Francisco Bellas

List of Publications by Year
in descending order

121	608	759233 12	752698 20
papers	citations	h-index	g-index

125	125	125	444
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Multilevel Darwinist Brain (MDB): Artificial Evolution in a Cognitive Architecture for Real Robots. IEEE Transactions on Autonomous Mental Development, 2010, 2, 340-354.	1.6	72
2	EDHMoR: Evolutionary designer of heterogeneous modular robots. Engineering Applications of Artificial Intelligence, 2013, 26, 2408-2423.	8.1	39
3	Evolutionary algorithm characterization in real parameter optimization problems. Applied Soft Computing Journal, 2013, 13, 1902-1921.	7.2	38
4	Open-ended evolution as a means to self-organize heterogeneous multi-robot systems in real time. Robotics and Autonomous Systems, 2010, 58, 1282-1291.	5.1	34
5	The Robobo Project: Bringing Educational Robotics Closer to Real-World Applications. Advances in Intelligent Systems and Computing, 2018, , 226-237.	0.6	20
6	Scalable Task Assignment for Heterogeneous Multi-Robot Teams. International Journal of Advanced Robotic Systems, 2013, 10, 105.	2.1	18
7	Introducing separable utility regions in a motivational engine for cognitive developmental robotics. Integrated Computer-Aided Engineering, 2018, 26, 3-20.	4.6	18
8	Specialization analysis of embodied evolution for robotic collective tasks. Robotics and Autonomous Systems, 2013, 61, 682-693.	5.1	17
9	An evolution friendly modular architecture to produce feasible robots. Robotics and Autonomous Systems, 2015, 63, 195-205.	5.1	17
10	Perceptual Generalization and Context in a Network Memory Inspired Long-Term Memory for Artificial Cognition. International Journal of Neural Systems, 2019, 29, 1850053.	5.2	17
11	An Adaptive Approach for the Progressive Integration of Spatial and Spectral Features When Training Ground-Based Hyperspectral Imaging Classifiers. IEEE Transactions on Instrumentation and Measurement, 2010, 59, 2083-2093.	4.7	15
12	Considerations in the application of evolution to the generation of robot controllers. Information Sciences, 2001, 133, 127-148.	6.9	13
13	Real-Valued Multimodal Fitness Landscape Characterization for Evolution. Lecture Notes in Computer Science, 2010, , 567-574.	1.3	13
14	Hyperspectral image segmentation through evolved cellular automata. Pattern Recognition Letters, 2013, 34, 1648-1658.	4.2	12
15	Motivation as a tool for designing lifelong learning robots. Integrated Computer-Aided Engineering, 2020, 27, 353-372.	4.6	11
16	Dynamic learning in cognitive robotics through a procedural long term memory. Evolving Systems, 2014, 5, 49-63.	3.9	10
17	Real-time optimization of dynamic problems through distributed Embodied Evolution. Integrated Computer-Aided Engineering, 2016, 23, 237-253.	4.6	10
18	A procedural Long Term Memory for cognitive robotics. , 2012, , .		9

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19	Motivational engine with autonomous sub-goal identification for the Multilevel Darwinist Brain. Biologically Inspired Cognitive Architectures, 2016, 17, 1-11.	0.9	9
20	Simplifying the creation and management of utility models in continuous domains for cognitive robotics. Neurocomputing, 2019, 353, 106-118.	5.9	9
21	Motivational engine and long-term memory coupling within a cognitive architecture for lifelong open-ended learning. Neurocomputing, 2021, 452, 341-354.	5.9	8
22	Using promoters and functional introns in genetic algorithms for neuroevolutionary learning in non-stationary problems. Neurocomputing, 2009, 72, 2134-2145.	5.9	7
23	A versatile robotic platform for educational interaction. , 2017, , .		7
24	Induced Behavior in a Real Agent Using the Multilevel Darwinist Brain. Lecture Notes in Computer Science, 2005, , 425-434.	1.3	6
25	Social learning for collaboration through ASiCo based neuroevolution. Journal of Intelligent and Fuzzy Systems, 2011, 22, 125-139.	1.4	6
26	Brain-Like Robotics. , 2014, , 1019-1056.		6
27	Complex Behaviours Through Modulation in Autonomous Robot Control. Lecture Notes in Computer Science, 2005, , 717-724.	1.3	5
28	Using Adaptive Artificial Neural Networks for Reconstructing Irregularly Sampled Laser Doppler Velocimetry Signals. IEEE Transactions on Instrumentation and Measurement, 2006, 55, 916-922.	4.7	5
29	A cognitive developmental robotics architecture for lifelong learning by evolution in real robots. , 2010, , .		5
30	Ï„-NEAT: Initial experiments in precise temporal processing through neuroevolution. Neurocomputing, 2015, 150, 43-49.	5.9	5
31	Introducing Synaptic Delays in the NEAT Algorithm to Improve Modelling in Cognitive Robotics. Neural Processing Letters, 2016, 43, 479-504.	3.2	5
32	Towards an Evolutionary Design of Modular Robots for Industry. Lecture Notes in Computer Science, 2011, , 50-59.	1.3	5
33	STEAM Approach to Autonomous Robotics Curriculum for High School Using the Robobo Robot. Advances in Intelligent Systems and Computing, 2020, , 77-89.	0.6	5
34	A Complex Systems Based Tool for Collective Robot Behavior Emergence and Analysis. Lecture Notes in Computer Science, 2008, , 633-640.	1.3	5
35	Experimental analysis of the relevance of fitness landscape topographical characterization. , 2012, , .		4
36	Evolving cellular automata for detecting edges in hyperspectral images. , 2012, , .		4

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37	Augmenting the NEAT algorithm to improve its temporal processing capabilities. , 2014, , .		4
38	A Behavior Based Architecture with Auction-Based Task Assignment for Multi-robot Industrial Applications. Lecture Notes in Computer Science, 2009, , 372-381.	1.3	4
39	Artificial Intelligence Teaching Through Embedded Systems: A Smartphone-Based Robot Approach. Advances in Intelligent Systems and Computing, 2020, , 515-527.	0.6	4
40	Applying synaptic delays for virtual sensing and actuation in mobile robots. , 2000, , .		3
41	Application domain study of evolutionary algorithms in optimization problems. , 2008, , .		3
42	Distributed embodied evolution for collective tasks. , 2013, , .		3
43	Towards the standardization of distributed Embodied Evolution. Information Sciences, 2015, 312, 55-77.	6.9	3
44	MotivEn: Motivational engine with sub-goal identification for autonomous robots. , 2016, , .		3
45	Bootstrapping Autonomous Skill Learning in the MDB Cognitive Architecture. Lecture Notes in Computer Science, 2019, , 120-129.	1.3	3
46	SARDAM: Service Assistant Robot for Daily Activity Monitoring. Proceedings (mdpi), 2020, 54, 3.	0.2	3
47	Artificial Intelligence in Pre-University Education: What and How to Teach. Proceedings (mdpi), 2020, 54, .	0.2	3
48	Adaptive Learning Application of the MDB Evolutionary Cognitive Architecture in Physical Agents. Lecture Notes in Computer Science, 2006, , 434-445.	1.3	3
49	Adaptively Coordinating Heterogeneous Robot Teams through Asynchronous Situated Coevolution. Lecture Notes in Computer Science, 2009, , 75-82.	1.3	3
50	Solving a Heterogeneous Fleet Vehicle Routing Problem with Time Windows through the Asynchronous Situated Coevolution Algorithm. Lecture Notes in Computer Science, 2011, , 200-207.	1.3	3
51	Task-Driven Species in Evolutionary Robotic Teams. Lecture Notes in Computer Science, 2011, , 138-147.	1.3	3
52	Developing a Simulation Model for Autonomous Driving Education in the Robobo SmartCity Framework. Engineering Proceedings, 2021, 7, .	0.4	3
53	Automatic Behavior Pattern Classification for Social Robots. Lecture Notes in Computer Science, 2010, , 88-95.	1.3	3
54	Adapting Computer Vision Algorithms to Smartphone-based Robot for Education. , 2020, , .		3

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55	Autom atic Profiling and Behavior Prediction of Computer System Users. , 2006, , .		2
56	Parallel Job Scheduling through Evolutionary Based Cognitive Strategies. , 0, , .		2
57	Internal and External Memory in Neuroevolution for Learning in Non-stationary Problems. Lecture Notes in Computer Science, 2008, , 62-72.	1.3	2
58	Population dynamics analysis in an agent-based artificial life system for engineering optimization problems. , 2009, , .		2
59	Are evolutionary algorithm competitions characterizing landscapes appropriately. , 2011, , .		2
60	Neuroevolutionary Motivational Engine for Autonomous Robots. , 2016, , .		2
61	Improving extrinsically motivated developmental robots through intrinsic motivations. , 2016, , .		2
62	Robobo: The Next Generation of Educational Robot. Advances in Intelligent Systems and Computing, 2018, , 359-369.	0.6	2
63	Utility Model Re-description within a Motivational System for Cognitive Robotics. , 2018, , .		2
64	Developmental Learning of Value Functions in a Motivational System for Cognitive Robotics. , 2020, , .		2
65	The School Path Guide: A Practical Introduction to Representation and Reasoning in AI for High School Students. Lecture Notes in Computer Science, 2021, , 88-92.	1.3	2
66	A Role for Sleep in Artificial Cognition through Deferred Restructuring of Experience in Autonomous Machines. Lecture Notes in Computer Science, 2014, , 1-10.	1.3	2
67	Motivational Engine with Sub-goal Identification in Neuroevolution Based Cognitive Robotics. Lecture Notes in Computer Science, 2016, , 659-670.	1.3	2
68	Asynchronous Situated Coevolution and Embryonic Reproduction as a Means to Autonomously Coordinate Robot Teams. Lecture Notes in Computer Science, 2009, , 351-359.	1.3	2
69	Incremental Evolution of Stigmergy-Based Multi Robot Controllers Through Utility Functions. Lecture Notes in Computer Science, 2007, , 1187-1195.	1.3	2
70	Web-Based Multimedia Tools for Monitoring and E-Learning. , 2010, , 1-21.		2
71	First Steps Towards State Representation Learning for Cognitive Robotics. Lecture Notes in Computer Science, 2020, , 499-510.	1.3	2
72	Modelling the world with statistically neutral PBGAs. Enhancement and real applications. , 0, , .		1

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73	Some thoughts on the use of sampled fitness functions for the multilevel Darwinist brain. Information Sciences, 2004, 161, 159-179.	6.9	1
74	Adaptive Spatio-Spectral Hyperspectral Image Processing for Online Industrial Classification of Inhomogeneous Materials. , 2006, , .		1
75	An Adaptive Visual Gesture Based Interface for Human Machine Interaction in Intelligent Workspaces. , 2006, , .		1
76	Intelligent Virtual Interface for Improving Performance in HPC Centers by Modelling Users and their Satisfaction. , 2006, , .		1
77	Improving Performance in HPC Centers by Modeling Users Through an Evolutionary Virtual Interface. IEEE Transactions on Instrumentation and Measurement, 2008, 57, 1885-1893.	4.7	1
78	Automatic Speech-Lip Synchronization System for 3D Animation. Lecture Notes in Computer Science, 2009, , 122-129.	1.3	1
79	Automatic model decomposition and reuse in an evolutionary cognitive mechanism. Evolving Systems, 2010, 1, 129-141.	3.9	1
80	Designing a modular robotic architecture for industrial applications. , 2013, , .		1
81	ECAS-II: A hybrid algorithm for the construction of multidimensional image segmenters. , 2015, , .		1
82	Applying the canonical distributed Embodied Evolution algorithm in a collective indoor navigation task. , 2015, , .		1
83	Embodied evolution versus cooperative coevolution in multi-robot optimization. , 2017, , .		1
84	A Dreaming Approach to Perceptual Class Delimitation Within the DREAM Architecture. , 2018, , .		1
85	Modulation Based Transfer Learning of Motivational Cues in Developmental Robotics. , 2019, , .		1
86	A Re-description Based Developmental Approach to the Generation of Value Functions for Cognitive Robots. Lecture Notes in Computer Science, 2018, , 671-683.	1.3	1
87	Using Spiking Neural Networks for the Generation of Coordinated Action Sequences in Robots. Lecture Notes in Computer Science, 2009, , 1013-1020.	1.3	1
88	Evolutionary Procedure for the Progressive Design of Controllers for Collective Behaviors. Lecture Notes in Computer Science, 2011, , 471-478.	1.3	1
89	SNAKE-LIKE BEHAVIORS USING MACROEVOLUTIONARY ALGORITHMS AND MODULATION BASED ARCHITECTURES. , 2006, , .		1
90	Autonomous Learning of Procedural Knowledge in an Evolutionary Cognitive Architecture for Robots. Lecture Notes in Computer Science, 2015, , 807-818.	1.3	1

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91	Motivational Engine for Cognitive Robotics in Non-static Tasks. Lecture Notes in Computer Science, 2017, , 32-42.	1.3	1
92	Autonomous Knowledge Representation forÂEfficient Skill Learning inÂCognitive Robots. Lecture Notes in Computer Science, 2022, , 253-263.	1.3	1
93	Engineering CORBA-based distributed systems. , 0, , .		0
94	Reconstructing irregularly sampled laser doppler velocimetry signals by using artificial neural networks. , 0, , .		0
95	Evolution of Cooperating ANNs Through Functional Phenotypic Affinity. Lecture Notes in Computer Science, 2005, , 333-340.	1.3	0
96	On the use of delay based networks in the analysis of turbulent signals. , 0, , .		0
97	Analysis of Hot-Wire Anemometer Turbulent Signals by Means of Delay Based Networks. , 2005, , .		0
98	Blind Signal Separation Through Cooperating ANNs. Lecture Notes in Computer Science, 2005, , 847-853.	1.3	0
99	On the Analysis of Turbulent Flow Signals by Artificial Neural Networks and Adaptive Techniques. , 2007, , .		0
100	Automatic Preprocessing and Classification System for High Resolution Ultra and Hyperspectral Images. Studies in Computational Intelligence, 2008, , 313-340.	0.9	0
101	Time in hyperspectral processing: A temporal based classification approach. , 2011, , .		0
102	Automatic neural-based pattern classification of motion behaviors in autonomous robots. Neurocomputing, 2012, 75, 146-155.	5.9	0
103	Addressing the training problem in cellular automata based hyperspectral image segmentation. , 2013, , .		0
104	Embodied Evolution for Collective Indoor Surveillance and Location. , 2015, , .		0
105	Studying How Innate Motivations Can Drive Skill Acquisition in Cognitive Robots. Proceedings (mdpi), 2019, 21, 2.	0.2	0
106	Exploring the Effect of Dynamic Drive Balancing in Open-ended Learning Robots. , 2021, , .		0
107	A Profiling Based Intelligent Resource Allocation System. Lecture Notes in Computer Science, 2005, , 840-846.	1.3	0
108	Integration of Spatial Information in Hyperspectral Imaging for Real Time Quality Control in an Andalusite Processing Line. Lecture Notes in Computer Science, 2006, , 292-299.	1.3	0

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109	Hydrodynamic Design of Control Surfaces for Ships Using a MOEA with Neuronal Correction. Lecture Notes in Computer Science, 2009, , 96-103.	1.3	0
110	An Incremental Learning Algorithm for Optimizing High-Dimensional ANN-Based Classification Systems. Lecture Notes in Computer Science, 2009, , 1037-1044.	1.3	0
111	Self-organization and Specialization in Multiagent Systems through Open-Ended Natural Evolution. Lecture Notes in Computer Science, 2012, , 93-102.	1.3	0
112	Multiscale Dynamic Learning in Cognitive Robotics. Lecture Notes in Computer Science, 2013, , 56-65.	1.3	0
113	Visual Behavior Definition for 3D Crowd Animation through Neuro-evolution. Lecture Notes in Computer Science, 2014, , 354-364.	1.3	0
114	Studying the Coupled Learning of Procedural and Declarative Knowledge in Cognitive Robotics. Lecture Notes in Computer Science, 2015, , 304-315.	1.3	0
115	Embodied Evolution for Collective Indoor Surveillance and Location. Lecture Notes in Computer Science, 2015, , 138-147.	1.3	0
116	How Complexity Pervades Specialization in Canonical Embodied Evolution. , 2016, , .		0
117	Automatic 3D design tool for fitted spools in shipbuilding industry. , 2018, , .		0
118	Producing Parameterized Value Functions Through Modulation for Cognitive Developmental Robots. Advances in Intelligent Systems and Computing, 2020, , 250-262.	0.6	0
119	Auto Adjustable ANN-Based Classification System for Optimal High Dimensional Data Analysis. , 2007, , 588-596.		0
120	Evolutionary Tool for the Incremental Design of Controllers for Collective Behaviors. Lecture Notes in Computer Science, 2007, , 587-596.	1.3	0
121	Experiencias para la mejora del proceso de aprendizaje y la motivaciÃ³n de los estudiantes basadas en proyectos. , 0, , 83-96.		0