Peter J Bentley

List of Publications by Year
in descending order

97 papers	1,425 citations	567281 15 h-index	454955 30 g-index
100 all docs	100 docs citations	100 times ranked	1007 citing authors

#	Article	IF	Citations
1	Immune system approaches to intrusion detection â€“ a review. Natural Computing, 2007, 6, 413-466.	3.0	224
2	Investigating Country Differences in Mobile App User Behavior and Challenges for Software Engineering. IEEE Transactions on Software Engineering, 2015, 41, 40-64.	5.6	125
3	Aspects of Evolutionary Design by Computers. , 1999, , 99-118.		87
4	An introduction to Creative Evolutionary Systems. , 2002, , 1-75.		82
5	Investigating the Suitability of Social Robots for the Wellbeing of the Elderly. Lecture Notes in Computer Science, 2011, , 578-587.	1.3	45
6	Danger Is Ubiquitous: Detecting Malicious Activities in Sensor Networks Using the Dendritic Cell Algorithm. Lecture Notes in Computer Science, 2006, , 390-403.	1.3	44
7	Immune Memory and Gene Library Evolution in the Dynamic Clonal Selection Algorithm. Genetic Programming and Evolvable Machines, 2004, 5, 361-391.	2.2	40
8	Biologically Inspired Evolutionary Development. Lecture Notes in Computer Science, 2003, , 57-68.	1.3	38
9	Evolving beyond perfection: an investigation of the effects of long-term evolution on fractal gene regulatory networks. BioSystems, 2004, 76, 291-301.	2.0	37
10	Investigating app store ranking algorithms using a simulation of mobile app ecosystems. , 2013, , .		37
11	Two Ways to Grow Tissue for Artificial Immune Systems. Lecture Notes in Computer Science, 2005, , 139-152.	1.3	34
12	Fractal Proteins. Genetic Programming and Evolvable Machines, 2004, 5, 71-101.	2.2	31
13	Detecting interest cache poisoning in sensor networks using anÂartificial immune algorithm. Applied Intelligence, 2010, 32, 1-26.	5.3	30
14	Using genetic algorithms to evolve three-dimensional microstructures from two-dimensional micrographs. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 1643-1652.	2.2	29
15	Hardware Implementation of a Bio-plausible Neuron Model for Evolution and Growth of Spiking Neural Networks on FPGA. , 2008, , .		26
16	Innately adaptive robotics through embodied evolution. Autonomous Robots, 2006, 20, 149-163.	4.8	24
17	Methods to evolve legal phenotypes. Lecture Notes in Computer Science, 1998, , 280-291.	1.3	23
18	Computational Embryology: Past, Present and Future. Natural Computing Series, 2003, , 461-477.	2.2	22

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19	An Intelligent Autopilot System that learns piloting skills from human pilots by imitation. , 2016, , .		20
20	Systemic computation: A model of interacting systems with natural characteristics. International Journal of Parallel, Emergent and Distributed Systems, 2007, 22, 103-121.	1.0	19
21	Learning how to flock. , 2018, , .		19
22	Bias and scalability in evolutionary development. , 2005, , .		18
23	Autonomous navigation and landing of large jets using Artificial Neural Networks and learning by imitation. , 2017, , .		17
24	Investigations Into Graceful Degradation of Evolutionary Developmental Software. Natural Computing, 2005, 4, 417-437.	3.0	15
25	An Intelligent Autopilot System that learns flight emergency procedures by imitating human pilots. , 2016, , .		15
26	The Role of Chromosome Missegregation in Cancer Development: A Theoretical Approach Using Agent-Based Modelling. PLoS ONE, 2013, 8, e72206.	2.5	13
27	Pain expressiveness and altruistic behavior. Pain, 2016, 157, 759-768.	4.2	13
28	An Evolutionary Approach to Damage Recovery of Robot Motion with Muscles. Lecture Notes in Computer Science, 2003, , 248-255.	1.3	12
29	An introduction to computational development. , 2003, , 1-43.		12
30	Generic Representation of Solid-Object Geometry for Genetic Search. Computer-Aided Civil and Infrastructure Engineering, 1996, 11, 153-161.	9.8	11
31	A Cellular Structure for Online Routing of Digital Spiking Neuron Axons and Dendrites on FPGAs. Lecture Notes in Computer Science, 2008, , 273-284.	1.3	11
32	Methods for improving simulations of biological systems: systemic computation and fractal proteins. Journal of the Royal Society Interface, 2009, 6, S451-66.	3.4	11
33	Evolving Fractal Proteins. Lecture Notes in Computer Science, 2003, , 81-92.	1.3	10
34	Perceptive Particle Swarm Optimisation. , 2005, , 259-263.		9
35	A systemic computation platform for the modelling and analysis of processes with natural characteristics. , 2007, , .		9
36	Fast bio-inspired computation using a GPU-based systemic computer. Parallel Computing, 2010, 36, 591-617.	2.1	9

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37	An Artificial Ecosystem Algorithm applied to static and Dynamic Travelling Salesman Problems. , 2014, , .		9
38	Autonomous landing and go-around of airliners under severe weather conditions using Artificial Neural Networks. , 2017, , .		9
39	Evolving Fractal Gene Regulatory Networks for Graceful Degradation of Software. Lecture Notes in Computer Science, 2005, , 21-35.	1.3	7
40	The challenge of irrationality. , 2009, , .		7
41	Evolving relationships between social networks and stakeholder involvement in software projects. , 2011, , .		7
42	Programming and evolving physical self-assembling systems in three dimensions. Natural Computing, 2012, 11, 475-498.	3.0	7
43	The Effects of Developer Dynamics on Fitness in an Evolutionary Ecosystem Model of the App Store. IEEE Transactions on Evolutionary Computation, 2016, 20, 529-545.	10.0	7
44	Analysing the Evolvability of Neural Network Agents Through Structural Mutations. Lecture Notes in Computer Science, 2005, , 312-321.	1.3	7
45	iStethoscope: A Demonstration of the Use of Mobile Devices for Auscultation. Methods in Molecular Biology, 2015, 1256, 293-303.	0.9	7
46	Modelling Nanorobot Control Using Swarm Intelligence: A Pilot Study. Studies in Computational Intelligence, 2009, , 175-214.	0.9	7
47	Evolving Physical Self-assembling Systems in Two-Dimensions. Lecture Notes in Computer Science, 2010, , 381-392.	1.3	7
48	App Epidemics: Modelling the Effects of Publicity in a Mobile App Ecosystem. , 0, , .		7
49	Evolving visually guided agents in an ambiguous virtual world. , 2005, , .		6
50	Evolving Hardware. , 2006, , 387-432.		6
51	How to be a successful app developer. , 2012, , .		6
52	Coping with Uncertainty: Modelling Personality when Collaborating on Noisy Problems. , 2018, , .		6
53	Diversity Improves Teamwork: Optimising Teams using a Genetic Algorithm. , 2019, , .		5
54	An Ecosystem Algorithm for the Dynamic Redistribution of Bicycles in London. Lecture Notes in Computer Science, 2015, , 39-51.	1.3	5

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55	Eating Data Is Good for Your Immune System: An Artificial Metabolism for Data Clustering Using Systemic Computation. Lecture Notes in Computer Science, 2008, , 412-423.	1.3	5
56	USING EVOLUTION TO LEARN USER PREFERENCES. Advances in Natural Computation, 2004, , 20-40.	0.1	4
57	Reaching the Unreachable : A Method for Early Stage Software Startups to Reach Inaccessible Stakeholders within Large Corporation. , 2020, , .		4
58	Controlling Robots with Fractal Gene Regulatory Networks. , 2005, , 320-339.		4
59	Programming Nanotechnology: Learning from Nature. Advances in Computers, 2007, 71, 1-37.	1.6	3
60	A more bio-plausible approach to the evolutionary inference of finite state machines. , 2007, , .		3
61	Metabolic Systemic Computing: Exploiting Innate Immunity within an Artificial Organism for On-line Self-Organisation and Anomaly Detection. Mathematical Modelling and Algorithms, 2009, 8, 203-225.	0.5	3
62	Staging the Self-Assembly Process: Inspiration from Biological Development. Artificial Life, 2014, 20, 29-53.	1.3	3
63	Autonomous flight cycles and extreme landings of airliners beyond the current limits and capabilities using artificial neural networks. Applied Intelligence, 2021, 51, 6349-6375.	5.3	3
64	Designing Biological Computers: Systemic Computation and Sensor Networks. Lecture Notes in Computer Science, 2008, , 352-363.	1.3	3
65	Programming Self-Assembling Systems via Physically Encoded Information. Understanding Complex Systems, 2012, , 157-188.	0.6	3
66	Systemic Computation Using Graphics Processors. Lecture Notes in Computer Science, 2010, , 121-132.	1.3	3
67	Teams Frightened of Failure Fail More: Modelling Reward Sensitivity in Teamwork. , 2020, , .		3
68	Evolving 3D Microstructures Using a Genetic Algorithm. Materials Science Forum, 2004, 467-470, 1019-1024.	0.3	2
69	Special Issue on Artificial Immune Systems. Mathematical Modelling and Algorithms, 2009, 8, 101-102.	0.5	2
70	A Multi-cellular Developmental Representation for Evolution of Adaptive Spiking Neural Microcircuits in an FPGA. , 2009, , .		2
71	Novel Visualisation and Analysis of Natural and Complex Systems Using Systemic Computation. Information Visualization, 2011, 10, 1-31.	1.9	2
72	An artificial ecosystem algorithm applied to the travelling salesman problem. , 2014, , .		2

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73	Evaluating clustering methods within the Artificial Ecosystem Algorithm and their application to bike redistribution in London. BioSystems, 2016, 146, 43-59.	2.0	2
74	Fault tolerant fusion of office sensor data using cartesian genetic programming. , 2017, , .		2
75	Exploiting Natural Asynchrony and Local Knowledge within Systemic Computation to Enable Generic Neural Structures. Proceedings in Information and Communications Technology, 2009, , 122-133.	0.2	2
76	Introducing the FPGA-Based Hardware Architecture of Systemic Computation (HAoS). Lecture Notes in Computer Science, 2012, , 179-190.	1.3	2
77	Modelling Biological Processes Naturally using Systemic Computation. , 0, , 204-241.		2
78	Adapting to dynamically changing noise during learning of heart sounds. , 2014, , .		1
79	Dynamic learning of heart sounds with changing noise. , 2014, , .		1
80	Demonstrating the performance, flexibility and programmability of the hardware architecture of systemic computation modelling cancer growth. International Journal of Bio-Inspired Computation, 2015, 7, 345.	0.9	1
81	Design Computing and Cognition (DCC'14). Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2016, 30, 123-124.	1.1	1
82	Artificial Ecosystem Algorithm Applied to Multi-Line Steel Scheduling. , 2019, , .		1
83	A Fractal Immune Network. Lecture Notes in Computer Science, 2004, , 133-145.	1.3	1
84	Special Section: Evolutionary Design. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 1999, 13, 325-325.	1.1	0
85	Special Section: Evolutionary Design. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2000, 14, .	1.1	0
86	Evolving Microstructured Optical Fibres. Studies in Computational Intelligence, 2008, , 87-124.	0.9	0
87	Extending the hardware architecture of systemic computation to a complete programming platform. , 2013, , .		0
88	Self-assembly. , 2014, , .		0
89	Building a Nature-Inspired Computer. , 2015, , .		0
90	Improving Artificial-Immune-System-based computing by exploiting intrinsic features of computer architectures. , 2016, , .		0

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91	Wide learning: Using an ensemble of biologically-plausible spiking neural networks for unsupervised parallel classification of spatio-temporal patterns. , 2017, , .		0
92	Evaluating decomposition strategies to enable scalable scheduling for a real-world multi-line steel scheduling problem. , 2017, , .		0
93	Why Biologists and Computer Scientists Should Work Together. Lecture Notes in Computer Science, 2002, , 3-15.	1.3	0
94	Analyzing the Credit Default Swap Market Using Cartesian Genetic Programming. , 2010, , 434-444.		0
95	Natural Born Computing. Lecture Notes in Computer Science, 2012, , 20-36.	1.3	0
96	What are You Looking at?. Opticon1826, 2007, , .	0.0	0
97	Generating Synthetic Energy Usage Data to Enable Machine Learning for Sustainable Accommodation. , 2021, , .		0