Jean-Baptiste Mouret

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81 papers	2,685 citations	27 h-index	50 g-index
90 ext. papers	3,408 ext. citations	6.2 avg, IF	5.82 L-index

#	Paper	IF	Citations
81	Robots that can adapt like animals. *Nature*, **2015**, 521, 503-7	50.4	417
80	The evolutionary origins of modularity. *Proceedings of the Royal Society B: Biological Sciences*, **2013**, 280, 20122863	4.4	337
79	Discovery of a big void in Khufu's Pyramid by observation of cosmic-ray muons. *Nature*, **2017**, 552, 386-390	50.4	168
78	Encouraging behavioral diversity in evolutionary robotics: an empirical study. *Evolutionary Computation*, **2012**, 20, 91-133	4.3	152
77	. *IEEE Transactions on Evolutionary Computation*, **2013**, 17, 122-145	15.6	138
76	Evolutionary Robotics: What, Why, and Where to. *Frontiers in Robotics and AI*, **2015**, 2,	2.8	92
75	Neural modularity helps organisms evolve to learn new skills without forgetting old skills. *PLoS Computational Biology*, **2015**, 11, e1004128	5	75
74	The Evolutionary Origins of Hierarchy. *PLoS Computational Biology*, **2016**, 12, e1004829	5	69
73	Beyond black-box optimization: a review of selective pressures for evolutionary robotics. *Evolutionary Intelligence*, **2014**, 7, 71-93	1.7	60
72	Novelty-Based Multiobjectivization. *Studies in Computational Intelligence*, **2011**, 139-154	0.8	57
71	Adaptive and Resilient Soft Tensegrity Robots. *Soft Robotics*, **2018**, 5, 318-329	9.2	49
70	Evolving embodied intelligence from materials to machines. *Nature Machine Intelligence*, **2019**, 1, 12-19	22.5	47
69	Overcoming the bootstrap problem in evolutionary robotics using behavioral diversity **2009**,		45
68	Evolving a Behavioral Repertoire for a Walking Robot. *Evolutionary Computation*, **2016**, 24, 59-88	4.3	41
67	Fast damage recovery in robotics with the T-resilience algorithm. *International Journal of Robotics Research*, **2013**, 32, 1700-1723	5.7	40
66	Using behavioral exploration objectives to solve deceptive problems in neuro-evolution **2009**,		37
65	Artificial evolution of the morphology and kinematics in a flapping-wing mini-UAV. *Bioinspiration and Biomimetics*, **2007**, 2, 65-82	2.6	37

64	Behavioral diversity measures for Evolutionary Robotics **2010**,		36
63	Crossing the reality gap in evolutionary robotics by promoting transferable controllers **2010**,		36
62	. *IEEE Transactions on Robotics*, **2020**, 36, 328-347	6.5	35
61	Reset-free Trial-and-Error Learning for Robot Damage Recovery. *Robotics and Autonomous Systems*, **2018**, 100, 236-250	3.5	32
60	. *IEEE Transactions on Evolutionary Computation*, **2018**, 22, 623-630	15.6	32
59	The Surprising Creativity of Digital Evolution: A Collection of Anecdotes from the Evolutionary Computation and Artificial Life Research Communities. *Artificial Life*, **2020**, 26, 274-306	1.4	31
58	Behavioral repertoire learning in robotics **2013**,		30
57	**2017**,		29
56	20 years of reality gap **2017**,		29
55	**2010**,		29
54	Evolving neural networks that are both modular and regular **2014**,		26
53	MENNAG: a modular, regular and hierarchical encoding for neural-networks based on attribute grammars. *Evolutionary Intelligence*, **2008**, 1, 187-207	1.7	22
52	How do Different Encodings Influence the Performance of the MAP-Elites Algorithm? **2016**,		21
51	Data-efficient exploration, optimization, and modeling of diverse designs through surrogate-assisted illumination **2017**,		21
50	Incremental Evolution of Animats Behaviors as a Multi-objective Optimization. *Lecture Notes in Computer Science*, **2008**, 210-219	0.9	21
49	Evolutionary Robotics: Exploring New Horizons. *Studies in Computational Intelligence*, **2011**, 3-25	0.8	21
48	Data-Efficient Design Exploration through Surrogate-Assisted Illumination. *Evolutionary Computation*, **2018**, 26, 381-410	4.3	19
47	On the relationships between generative encodings, regularity, and learning abilities when evolving plastic artificial neural networks. *PLoS ONE*, **2013**, 8, e79138	3.7	18

46	Incremental Evolution of Target-Following Neuro-controllers for Flapping-Wing Animats. *Lecture Notes in Computer Science*, **2006**, 606-618	0.9	18
45	Behavioral diversity with multiple behavioral distances **2013**,		15
44	Animal-to-robot social attachment: initial requisites in a gallinaceous bird. *Bioinspiration and Biomimetics*, **2016**, 11, 016007	2.6	14
43	Fast Road Network Extraction in Satellite Images Using Mathematical Morphology and Markov Random Fields. *Eurasip Journal on Advances in Signal Processing*, **2004**, 2004, 1	1.9	14
42	Discovering the elite hypervolume by leveraging interspecies correlation **2018**,		14
41	Bayesian Optimization with Automatic Prior Selection for Data-Efficient Direct Policy Search **2018**,		13
40	**2009**,		12
39	Automatic system identification based on coevolution of models and tests **2009**,		12
38	Aerodynamic Design Exploration through Surrogate-Assisted Illumination **2017**,		11
37	On the relationships between synaptic plasticity and generative systems **2011**,		11
36	New Horizons in Evolutionary Robotics. *Studies in Computational Intelligence*, **2011**,	0.8	11
35	**2018**,		11
34	Evolvability signatures of generative encodings: Beyond standard performance benchmarks. *Information Sciences*, **2015**, 313, 43-61	7.7	10
33	Importing the computational neuroscience toolbox into neuro-evolution-application to basal ganglia **2010**,		10
32	Quality diversity for multi-task optimization **2020**,		10
31	Are quality diversity algorithms better at generating stepping stones than objective-based search? **2019**,		9
30	A comparison of illumination algorithms in unbounded spaces **2017**,		9
29	Limbo: A Flexible High-performance Library for Gaussian Processes modeling and Data-Efficient Optimization. *Journal of Open Source Software*, **2018**, 3, 545	5.2	9

28	Adaptive Prior Selection for Repertoire-Based Online Adaptation in Robotics. *Frontiers in Robotics and AI*, **2019**, 6, 151	2.8	9
27	How to promote generalisation in evolutionary robotics **2011**,		8
26	Artificial Evolution of Plastic Neural Networks: A Few Key Concepts. *Studies in Computational Intelligence*, **2014**, 251-261	0.8	8
25	Comparing multimodal optimization and illumination **2017**,		7
24	Discovering representations for black-box optimization **2020**,		7
23	Learning Robust Task Priorities and Gains for Control of Redundant Robots. *IEEE Robotics and Automation Letters*, **2020**, 5, 2626-2633	4.2	6
22	Does Aligning Phenotypic and Genotypic Modularity Improve the Evolution of Neural Networks? **2016**,		6
21	Data-efficient neuroevolution with kernel-based surrogate models **2018**,		6
20	Summary of "the evolutionary origins of modularity" **2013**,		6
19	MAP-Elites for noisy domains by adaptive sampling **2019**,		6
18	A New Method to Evaluate Simulation Models: The Calibration Profile (CP) Algorithm. *Jasss*, **2015**, 18,	4.8	6
17	Human Posture Prediction During Physical Human-Robot Interaction. *IEEE Robotics and Automation Letters*, **2021**, 6, 6046-6053	4.2	5
16	Trial-and-error learning of repulsors for humanoid QP-based whole-body control **2017**,		4
15	Fast Online Adaptation in Robotics through Meta-Learning Embeddings of Simulated Priors **2020**,		4
14	Learning behaviour-performance maps with meta-evolution **2020**,		4
13	Comparing the Evolvability of Generative Encoding Schemes		4
12	Quality-Diversity Optimization: A Novel Branch of Stochastic Optimization. *Springer Optimization and Its Applications*, **2021**, 109-135	0.4	4
11	Using a map-based encoding to evolve plastic neural networks **2011**,		3

10	Optimization of humanoid walking controller: Crossing the reality gap **2013**,		2
9	Single step evolution of robot controllers for sequential tasks **2009**,		2
8	Multi-objective Trajectory Optimization to Improve Ergonomics in Human Motion. *IEEE Robotics and Automation Letters*, **2021**, 1-1	4.2	2
7	Evolving the Behavior of Machines: From Micro to Macroevolution. *IScience*, **2020**, 23, 101731	6.1	2
6	Signal-Based Self-Organization of a Chain of UAVs for Subterranean Exploration. *Frontiers in Robotics and AI*, **2021**, 8, 614206	2.8	2
5	Humanoid Whole-Body Movement Optimization from Retargeted Human Motions **2019**,		2
4	Stochastic optimization of a neural network-based controller for aggressive maneuvers on loose surfaces **2010**,		1
3	Dynamic behavioral diversity **2012**,		1
2	Stochastic Multi-objective Optimization for Aggressive Maneuver Trajectory Planning on Loose Surface. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2010**, 43, 575-580		
1	Influence of Promoter Length on Network Convergence in GRN-Based Evolutionary Algorithms. *Lecture Notes in Computer Science*, **2011**, 302-309	0.9	