Simon A Dobson

List of Publications by Year
in descending order

119 papers	3,452 citations	257450 24 h-index	155660 55 g-index
122 all docs	122 docs citations	122 times ranked	2929 citing authors

#	Article	IF	Citations
1	Degree correlations in graphs with clique clustering. Physical Review E, 2022, 105, 044314.	2.1	2
2	epyc: Computational experiment management in Python. Journal of Open Source Software, 2022, 7, 3764.	4.6	0
3	Random graphs with arbitrary clustering and their applications. Physical Review E, 2021, 103, 012309.	2.1	14
4	Cooperative coinfection dynamics on clustered networks. Physical Review E, 2021, 103, 042307.	2.1	3
5	Two-pathogen model with competition on clustered networks. Physical Review E, 2021, 103, 062308.	2.1	7
6	Exact formula for bond percolation on cliques. Physical Review E, 2021, 104, 024304.	2.1	5
7	Symbiotic and antagonistic disease dynamics on networks using bond percolation. Physical Review E, 2021, 104, 024303.	2.1	2
8	Percolation in random graphs with higher-order clustering. Physical Review E, 2021, 103, 012313.	2.1	7
9	Discovery and Recognition of Emerging Human Activities Using a Hierarchical Mixture of Directional Statistical Models. IEEE Transactions on Knowledge and Data Engineering, 2020, 32, 1304-1316.	5.7	12
10	On the Social Implications of Collective Adaptive Systems. IEEE Technology and Society Magazine, 2020, 39, 36-46.	0.8	8
11	Modelling the effects of environmental heterogeneity within the lung on the tuberculosis life-cycle. Journal of Theoretical Biology, 2020, 506, 110381.	1.7	5
12	XLearn. ACM Transactions on Intelligent Systems and Technology, 2020, 11, 1-28.	4.5	7
13	Distributed Self-Monitoring Sensor Networks Via Markov Switching Dynamic Linear Models. , 2019, , .		0
14	Representation learning for minority andÂsubtle activities in a smart homeÂenvironment. Journal of Ambient Intelligence and Smart Environments, 2019, 11, 495-513.	1.4	4
15	Self-Organization and Resilience for Networked Systems: Design Principles and Open Research Issues. Proceedings of the IEEE, 2019, 107, 819-834.	21.3	26
16	Sensor-Based Human Activity Mining Using Dirichlet Process Mixtures of Directional Statistical Models. , 2019, , .		0
17	Lifelong Learning in Sensor-Based Human Activity Recognition. IEEE Pervasive Computing, 2019, 18, 49-58.	1.3	16
18	A spatially heterogeneous network-based metapopulation software model applied to the simulation of a pulmonary tuberculosis infection. Applied Network Science, 2018, 3, 33.	1.5	9

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19	Making Sense of the World: Framing Models for Trustworthy Sensor-Driven Systems. Computers, 2018, 7, 62.	3.3	3
20	A Reference Architecture and Model for Sensor Data Warehousing. IEEE Sensors Journal, 2018, 18, 7659-7670.	4.7	10
21	Detecting abnormal events on binary sensors in smart home environments. Pervasive and Mobile Computing, 2016, 33, 32-49.	3.3	33
22	Open badges: A best-practice framework. , 2016, , .		1
23	Discovery and recognition of unknown activities. , 2016, , .		8
24	Spatial awareness in pervasive ecosystems. Knowledge Engineering Review, 2016, 31, 343-366.	2.6	3
25	Critical tipping point distinguishing two types of transitions in modular network structures. Physical Review E, 2015, 92, 062805.	2.1	43
26	Developing pervasive multi-agent systems with nature-inspired coordination. Pervasive and Mobile Computing, 2015, 17, 236-252.	3.3	75
27	USMART. ACM Transactions on Interactive Intelligent Systems, 2015, 4, 1-27.	3.7	41
28	Semantic web technologies in pervasive computing: A survey and research roadmap. Pervasive and Mobile Computing, 2015, 23, 1-25.	3.3	53
29	Towards Data-centric Control of Sensor Networks through Bayesian Dynamic Linear Modelling. , 2015, , .		3
30	Multiplex networks in metropolitan areas: generic features and local effects. Journal of the Royal Society Interface, 2015, 12, 20150651.	3.4	70
31	Using temporal correlation and time series to detect missing activity-driven sensor events. , 2015, , .		1
32	Fault detection for binary sensors in smart home environments. , 2015, , .		16
33	A survey of selfâ€healing systems frameworks. Software - Practice and Experience, 2015, 45, 1375-1398.	3.6	21
34	KCAR: A knowledge-driven approach for concurrent activity recognition. Pervasive and Mobile Computing, 2015, 19, 47-70.	3.3	67
35	Energy-Efficient Sensing in Wireless Sensor Networks Using Compressed Sensing. Sensors, 2014, 14, 2822-2859.	3.8	150
36	Self-managing and self-organising mobile computing applications. , 2014, , .		5

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37	Data Collection with In-network Fault Detection Based on Spatial Correlation. , 2014, , .		4
38	Formal verification of a pervasive messaging system. Formal Aspects of Computing, 2014, 26, 677-694.	1.8	15
39	Failure detection in wireless sensor networks. ACM Transactions on Sensor Networks, 2014, 10, 1-29.	3.6	34
40	Unifying Sensor Fault Detection with Energy Conservation. Lecture Notes in Computer Science, 2014, , 176-181.	1.3	11
41	Perceiving and interpreting smart home datasets with $$\mathcal{PI}$$. Journal of Ambient Intelligence and Humanized Computing, 2013, 4, 717-729.	4.9	2
42	Compression in wireless sensor networks. ACM Transactions on Sensor Networks, 2013, 10, 1-44.	3.6	140
43	Combining self-organisation, context-awareness and semantic reasoning. , 2013, , .		12
44	A Bio-chemical Approach to Awareness in Pervasive Systems. , 2013, , .		3
45	Augmented materials: spatially embodied sensor networks. International Journal of Communication Networks and Distributed Systems, 2013, 11, 453.	0.4	7
46	Decentralized and optimal control of shared resource pools. ACM Transactions on Autonomous and Adaptive Systems, 2012, 7, 1-31.	0.8	6
47	Towards Situated Awareness in Urban Networks: A Bio-Inspired Approach. , 2012, , .		3
48	Self-Organising Semantic Resource Discovery for Pervasive Systems. , 2012, , .		5
49	Situation identification techniques in pervasive computing: A review. Pervasive and Mobile Computing, 2012, 8, 36-66.	3.3	359
50	A reconfigurable component model with semantic type system for dynamic WSN applications. Journal of Internet Services and Applications, 2012, 3, 277-290.	2.1	4
51	Mission-oriented middleware for sensor-driven scientific systems. Journal of Internet Services and Applications, 2012, 3, 133-139.	2.1	1
52	High-Accuracy Reference-Free Ultrasonic Location Estimation. IEEE Transactions on Instrumentation and Measurement, 2012, 61, 1561-1570.	4.7	93
53	Social sensors and pervasive services: Approaches and perspectives. , 2011, , .		62
54	An ASSL Approach to Handling Uncertainty in Self-adaptive Systems. , 2011, , .		4

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55	Self-aware Pervasive Service Ecosystems. Procedia Computer Science, 2011, 7, 197-199.	2.0	52
56	Robust High-Accuracy Ultrasonic Range Measurement System. IEEE Transactions on Instrumentation and Measurement, 2011, 60, 3334-3341.	4.7	70
57	A top-level ontology for smart environments. Pervasive and Mobile Computing, 2011, 7, 359-378.	3.3	59
58	Sapphire: Generating Java Runtime Artefacts from OWL Ontologies. Lecture Notes in Business Information Processing, 2011, , 425-436.	1.0	16
59	PI: Perceiver and Interpreter of Smart Home Datasets. , 2011, , .		2
60	Exploring semantics in activity recognition using context lattices. Journal of Ambient Intelligence and Smart Environments, 2010, 2, 389-407.	1.4	21
61	Fulfilling the Vision of Autonomic Computing. Computer, 2010, 43, 35-41.	1.1	96
62	Situvis: A sensor data analysis and abstraction tool for pervasive computing systems. Pervasive and Mobile Computing, 2010, 6, 575-589.	3.3	8
63	Activity recognition using temporal evidence theory. Journal of Ambient Intelligence and Smart Environments, 2010, 2, 253-269.	1.4	68
64	LOC8: A Location Model and Extensible Framework for Programming with Location. IEEE Pervasive Computing, 2010, 9, 28-37.	1.3	33
65	Adaptive Management of Shared Resource Pools with Decentralized Optimization and Epidemics. , 2010, , .		5
66	Enhancement of Self-organisation in Wireless Networking through a Cross-Layer Approach. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2010, , 144-159.	0.3	6
67	On Using Temporal Features to Create More Accurate Human-Activity Classifiers. Lecture Notes in Computer Science, 2010, , 273-282.	1.3	5
68	Using situation lattices in sensor analysis. , 2009, , .		15
69	Human-behaviour study with situation lattices. , 2009, , .		3
70	Modelling Periodic Data Dissemination in Wireless Sensor Networks. , 2009, , .		9
71	Ontonym. , 2009, , .		32
72	The Use of Context-Aware Policies and Ontologies to Facilitate Business-Aware Network Management. Journal of Network and Systems Management, 2009, 17, 255-284.	4.9	16

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73	Decentralized Utility Maximization for Adaptive Management of Shared Resource Pools. , 2009, , .		3
74	Delay tolerant networks and spatially detailed human mobility. , 2009, , .		0
75	Partial Coverage in Homological Sensor Networks. , 2009, , .		8
76	From Physical Models to Well-Founded Control. , 2009, , .		3
77	Ubiquitous autonomic management. , 2009, , .		0
78	Situvis: A Visual Tool for Modeling a User's Behaviour Patterns in a Pervasive Environment. Lecture Notes in Computer Science, 2009, , 327-341.	1.3	6
79	Using Dempster-Shafer Theory of Evidence for Situation Inference. Lecture Notes in Computer Science, 2009, , 149-162.	1.3	16
80	A Context Quality Model to Support Transparent Reasoning with Uncertain Context. Lecture Notes in Computer Science, 2009, , 65-75.	1.3	18
81	Self-management of Routing on Human Proximity Networks. Lecture Notes in Computer Science, 2009, , 1-12.	1.3	3
82	Application development using modeling and dynamical systems analysis. , 2009, , .		0
83	A relation based measure of semantic similarity for Gene Ontology annotations. BMC Bioinformatics, 2008, 9, 468.	2.6	27
84	A Secure Lightweight Architecture for Wireless Sensor Networks. , 2008, , .		2
85	Cross-Layer Self Routing: A Self-Managed Routing Approach for MANETs. , 2008, , .		8
86	Facilitating a Well-Founded Approach to Autonomic Systems. , 2008, , .		5
87	Resolving uncertainty in context integration and abstraction. , 2008, , .		22
88	Multi criteria adaptation mechanisms in homological sensor networks. , 2008, , .		3
89	An adaptive systems perspective on network calculus, with applications to autonomic control. International Journal of Autonomous and Adaptive Communications Systems, 2008, 1, 332.	0.3	1
90	An Overview of Pervasive Computing Systems. Microsystems, 2008, , 3-17.	0.3	4

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91	Augmenting Materials to Build Cooperating Objects. Microsystems, 2008, , 19-46.	0.3	2
92	Scatterbox: Context-Aware Message Management. Revue D'Intelligence Artificielle, 2008, 22, 549-568.	0.6	5
93	Representing and Manipulating Situation Hierarchies using Situation Lattices. Revue D'Intelligence Artificielle, 2008, 22, 647-667.	0.6	17
94	Co-Design for Context Awareness in Pervasive Systems. Microsystems, 2008, , 297-307.	0.3	0
95	Context Awareness through Cross-Layer Network Architecture. , 2007, , .		3
96	Ontology-based models in pervasive computing systems. Knowledge Engineering Review, 2007, 22, 315-347.	2.6	155
97	A first approach to the closed-form specification and analysis of an autonomic control system. , 2007, , .		9
98	Achieving an acceptable design model for autonomic systems. , 2007, , .		3
99	Construct: An Open Source Pervasive Systems Platform. , 2007, , .		4
100	Cross-Layer Architectures for Autonomic Communications. Journal of Network and Systems Management, 2007, 15, 13-27.	4.9	28
101	Autonomic Pervasive and Context-Aware Systems. Journal of Network and Systems Management, 2007, 15, 1-3.	4.9	1
102	A Unified Semantics Space Model. Lecture Notes in Computer Science, 2007, , 103-120.	1.3	19
103	Cross-layer Optimisations for Autonomic Networks. , 2007, , 127-148.		4
104	Whole-System Programming of Adaptive Ambient Intelligence. Lecture Notes in Computer Science, 2007, , 73-81.	1.3	2
105	Demonstrating the feasibility of an Autonomic Communication- Targeted Cross-Layer Architecture. , 2006, , .		5
106	A survey of autonomic communications. ACM Transactions on Autonomous and Adaptive Systems, 2006, 1, 223-259.	0.8	521
107	Adaptive middleware for autonomic systems. Annales Des Telecommunications/Annals of Telecommunications, 2006, 61, 1099-1118.	2.5	8
108	Towards a Reliable, Wide-Area Infrastructure for Context-Based Self-management of Communications. Lecture Notes in Computer Science, 2006, , 115-128.	1.3	7

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109	Rapid User-Centred Evaluation for Context-Aware Systems. , 2006, , 220-233.		8
110	A Cross-Layer Architecture for Autonomic Communications. Lecture Notes in Computer Science, 2006, , 25-35.	1.3	15
111	Putting Meaning into the Network: Some Semantic Issues for the Design of Autonomic Communications Systems. Lecture Notes in Computer Science, 2005, , 207-216.	1.3	6
112	A Systems Architecture for Sensor Networks Based On Hardware/Software Co-design. Lecture Notes in Computer Science, 2005, , 115-126.	1.3	3
113	More Principled Design of Pervasive Computing Systems. Lecture Notes in Computer Science, 2005, , 292-305.	1.3	17
114	Leveraging the subtleties of location. , 2005, , .		15
115	Context is key. Communications of the ACM, 2005, 48, 49-53.	4.5	419
116	Comparing Service-Oriented and Distributed Object Architectures. Lecture Notes in Computer Science, 2005, , 631-645.	1.3	23
117	A Co-designed Hardware/Software Architecture for Augmented Materials. Lecture Notes in Computer Science, 2005, , 43-53.	1.3	3
118	As strong as possible mobility (poster session). , 2000, , .		1
119	Toward a Model for Shared Data Abstraction with Performance. Journal of Parallel and Distributed Computing, 1998, 49, 156-167.	4.1	8