Michel Dumontier

List of Publications by Year
in descending order

163 papers	13,678 citations	87888 38 h-index	27406 106 g-index
189 all docs	189 docs citations	189 times ranked	24767 citing authors

#	Article	IF	Citations
1	The FAIR Guiding Principles for scientific data management and stewardship. Scientific Data, 2016, 3, 160018.	5.3	8,670
2	Controlled vocabularies and semantics in systems biology. Molecular Systems Biology, 2011, 7, 543.	7.2	246
3	Cloudy, increasingly FAIR; revisiting the FAIR Data guiding principles for the European Open Science Cloud. Information Services and Use, 2017, 37, 49-56.	0.2	232
4	The Ontology for Biomedical Investigations. PLoS ONE, 2016, 11, e0154556.	2.5	217
5	Finding Our Way through Phenotypes. PLoS Biology, 2015, 13, e1002033.	5.6	178
6	FAIR Principles: Interpretations and Implementation Considerations. Data Intelligence, 2020, 2, 10-29.	1.5	149
7	A design framework and exemplar metrics for FAIRness. Scientific Data, 2018, 5, 180118.	5.3	145
8	The Semanticscience Integrated Ontology (SIO) for biomedical research and knowledge discovery. Journal of Biomedical Semantics, 2014, 5, 14.	1.6	138
9	Analysis of In Vitro Aptamer Selection Parameters. Journal of Molecular Evolution, 2015, 81, 150-161.	1.8	119
10	Toward a complete dataset of drugâ€“drug interaction information from publicly available sources. Journal of Biomedical Informatics, 2015, 55, 206-217.	4.3	97
11	Identifiers for the 21st century: How to design, provision, and reuse persistent identifiers to maximize utility and impact of life science data. PLoS Biology, 2017, 15, e2001414.	5.6	97
12	Achieving human and machine accessibility of cited data in scholarly publications. PeerJ Computer Science, 2015, 1, e1.	4.5	89
13	The Chemical Information Ontology: Provenance and Disambiguation for Chemical Data on the Biological Semantic Web. PLoS ONE, 2011, 6, e25513.	2.5	86
14	Evaluating FAIR maturity through a scalable, automated, community-governed framework. Scientific Data, 2019, 6, 174.	5.3	82
15	PubChemRDF: towards the semantic annotation of PubChem compound and substance databases. Journal of Cheminformatics, 2015, 7, 34.	6.1	77
16	Bio2RDF Release 2: Improved Coverage, Interoperability and Provenance of Life Science Linked Data. Lecture Notes in Computer Science, 2013, , 200-212.	1.3	77
17	The center for expanded data annotation and retrieval. Journal of the American Medical Informatics Association: JAMIA, 2015, 22, 1148-1152.	4.4	74
18	Crowdsourced assessment of common genetic contribution to predicting anti-TNF treatment response in rheumatoid arthritis. Nature Communications, 2016, 7, 12460.	12.8	73

#	Article	IF	Citations
19	CO: A chemical ontology for identification of functional groups and semantic comparison of small molecules. FEBS Letters, 2005, 579, 4685-4691.	2.8	69
20	The Translational Medicine Ontology and Knowledge Base: driving personalized medicine by bridging the gap between bench and bedside. Journal of Biomedical Semantics, 2011, 2, S1.	1.6	68
21	A Novel Ensemble-Based Machine Learning Algorithm to Predict the Conversion From Mild Cognitive Impairment to Alzheimer's Disease Using Socio-Demographic Characteristics, Clinical Information, and Neuropsychological Measures. Frontiers in Neurology, 2019, 10, 756.	2.4	68
22	Computational approaches toward the design of pools for the in vitro selection of complex aptamers. Rna, 2010, 16, 2252-2262.	3.5	66
23	In-silico Prediction of Synergistic Anti-Cancer Drug Combinations Using Multi-omics Data. Scientific Reports, 2019, 9, 8949.	3.3	66
24	Armadillo: Domain Boundary Prediction by Amino Acid Composition. Journal of Molecular Biology, 2005, 350, 1061-1073.	4.2	62
25	Distributed Analytics on Sensitive Medical Data: The Personal Health Train. Data Intelligence, 2020, 2, 96-107.	1.5	62
26	Evaluation of research in biomedical ontologies. Briefings in Bioinformatics, 2013, 14, 696-712.	6.5	60
27	Aptamer base: a collaborative knowledge base to describe aptamers and SELEX experiments. Database: the Journal of Biological Databases and Curation, 2012, 2012, bas006.	3.0	59
28	Evaluation of knowledge graph embedding approaches for drug-drug interaction prediction in realistic settings. BMC Bioinformatics, 2019, 20, 726.	2.6	58
29	Interoperability and FAIRness through a novel combination of Web technologies. PeerJ Computer Science, 0, 3, e110.	4.5	58
30	Global investigation of proteinâ€“protein interactions in yeast Saccharomyces cerevisiae using re-occurring short polypeptide sequences. Nucleic Acids Research, 2008, 36, 4286-4294.	14.5	57
31	Computational Methods For Predicting Proteinâ€“Protein Interactions. Advances in Biochemical Engineering/Biotechnology, 2008, 110, 247-267.	1.1	49
32	Bridging Islands of Information to Establish an Integrated Knowledge Base of Drugs and Health Outcomes of Interest. Drug Safety, 2014, 37, 557-567.	3.2	49
33	Towards pharmacogenomics knowledge discovery with the semantic web. Briefings in Bioinformatics, 2009, 10, 153-163.	6.5	47
34	BioHackathon series in 2011 and 2012: penetration of ontology and linked data in life science domains. Journal of Biomedical Semantics, 2014, 5, 5.	1.6	47
35	Evaluation of the OQuaRE framework for ontology quality. Expert Systems With Applications, 2013, 40, 2696-2703.	7.6	45
36	Decentralized provenance-aware publishing with nanopublications. PeerJ Computer Science, 0, 2, e78.	4.5	45

#	Article	IF	Citations
37	Relations as patterns: bridging the gap between OBO and OWL. BMC Bioinformatics, 2010, 11, 441.	2.6	44
38	Integrating systems biology models and biomedical ontologies. BMC Systems Biology, 2011, 5, 124.	3.0	44
39	Ontology-Based Querying with Bio2RDFâ€™s Linked Open Data. Journal of Biomedical Semantics, 2013, 4, S1.	1.6	44
40	Blockchain for Privacy Preserving and Trustworthy Distributed Machine Learning in Multicentric Medical Imaging (C-DistriM). IEEE Access, 2020, 8, 183939-183951.	4.2	44
41	The digital revolution in phenotyping. Briefings in Bioinformatics, 2016, 17, 819-830.	6.5	41
42	Columbia Open Health Data, clinical concept prevalence and co-occurrence from electronic health records. Scientific Data, 2018, 5, 180273.	5.3	41
43	SeqHound: biological sequence and structure database as a platform for bioinformatics research. BMC Bioinformatics, 2002, 3, 32.	2.6	40
44	Identifying aberrant pathways through integrated analysis of knowledge in pharmacogenomics. Bioinformatics, 2012, 28, 2169-2175.	4.1	39
45	Interoperability between Biomedical Ontologies through Relation Expansion, Upper-Level Ontologies and Automatic Reasoning. PLoS ONE, 2011, 6, e22006.	2.5	38
46	Mouse model phenotypes provide information about human drug targets. Bioinformatics, 2014, 30, 719-725.	4.1	38
47	Biolink Model: A universal schema for knowledge graphs in clinical, biomedical, and translational science. Clinical and Translational Science, 2022, 15, 1848-1855.	3.1	38
48	yOWL: An ontology-driven knowledge base for yeast biologists. Journal of Biomedical Informatics, 2008, 41, 779-789.	4.3	37
49	A common layer of interoperability for biomedical ontologies based on OWL EL. Bioinformatics, 2011, 27, 1001-1008.	4.1	35
50	Ranking Adverse Drug Reactions With Crowdsourcing. Journal of Medical Internet Research, 2015, 17, e80.	4.3	35
51	GridCell: a stochastic particle-based biological system simulator. BMC Systems Biology, 2008, 2, 66.	3.0	33
52	Integration and publication of heterogeneous text-mined relationships on the Semantic Web. Journal of Biomedical Semantics, 2011, 2, S10.	1.6	31
53	Feasibility of Prioritizing Drugâ€“Drug-Event Associations Found in Electronic Health Records. Drug Safety, 2016, 39, 45-57.	3.2	31
54	HyQue: evaluating hypotheses using Semantic Web technologies. Journal of Biomedical Semantics, 2011, 2, S3.	1.6	28

#	Article	IF	Citations
55	Drug-drug interaction discovery and demystification using Semantic Web technologies. Journal of the American Medical Informatics Association: JAMIA, 2017, 24, 556-564.	4.4	28
56	The emergence and evolution of the research fronts in HIV/AIDS research. PLoS ONE, 2017, 12, e0178293.	2.5	27
57	Semantic Web integration of Cheminformatics resources with the SADI framework. Journal of Cheminformatics, 2011, 3, 16.	6.1	26
58	smartAPI: Towards a More Intelligent Network of Web APIs. Lecture Notes in Computer Science, 2017, , 154-169.	1.3	26
59	Knowledge Graph Completeness: A Systematic Literature Review. IEEE Access, 2021, 9, 31322-31339.	4.2	26
60	NBLAST: a cluster variant of BLAST for NxN comparisons. BMC Bioinformatics, 2002, 3, 13.	2.6	25
61	Domain-based small molecule binding site annotation. BMC Bioinformatics, 2006, 7, 152.	2.6	25
62	Chemical Entity Semantic Specification: Knowledge representation for efficient semantic cheminformatics and facile data integration. Journal of Cheminformatics, 2011, 3, 20.	6.1	24
63	Making Digital Artifacts on the Web Verifiable and Reliable. IEEE Transactions on Knowledge and Data Engineering, 2015, 27, 2390-2400.	5.7	24
64	Pharmacogenomic knowledge representation, reasoning and genome-based clinical decision support based on OWL 2 DL ontologies. BMC Medical Informatics and Decision Making, 2015, 15, 12.	3.0	24
65	Developing a framework for digital objects in the Big Data to Knowledge (BD2K) commons: Report from the Commons Framework Pilots workshop. Journal of Biomedical Informatics, 2017, 71, 49-57.	4.3	24
66	Ten simple rules for making training materials FAIR. PLoS Computational Biology, 2020, 16, e1007854.	3.2	24
67	The RNA Ontology (RNAO): An ontology for integrating RNA sequence and structure data. Applied Ontology, 2011, 6, 53-89.	2.0	23
68	State of the art and open challenges in community-driven knowledge curation. Journal of Biomedical Informatics, 2013, 46, 1-4.	4.3	23
69	FALDO: a semantic standard for describing the location of nucleotide and protein feature annotation. Journal of Biomedical Semantics, 2016, 7, 39.	1.6	22
70	BioSearch: a semantic search engine for Bio2RDF. Database: the Journal of Biological Databases and Curation, 2017, 2017, .	3.0	21
71	Nanopublications: A Growing Resource of Provenance-Centric Scientific Linked Data. , 2018, , .		21
72	Self-organizing ontology of biochemically relevant small molecules. BMC Bioinformatics, 2012, 13, 3.	2.6	20

#	Article	IF	Citations
73	Prototype semantic infrastructure for automated small molecule classification and annotation in lipidomics. BMC Bioinformatics, 2011, 12, 303.	2.6	19
74	Disruption of fungal cell wall by antifungalEchinaceaextracts. Medical Mycology, 2010, 48, 949-958.	0.7	18
75	Semantically enabling pharmacogenomic data for the realization of personalized medicine. Pharmacogenomics, 2012, 13, 201-212.	1.3	18
76	Publishing DisGeNET as nanopublications. Semantic Web, 2016, 7, 519-528.	1.9	18
77	The health care and life sciences community profile for dataset descriptions. PeerJ, 2016, 4, e2331.	2.0	18
78	Trusty URIs: Verifiable, Immutable, and Permanent Digital Artifacts for Linked Data. Lecture Notes in Computer Science, 2014, , 395-410.	1.3	17
79	Progress toward a universal biomedical data translator. Clinical and Translational Science, 2022, 15, 1838-1847.	3.1	17
80	Hardware-accelerated protein identification for mass spectrometry. Rapid Communications in Mass Spectrometry, 2005, 19, 833-837.	1.5	16
81	Finding melanoma drugs through a probabilistic knowledge graph. PeerJ Computer Science, 0, 3, e106.	4.5	16
82	Building an HIV data mashup using Bio2RDF. Briefings in Bioinformatics, 2012, 13, 98-106.	6.5	15
83	A Web API Ecosystem through Feature-Based Reuse. IEEE Internet Computing, 2018, 22, 29-37.	3.3	15
84	SPARQL-enabled identifier conversion with Identifiers.org. Bioinformatics, 2015, 31, 1875-1877.	4.1	14
85	Semantics-Powered Healthcare Engineering and Data Analytics. Journal of Healthcare Engineering, 2017, 2017, 1-3.	1.9	14
86	Genuine semantic publishing. Data Science, 2017, 1, 139-154.	0.9	14
87	Considerations for the Conduction and Interpretation of FAIRness Evaluations. Data Intelligence, 2020, 2, 285-292.	1.5	14
88	Species-specific protein sequence and fold optimizations. BMC Bioinformatics, 2002, 3, 39.	2.6	13
89	An Ebola virus-centered knowledge base. Database: the Journal of Biological Databases and Curation, 2015, 2015, bav049.	3.0	13
90	Semantic micro-contributions with decentralized nanopublication services. PeerJ Computer Science, 2021, 7, e387.	4.5	13

#	Article	IF	Citations
91	Privacy preserving distributed learning classifiers â€“ Sequential learning with small sets of data. Computers in Biology and Medicine, 2021, 136, 104716.	7.0	12
92	A Privacy-Preserving Infrastructure for Analyzing Personal Health Data in a Vertically Partitioned Scenario. Studies in Health Technology and Informatics, 2019, 264, 373-377.	0.3	12
93	3D topography of noncompact zone Golgi tubules in rat spermatids: A computer-assisted serial section reconstruction study. , 1998, 250, 381-396.		11
94	Integrating findings of traditional medicine with modern pharmaceutical research: the potential role of linked open data. Chinese Medicine, 2010, 5, 43.	4.0	11
95	Predicting biomedical metadata in CEDAR: A study of Gene Expression Omnibus (GEO). Journal of Biomedical Informatics, 2017, 72, 132-139.	4.3	11
96	Semantic modelling of common data elements for rare disease registries, and a prototype workflow for their deployment over registry data. Journal of Biomedical Semantics, 2022, 13, 9.	1.6	11
97	BioSimulators: a central registry of simulation engines and services for recommending specific tools. Nucleic Acids Research, 2022, 50, W108-W114.	14.5	11
98	Automatically exposing OpenLifeData via SADI semantic Web Services. Journal of Biomedical Semantics, 2014, 5, 46.	1.6	10
99	Is the crowd better as an assistant or a replacement in ontology engineering? An exploration through the lens of the Gene Ontology. Journal of Biomedical Informatics, 2016, 60, 199-209.	4.3	10
100	The SADI Personal Health Lens: A Web Browser-Based System for Identifying Personally Relevant Drug Interactions. JMIR Research Protocols, 2013, 2, e14.	1.0	10
101	Towards FAIR protocols and workflows: the OpenPREDICT use case. PeerJ Computer Science, 2020, 6, e281.	4.5	10
102	Predicting structured metadata from unstructured metadata. Database: the Journal of Biological Databases and Curation, 2016, 2016, baw080.	3.0	9
103	Link Analysis of Life Science Linked Data. Lecture Notes in Computer Science, 2015, , 446-462.	1.3	9
104	Modeling and querying graphical representations of statistical data. Web Semantics, 2010, 8, 241-254.	2.9	8
105	Building an effective Semantic Web for health care and the life sciences. Semantic Web, 2010, 1, 131-135.	1.9	8
106	An evidence-based approach to identify aging-related genes in Caenorhabditis elegans. BMC Bioinformatics, 2015, 16, 40.	2.6	8
107	Formalizing drug indications on the road to therapeutic intent. Journal of the American Medical Informatics Association: JAMIA, 2017, 24, 1169-1172.	4.4	8
108	Data ScienceÂâ€“ Methods, infrastructure, and applications. Data Science, 2017, 1, 1-5.	0.9	8

#	Article	IF	Citations
109	Predicting the need for a reduced drug dose, at first prescription. Scientific Reports, 2018, 8, 15558.	3.3	8
110	A Minimal Information Model for Potential Drug-Drug Interactions. Frontiers in Pharmacology, 2020, 11, 608068.	3.5	8
111	Chemical Knowledge for the Semantic Web. Lecture Notes in Computer Science, 2008, , 169-176.	1.3	8
112	Evaluating Scientific Hypotheses Using the SPARQL Inferencing Notation. Lecture Notes in Computer Science, 2012, , 647-658.	1.3	8
113	Special issue on Linked Data for Health Care and the Life Sciences. Semantic Web, 2014, 5, 99-100.	1.9	7
114	Provenance-Centered Dataset of Drug-Drug Interactions. Lecture Notes in Computer Science, 2015, , 293-300.	1.3	7
115	Publishing Without Publishers: A Decentralized Approach to Dissemination, Retrieval, and Archiving of Data. Lecture Notes in Computer Science, 2015, , 656-672.	1.3	7
116	Representing Physician Suicide Claims as Nanopublications: Proof-of-Concept Study Creating Claim Networks. Jmirx Med, 2022, 3, e34979.	0.4	7
117	Finding the Evidence Base Using Citation Networks: Do 300 to 400 US Physicians Die by Suicide Annually?. Journal of General Internal Medicine, 2021, 36, 1129-1131.	2.6	6
118	An RDF/OWL knowledge base for query answering and decision support in clinical pharmacogenetics. Studies in Health Technology and Informatics, 2013, 192, 539-42.	0.3	6
119	Using LASSO Regression to Predict Rheumatoid Arthritis Treatment Efficacy. AMIA Summits on Translational Science Proceedings, 2016, 2016, 176-83.	0.4	6
120	Towards an interoperable information infrastructure providing decision support for genomic medicine. Studies in Health Technology and Informatics, 2011, 169, 165-9.	0.3	6
121	RKB: a Semantic Web knowledge base for RNA. Journal of Biomedical Semantics, 2010, 1, S2.	1.6	5
122	Overlap in drug-disease associations between clinical practice guidelines and drug structured product label indications. Journal of Biomedical Semantics, 2016, 7, 37.	1.6	5
123	Is Crowdsourcing Patient-Reported Outcomes the Future of Evidence-Based Medicine? A Case Study of Back Pain. Lecture Notes in Computer Science, 2017, , 245-255.	1.3	5
124	BioHackathon 2015: Semantics of data for life sciences and reproducible research. F1000Research, 2020, 9, 136.	1.6	5
125	Biotea: semantics for Pubmed Central. PeerJ, 2018, 6, e4201.	2.0	5
126	Mining Electronic Health Records using Linked Data. AMIA Summits on Translational Science Proceedings, 2015, 2015, 217-21.	0.4	5

#	Article	IF	Citations
127	MoSuMo: A Semantic Web service to generate electrostatic potentials across solvent excluded protein surfaces and binding pockets. Computers and Graphics, 2011, 35, 823-830.	2.5	4
128	Selected papers from the 16th Annual Bio-Ontologies Special Interest Group Meeting. Journal of Biomedical Semantics, 2014, 5, I1.	1.6	4
129	A systematic review on privacy-preserving distributed data mining. Data Science, 2021, 4, 121-150.	0.9	4
130	Semantic Query Answering with Time-Series Graphs. , 2007, , .		3
131	Advancing Discovery Science with FAIR Data Stewardship: Findable, Accessible, Interoperable, Reusable. Serials Librarian, 2018, 74, 39-48.	0.4	3
132	GFVO: the Genomic Feature and Variation Ontology. PeerJ, 2015, 3, e933.	2.0	3
133	User-friendly Composition of FAIR Workflows in a Notebook Environment. , 2021, , .		3
134	Linked Data in Drug Discovery. IEEE Internet Computing, 2012, 16, 68-71.	3.3	2
135	Introduction â€“ FAIR data, systems andÂanalysis. Data Science, 2020, 3, 1-2.	0.9	2
136	Relation extraction from DailyMed structured product labels by optimally combining crowd, experts and machines. Journal of Biomedical Informatics, 2021, 122, 103902.	4.3	2
137	Prediction of illness remission in patients with Obsessive-Compulsive Disorder with supervised machine learning. Journal of Affective Disorders, 2022, 296, 117-125.	4.1	2
138	Automating Identification of Multiple Chronic Conditions in Clinical Practice Guidelines. AMIA Summits on Translational Science Proceedings, 2015, 2015, 456-60.	0.4	2
139	Target Profiling of Small Molecules. , 0, , 11-38.		1
140	Special issue on bio-ontologies and phenotypes. Journal of Biomedical Semantics, 2015, 6, 40.	1.6	1
141	Putting FAIR Evidence into Practice. Journal of General Internal Medicine, 2019, 34, 1369-1369.	2.6	1
142	The Case for a Linked Data Research Engine for Legal Scholars. European Journal of Risk Regulation, 2020, 11, 70-93.	1.2	1
143	A qualitative-computational cataloguing of the EU-level public research and innovation portfolio of clean energy technologies (2014â€“2020). Current Research in Environmental Sustainability, 2021, 3, 100084.	3.5	1
144	InContext: curation of medical context for drug indications. Journal of Biomedical Semantics, 2021, 12, 2.	1.6	1

#	Article	IF	Citations
145	Experience: Automated Prediction of Experimental Metadata from Scientific Publications. Journal of Data and Information Quality, 2021, 13, 1-11.	2.1	1
146	Adding Cognition to the Semanticscience Integrated Ontology. Edelweiss Psychiatry Open Access, 2019, , 4-13.	0.7	1
147	Accelerating Discovery Science with an Internet of FAIR Data and Services. , 2020, , .		1
148	Report on semantic web for health care and life sciences workshop. , 2008, , .		0
149	Performance of the Charniak-Lease parser on biological text using different training corpora. Nature Precedings, 2008, , .	0.1	0
150	Yeast Features: Identifying Significant Features Shared Among Yeast Proteins for Functional Genomics. Nature Precedings, 2008, , .	0.1	0
151	Modeling tryptic digestion on the Cell BE processor. , 2009, , .		0
152	Development of Small-Molecule Ligands and Inhibitors. , 0, , 115-147.		0
153	Taking flight with OWL2. Semantic Web, 2011, 2, 67-70.	1.9	0
154	Selected papers from the 14th Annual Bio-Ontologies Special Interest Group Meeting. Journal of Biomedical Semantics, 2012, 3, I1.	1.6	0
155	Selected papers from the 15th Annual Bio-Ontologies Special Interest Group Meeting. Journal of Biomedical Semantics, 2013, 4, I1.	1.6	0
156	Network Ranking Assisted Semantic Data Mining. Lecture Notes in Computer Science, 2016, , 752-764.	1.3	0
157	Thematic issue of the Second combined Bio-ontologies and Phenotypes Workshop. Journal of Biomedical Semantics, 2016, 7, 66.	1.6	0
158	Modeling and Querying Graphical Representations of Statistical Data. SSRN Electronic Journal, 0, , .	0.4	0
159	Adding Cognition to the Semanticscience Integrated Ontology. Journal of Obesity and Diabetes, 2019, , 4-13.	0.8	0
160	BioHackathon series in 2013 and 2014: improvements of semantic interoperability in life science data and services. F1000Research, 0, 8, 1677.	1.6	0
161	A formalization of one of the main claims of â€œThe FAIR Guiding Principles for scientific data management and stewardshipâ€•by Wilkinson et al. 20161. Data Science, 2022, , 1-4.	0.9	0
162	Comparing Drug-Disease Associations in Clinical Practice Guideline Recommendations and Drug Product Label Indications. Studies in Health Technology and Informatics, 2015, 216, 1039.	0.3	0

#	Article	IF	Citations
163	Authorsâ€™ Response to Peer Reviews of â€œRepresenting Physician Suicide Claims as Nanopublications: Proof-of-Concept Study Creating Claim Networksâ€• Jmirx Med, 2022, 3, e40158.	0.4	0