times ranked	6147 citing authors

#	Article	IF	Citations
1	A common open representation of mass spectrometry data and its application to proteomics research. Nature Biotechnology, 2004, 22, 1459-1466.	17.5	724
2	The minimum information about a proteomics experiment (MIAPE). Nature Biotechnology, 2007, 25, 887-893.	17.5	694
3	Active database systems. ACM Computing Surveys, 1999, 31, 63-103.	23.0	390
4	A proposed framework for the description of plant metabolomics experiments and their results. Nature Biotechnology, 2004, 22, 1601-1606.	17.5	283
5	A systematic approach to modeling, capturing, and disseminating proteomics experimental data. Nature Biotechnology, 2003, 21, 247-254.	17.5	246
6	The design and implementation of Grid database services in OGSA-DAI. Concurrency Computation Practice and Experience, 2005, 17, 357-376.	2.2	243
7	Growth control of the eukaryote cell: a systems biology study in yeast. Journal of Biology, 2007, 6, 4.	2.7	234
8	Comparative Genome Analysis of Filamentous Fungi Reveals Gene Family Expansions Associated with Fungal Pathogenesis. PLoS ONE, 2008, 3, e2300.	2.5	169
9	A model of yeast glycolysis based on a consistent kinetic characterisation of all its enzymes. FEBS Letters, 2013, 587, 2832-2841.	2.8	113
10	Conceptual modelling of genomic information. Bioinformatics, 2000, 16, 548-557.	4.1	96
11	The Functional Genomics Experiment model (FuGE): an extensible framework for standards in functional genomics. Nature Biotechnology, 2007, 25, 1127-1133.	17.5	96
12	Comparative genome analysis across a kingdom of eukaryotic organisms: Specialization and diversification in the Fungi. Genome Research, 2007, 17, 1809-1822.	5.5	94
13	The SuBliMinaL Toolbox: automating steps in the reconstruction of metabolic networks. Journal of Integrative Bioinformatics, 2011, 8, 187-203.	1.5	67
14	Guidelines for reporting the use of gel electrophoresis in proteomics. Nature Biotechnology, 2008, 26, 863-864.	17.5	61
15	PEDRo: A database for storing, searching and disseminating experimental proteomics data. BMC Genomics, 2004, 5, 68.	2.8	58
16	Optimizing virtual machine placement for energy and SLA in clouds using utility functions. Journal of Cloud Computing: Advances, Systems and Applications, 2016, 5, .	3.9	57
17	SBRML: a markup language for associating systems biology data with models. Bioinformatics, 2010, 26, 932-938.	4.1	54
18	Dataset Discovery in Data Lakes. , 2020, , .		53

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19	The SuBliMinaL Toolbox: automating steps in the reconstruction of metabolic networks. Journal of Integrative Bioinformatics, 2011, 8, 186.	1.5	51
20	Design and implementation of ROCK & ROLL: A deductive object-oriented database system. Information Systems, 1995, 20, 185-211.	3.6	48
21	The design and implementation of OGSA-DQP: A service-based distributed query processor. Future Generation Computer Systems, 2009, 25, 224-236.	7.5	47
22	The PSI formal document process and its implementation on the PSI website. Proteomics, 2007, 7, 2355-2357.	2.2	45
23	Teallach: a model-based user interface development environment for object databases. Interacting With Computers, 2001, 14, 31-68.	1.5	44
24	Conceptual data modelling for bioinformatics. Briefings in Bioinformatics, 2002, 3, 166-180.	6.5	43
25	GIMS: an integrated data storage and analysis environment for genomic and functional data. Yeast, 2003, 20, 1291-1306.	1.7	39
26	A Semantic Sensor Web for Environmental Decision Support Applications. Sensors, 2011, 11, 8855-8887.	3.8	39
27	Adaptation in cloud resource configuration: a survey. Journal of Cloud Computing: Advances, Systems and Applications, 2016, 5, .	3.9	36
28	SNEE: a query processor for wireless sensor networks. Distributed and Parallel Databases, 2011, 29, 31-85.	1.6	33
29	A logic-based integration of active and deductive databases. New Generation Computing, 1997, 15, 205-244.	3.3	32
30	e-Fungi: a data resource for comparative analysis of fungal genomes. BMC Genomics, 2007, 8, 426.	2.8	32
31	Facilitating the development of controlled vocabularies for metabolomics technologies with text mining. BMC Bioinformatics, 2008, 9, S5.	2.6	32
32	A Semantically Enabled Service Architecture for Mashups over Streaming and Stored Data. Lecture Notes in Computer Science, 2011, , 300-314.	1.3	32
33	Incrementally improving dataspaces based on user feedback. Information Systems, 2013, 38, 656-687.	3.6	31
34	Dimensions of Active Behaviour. Workshops in Computing, 1994, , 40-57.	0.4	31
35	Service-Based Distributed Querying on the Grid. Lecture Notes in Computer Science, 2003, , 467-482.	1.3	31
36	Adaptive workflow processing and execution in Pegasus. Concurrency Computation Practice and Experience, 2009, 21, 1965-1981.	2.2	30

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37	Information quality in proteomics. Briefings in Bioinformatics, 2007, 9, 174-188.	6.5	29
38	Systematic integration of experimental data and models in systems biology. BMC Bioinformatics, 2010, 11, 582.	2.6	28
39	The Tripod spatio-historical data model. Data and Knowledge Engineering, 2004, 49, 23-65.	3.4	27
40	A novel approach to resource scheduling for parallel query processing on computational grids. Distributed and Parallel Databases, 2006, 19, 87-106.	1.6	26
41	The WS-DAI family of specifications for web service data access and integration. SIGMOD Record, 2006, 35, 48-55.	1.2	25
42	Autonomic query parallelization using non-dedicated computers: an evaluation of adaptivity options. VLDB Journal, 2009, 18, 119-140.	4.1	25
43	Pedro: a configurable data entry tool for XML. Bioinformatics, 2004, 20, 2463-2465.	4.1	24
44	Guidelines for reporting the use of column chromatography in proteomics. Nature Biotechnology, 2010, 28, 654-654.	17.5	24
45	Crowdsourcing for data management. Knowledge and Information Systems, 2017, 53, 1-41.	3.2	24
46	Kaleidoqueryâ€"A Flow-based Visual Language and its Evaluation. Journal of Visual Languages and Computing, 2000, 11, 151-189.	1.8	23
47	MOVIE: An incremental maintenance system for materialized object views. Data and Knowledge Engineering, 2003, 47, 131-166.	3.4	23
48	Scalable Virtual Machine Migration using Reinforcement Learning. Journal of Grid Computing, 2022, 20, 1.	3.9	23
49	Combining active rules and metaclasses for enhanced extensibility in object-oriented systems. Data and Knowledge Engineering, 1993, 10, 45-63.	3.4	22
50	Feedback-based annotation, selection and refinement of schema mappings for dataspaces. , 2010, , .		21
51	Enzyme kinetics informatics: from instrument to browser. FEBS Journal, 2010, 277, 3769-3779.	4.7	20
52	A Semantics for a Query Language over Sensors, Streams and Relations. Lecture Notes in Computer Science, 2008, , 87-99.	1.3	20
53	The Gel Electrophoresis Markup Language (GelML) from the Proteomics Standards Initiative. Proteomics, 2010, 10, 3073-3081.	2.2	19
54	ISPIDER Central: an integrated database web-server for proteomics. Nucleic Acids Research, 2008, 36, W485-W490.	14.5	18

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55	A Framework for Describing Visual Interfaces to Databases. Journal of Visual Languages and Computing, 1998, 9, 429-456.	1.8	17
56	A critical and Integrated View of the Yeast Interactome. Comparative and Functional Genomics, 2004, 5, 382-402.	2.0	17
57	Self-monitoring query execution for adaptive query processing. Data and Knowledge Engineering, 2004, 51, 325-348.	3.4	16
58	VADA: an architecture for end user informed data preparation. Journal of Big Data, 2019, 6, .	11.0	16
59	User driven multi-criteria source selection. Information Sciences, 2018, 430-431, 179-199.	6.9	15
60	Formal specification of active database functionality: A survey. Lecture Notes in Computer Science, 1995, , 19-35.	1.3	15
61	Multi-paradigm query interface to an object-oriented database. Interacting With Computers, 1995, 7, 25-47.	1.5	14
62	VESPA: A Benchmark for Vector Spatial Databases. Lecture Notes in Computer Science, 2000, , 81-101.	1.3	14
63	Tripod. , 2001, , .		14
64	Supporting dynamic displays using active rules. SIGMOD Record, 1994, 23, 21-26.	1.2	14
65	Data capture in bioinformatics: requirements and experiences with Pedro. BMC Bioinformatics, 2008, 9, 183.	2.6	13
66	Utility functions for adaptively executing concurrent workflows. Concurrency Computation Practice and Experience, 2011, 23, 646-666.	2.2	13
67	Managing and sharing experimental data: standards, tools and pitfalls. Biochemical Society Transactions, 2008, 36, 33-36.	3.4	12
68	Adaptive workload allocation in query processing inÂautonomous heterogeneous environments. Distributed and Parallel Databases, 2009, 25, 125-164.	1.6	12
69	Deductive object-oriented database systems: A survey. Lecture Notes in Computer Science, 1997, , 1-19.	1.3	11
70	Generating user interface code in a model based user interface development environment. , 2000, , .		11
71	Model-driven user interfaces for bioinformatics data resources: regenerating the wheel as an alternative to reinventing it. BMC Bioinformatics, 2006, 7, 532.	2.6	11
72	Data context informed data wrangling. , 2017, , .		11

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73	An Experimental Performance Evaluation of Spatio-Temporal Join Strategies. Transactions in GIS, 2005, 9, 129-156.	2.3	10
74	An analysis of extensible modelling for functional genomics data. BMC Bioinformatics, 2005, 6, 235.	2.6	10
75	Feedback driven improvement of data preparation pipelines. Information Systems, 2020, 92, 101480.	3.6	9
76	An active rule language for ROCK & ROLL. Lecture Notes in Computer Science, 1996, , 36-55.	1.3	9
77	Query processing in DOQL: A deductive database language for the ODMG model. Data and Knowledge Engineering, 2000, 35, 1-38.	3.4	8
78	The Design, Implementation and Evaluation of an ODMG Compliant, Parallel Object Database Server. Distributed and Parallel Databases, 2004, 16, 275-319.	1.6	8
79	A toolkit for capturing and sharing FuGE experiments. Bioinformatics, 2008, 24, 2647-2649.	4.1	8
80	Modeling and Managing Experimental Data Using FuGE. OMICS A Journal of Integrative Biology, 2009, 13, 239-251.	2.0	8
81	Validated cost models for sensor network queries. , 2009, , .		8
82	Utility-driven adaptive query workload execution. Future Generation Computer Systems, 2012, 28, 1070-1079.	7.5	8
83	A structured specification of an active database system. Information and Software Technology, 1995, 37, 47-61.	4.4	7
84	Measuring and modelling the performance of a parallel ODMG compliant object database server. Concurrency Computation Practice and Experience, 2006, 18, 63-109.	2.2	7
85	Incorporating Data Context to Cost-Effectively Automate End-to-End Data Wrangling. IEEE Transactions on Big Data, 2021, 7, 169-186.	6.1	7
86	Validated Cost Models for Parallel OQL Query Processing. Lecture Notes in Computer Science, 2002, , 60-76.	1.3	7
87	Supporting production rules using ECA rules in an object-oriented context. Information and Software Technology, 1995, 37, 691-699.	4.4	6
88	Design and user testing of a multi-paradigm query interface to an object-oriented database. SIGMOD Record, 1995, 24, 12-17.	1.2	6
89	Extending a deductive object-oriented database system with spatial data handling facilities. Information and Software Technology, 1999, 41, 483-497.	4.4	6
90	Efficient load balancing in partitioned queries under random perturbations. ACM Transactions on Autonomous and Adaptive Systems, 2012, 7, 1-27.	0.8	6

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91	QoS-aware optimization of sensor network queries. VLDB Journal, 2013, 22, 495-517.	4.1	6
92	Efficient Feedback Collection for Pay-as-you-go Source Selection. , 2016, , .		6
93	Pay-as-you-go Data Integration: Experiences and Recurring Themes. Lecture Notes in Computer Science, 2016, , 81-92.	1.3	6
94	Observing the Data Scientist. , 2017, , .		6
95	The implementation of a deductive query language over an OODB. Lecture Notes in Computer Science, 1995, , 143-160.	1.3	6
96	Chapter 15: Search Computing and the Life Sciences. Lecture Notes in Computer Science, 2010, , 291-306.	1.3	6
97	Integrative Information Management for Systems Biology. Lecture Notes in Computer Science, 2010, , 164-178.	1.3	6
98	Visualizing advanced data modelling constructs. Information and Software Technology, 1994, 36, 597-605.	4.4	5
99	Formalizing and validating behavioral models through the event calculus. Information Systems, 1998, 23, 179-196.	3.6	5
100	Active rule analysis and optimisation in the rock & roll deductive object-oriented database. Information Systems, 1999, 24, 327-353.	3.6	5
101	Enabling community-driven information integration through clustering. Distributed and Parallel Databases, 2015, 33, 33-67.	1.6	5
102	Source Selection Languages. , 2018, , .		5
103	Towards Automatic Data Format Transformations: Data Wrangling at Scale. Computer Journal, 2019, 62, 1044-1060.	2.4	5
104	On interface objects in object-oriented databases. Lecture Notes in Computer Science, 1994, , 153-169.	1.3	5
105	GML for Representing Data from Spatio-Historical Databases: A Case Study. Transactions in GIS, 2007, 11, 233-253.	2.3	4
106	Information management for high content live cell imaging. BMC Bioinformatics, 2009, 10, 226.	2.6	4
107	SHDF - A Scalable Hierarchical Distributed Framework for Data Centre Management. , 2017, , .		4
108	Dynamap. , 2019, , .		4

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109	Fairness in Data Wrangling. , 2020, , .		4
110	Tripod: A Spatio-Historical Object Database System. , 2002, , 127-148.		4
111	Pedro Ontology Services: A Framework for Rapid Ontology Markup. Lecture Notes in Computer Science, 2005, , 578-591.	1.3	4
112	Deploying In-Network Data Analysis Techniques in Sensor Networks. , 2011, , .		3
113	Pairwise comparisons or constrained optimization? A usability evaluation of techniques for eliciting decision priorities. International Transactions in Operational Research, 2020, , .	2.7	3
114	DSToolkit: An Architecture for Flexible Dataspace Management. Lecture Notes in Computer Science, 2012, , 126-157.	1.3	3
115	The formalisation of ROCK & ROLL: A deductive object-oriented database system. Information and Software Technology, 1997, 39, 379-389.	4.4	2
116	Probabilistic adaptive load balancing for parallel queries. , 2008, , .		2
117	SensorBench. , 2014, , .		2
118	Proactive adaptations in sensor network query processing. , 2014, , .		2
119	Crowdsourced Targeted Feedback Collection for Multicriteria Data Source Selection. Journal of Data and Information Quality, 2019, 11, 1-27.	2.1	2
120	Deductive Queries in ODMG Databases: the DOQL Approach. , 1998, , 57-74.		2
121	Schema mapping generation in the wild. Information Systems, 2022, 104, 101904.	3.6	2
122	Techniques for the Effective Evaluation of Database Interfaces. Workshops in Computing, 1995, , 343-357.	0.4	2
123	Targeted Feedback Collection Applied to Multi-Criteria Source Selection. Lecture Notes in Computer Science, 2017, , 136-150.	1.3	2
124	Data Integration in the Life Sciences: Fun, Findings and Frustrations. Lecture Notes in Computer Science, 2008, , 8-10.	1.3	2
125	A Methodology for Comparative Functional Genomics. Journal of Integrative Bioinformatics, 2007, 4, 112-122.	1.5	1
126	Run-Time Adaptivity for Search Computing. Lecture Notes in Computer Science, 2011, , 156-166.	1.3	1

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127	Extending database technology. Lecture Notes in Computer Science, 1995, , 146-165.	1.3	1
128	Quantifying and Propagating Uncertainty in Automated Linked Data Integration. Lecture Notes in Computer Science, 2018, , 81-112.	1.3	1
129	Fairness-aware Data Integration. Journal of Data and Information Quality, 2022, 14, 1-26.	2.1	1
130	Proteomics data representation and management. , 2005, , .		0
131	Language Bindings for Spatio-Temporal Database Programming in Tripod. Lecture Notes in Computer Science, 2004, , 216-233.	1.3	0
132	RAP: The ROCK & ROLL Active Programming System. Texts and Monographs in Computer Science, 1999, , 323-336.	0.7	0
133	Storing, Searching, and Disseminating Experimental Proteomics Data. , 2007, , 472-483.		0