Marco Dorigo

List of Publications by Year
in descending order

256 papers	49,147 citations	13087 68 h-index	2446 197 g-index
270 all docs	270 docs citations	270 times ranked	19423 citing authors

#	Article	IF	Citations
1	Ant system: optimization by a colony of cooperating agents. IEEE Transactions on Systems, Man, and Cybernetics, 1996, 26, 29-41.	5.5	8,864
2	Ant colony system: a cooperative learning approach to the traveling salesman problem. IEEE Transactions on Evolutionary Computation, 1997, 1, 53-66.	7.5	6,166
3	Swarm Intelligence. , 1999, , .		4,417
4	Ant colony optimization. IEEE Computational Intelligence Magazine, 2006, 1, 28-39.	3.4	3,284
5	Ant Algorithms for Discrete Optimization. Artificial Life, 1999, 5, 137-172.	1.0	2,264
6	Ant Colony Optimization. , 2004, , .		2,088
7	Ant colony optimization theory: A survey. Theoretical Computer Science, 2005, 344, 243-278.	0.5	1,830
8	Ant colonies for the travelling salesman problem. BioSystems, 1997, 43, 73-81.	0.9	1,595
9	Swarm robotics: a review from the swarm engineering perspective. Swarm Intelligence, 2013, 7, 1-41.	1.3	1,207
10	Ant colony optimization for continuous domains. European Journal of Operational Research, 2008, 185, 1155-1173.	3.5	1,181
11	Ant Colony Optimization. IEEE Computational Intelligence Magazine, 2006, 1, 28-39.	3.4	906
12	Inspiration for optimization from social insect behaviour. Nature, 2000, 406, 39-42.	13.7	811
13	Ant algorithms and stigmergy. Future Generation Computer Systems, 2000, 16, 851-871.	4.9	691
14	A survey on metaheuristics for stochastic combinatorial optimization. Natural Computing, 2009, 8, 239-287.	1.8	543
15	ARGoS: a modular, parallel, multi-engine simulator for multi-robot systems. Swarm Intelligence, 2012, 6, 271-295.	1.3	399
16	The Ant Colony Optimization Metaheuristic: Algorithms, Applications, and Advances. Profiles in Operations Research, 2003, , 250-285.	0.3	383
17	A short convergence proof for a class of ant colony optimization algorithms. IEEE Transactions on Evolutionary Computation, 2002, 6, 358-365.	7.5	345
18	Ant-Q: A Reinforcement Learning approach to the traveling salesman problem. , 1995, , 252-260.		338

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19	The Hyper-Cube Framework for Ant Colony Optimization. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 1161-1172.	5.5	329
20	An Ant Colony System Hybridized with a New Local Search for the Sequential Ordering Problem. INFORMS Journal on Computing, 2000, 12, 237-255.	1.0	298
21	Frankenstein's PSO: A Composite Particle Swarm Optimization Algorithm. IEEE Transactions on Evolutionary Computation, 2009, 13, 1120-1132.	7.5	297
22	Ant Colony Optimization: Overview and Recent Advances. Profiles in Operations Research, 2019, , 311-351.	0.3	283
23	Swarm-Bot: A New Distributed Robotic Concept. Autonomous Robots, 2004, 17, 193-221.	3.2	277
24	Evolving Self-Organizing Behaviors for a Swarm-Bot. Autonomous Robots, 2004, 17, 223-245.	3.2	265
25	Ant Colony Optimization: Overview and Recent Advances. Profiles in Operations Research, 2010, , 227-263.	0.3	259
26	Autonomous Self-Assembly in Swarm-Bots. , 2006, 22, 1115-1130.		255
27	Swarmanoid: A Novel Concept for the Study of Heterogeneous Robotic Swarms. IEEE Robotics and Automation Magazine, 2013, 20, 60-71.	2.2	254
28	Ant Colony Optimization for Mixed-Variable Optimization Problems. IEEE Transactions on Evolutionary Computation, 2014, 18, 503-518.	7.5	203
29	Model-Based Search for Combinatorial Optimization: A Critical Survey. Annals of Operations Research, 2004, 131, 373-395.	2.6	193
30	Ant-Based Clustering and Topographic Mapping. Artificial Life, 2006, 12, 35-62.	1.0	167
31	Division of labor in a group of robots inspired by ants' foraging behavior. ACM Transactions on Autonomous and Adaptive Systems, 2006, 1, 4-25.	0.4	166
32	Robot shaping: developing autonomous agents through learning. Artificial Intelligence, 1994, 71, 321-370.	3.9	162
33	The cooperation of swarm-bots - Physical interactions in collective robotics. IEEE Robotics and Automation Magazine, 2005, 12, 21-28.	2.2	159
34	Reflections on the future of swarm robotics. Science Robotics, 2020, 5, .	9.9	143
35	Genetics-based machine learning and behavior-based robotics: a new synthesis. IEEE Transactions on Systems, Man, and Cybernetics, 1993, 23, 141-154.	0.9	139
36	From Fireflies to Fault-Tolerant Swarms of Robots. IEEE Transactions on Evolutionary Computation, 2009, 13, 754-766.	7.5	137

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37	Ant colony optimization. Scholarpedia Journal, 2007, 2, 1461.	0.3	136
38	Self-organized flocking with a mobile robot swarm: a novel motion control method. Adaptive Behavior, 2012, 20, 460-477.	1.1	129
39	Path formation in a robot swarm. Swarm Intelligence, 2008, 2, 1-23.	1.3	125
40	Swarm Robotics: Past, Present, and Future [Point of View]. Proceedings of the IEEE, 2021, 109, 1152-1165.	16.4	124
41	Ant Colony Optimization for the Total Weighted Tardiness Problem. Lecture Notes in Computer Science, 2000, , 611-620.	1.0	119
42	Teamwork in Self-Organized Robot Colonies. IEEE Transactions on Evolutionary Computation, 2009, 13, 695-711.	7.5	118
43	The Best-of-n Problem in Robot Swarms: Formalization, State of the Art, and Novel Perspectives. Frontiers in Robotics and AI, 2017, 4, .	2.0	118
44	Towards group transport by swarms of robots. International Journal of Bio-Inspired Computation, 2009, 1, 1.	0.6	117
45	Guest editorial: special section on ant colony optimization. IEEE Transactions on Evolutionary Computation, 2002, 6, 317-319.	7.5	116
46	Swarm robotics. Scholarpedia Journal, 2014, 9, 1463.	0.3	115
47	Self-Assembly at the Macroscopic Scale. Proceedings of the IEEE, 2008, 96, 1490-1508.	16.4	112
48	Swarm intelligence. Scholarpedia Journal, 2007, 2, 1462.	0.3	112
49	A unified ant colony optimization algorithm for continuous optimization. European Journal of Operational Research, 2014, 234, 597-609.	3.5	110
50	Incremental Social Learning in Particle Swarms. IEEE Transactions on Systems, Man, and Cybernetics, 2011, 41, 368-384.	5.5	109
51	Collective decision with 100 Kilobots: speed versus accuracy in binary discrimination problems. Autonomous Agents and Multi-Agent Systems, 2016, 30, 553-580.	1.3	108
52	A study of some properties of Ant-Q. Lecture Notes in Computer Science, 1996, , 656-665.	1.0	106
53	A Design Pattern for Decentralised Decision Making. PLoS ONE, 2015, 10, e0140950.	1.1	97
54	Elasticity-Based Mechanism for the Collective Motion of Self-Propelled Particles with Springlike Interactions: A Model System for Natural and Artificial Swarms. Physical Review Letters, 2013, 111, 268302.	2.9	96

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55	Majority-rule opinion dynamics with differential latency: a mechanism for self-organized collective decision-making. Swarm Intelligence, 2011, 5, 305-327.	1.3	89
56	Search Bias in Ant Colony Optimization: On the Role of Competition-Balanced Systems. IEEE Transactions on Evolutionary Computation, 2005, 9, 159-174.	7.5	87
57	Ant Colony Optimization and Stochastic Gradient Descent. Artificial Life, 2002, 8, 103-121.	1.0	86
58	Evolution of Self-Organized Task Specialization in Robot Swarms. PLoS Computational Biology, 2015, 11, e1004273.	1.5	86
59	Self-Organized Coordinated Motion in Groups of Physically Connected Robots. IEEE Transactions on Systems, Man, and Cybernetics, 2007, 37, 224-239.	5.5	84
60	Cooperation through self-assembly in multi-robot systems. ACM Transactions on Autonomous and Adaptive Systems, 2006, 1, 115-150.	0.4	83
61	Evolving Aggregation Behaviors in a Swarm of Robots. Lecture Notes in Computer Science, 2003, , 865-874.	1.0	82
62	ARGoS: A modular, multi-engine simulator for heterogeneous swarm robotics. , 2011, , .		82
63	Self-organized task allocation to sequentially interdependent tasks in swarm robotics. Autonomous Agents and Multi-Agent Systems, 2014, 28, 101-125.	1.3	82
64	Cooperative hole avoidance in a swarm-bot. Robotics and Autonomous Systems, 2006, 54, 97-103.	3.0	79
65	On the Invariance of Ant Colony Optimization. IEEE Transactions on Evolutionary Computation, 2007, 11, 732-742.	7.5	77
66	Fault detection in autonomous robots based on fault injection andÂlearning. Autonomous Robots, 2008, 24, 49-67.	3.2	77
67	An Ant Colony Optimization Approach to the Probabilistic Traveling Salesman Problem. Lecture Notes in Computer Science, 2002, , 883-892.	1.0	76
68	What Is a Learning Classifier System?. Lecture Notes in Computer Science, 2000, , 3-32.	1.0	75
69	Blockchain Technology Secures Robot Swarms: A Comparison of Consensus Protocols and Their Resilience to Byzantine Robots. Frontiers in Robotics and AI, 2020, 7, 54.	2.0	72
70	Behavior analysis and training-a methodology for behavior engineering. IEEE Transactions on Systems, Man, and Cybernetics, 1996, 26, 365-380.	5.5	71
71	A Comparison of the Performance of Different Metaheuristics on the Timetabling Problem. Lecture Notes in Computer Science, 2003, , 329-351.	1.0	71
72	Morphology control in a multirobot system. IEEE Robotics and Automation Magazine, 2007, 14, 18-25.	2.2	70

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73	An analysis of communication policies for homogeneous multi-colony ACO algorithms. Information Sciences, 2010, 180, 2390-2404.	4.0	70
74	Collective Perception of Environmental Features in a Robot Swarm. Lecture Notes in Computer Science, 2016, , 65-76.	1.0	66
75	Metaheuristics for High School Timetabling. Computational Optimization and Applications, 1998, 9, 275-298.	0.9	65
76	Parameter Adaptation in Ant Colony Optimization. , 2011, , 191-215.		64
77	Self-organisation and communication in groups of simulated and physical robots. Biological Cybernetics, 2006, 95, 213-231.	0.6	63
78	Open E-puck Range &#x00026; Bearing miniaturized board for local communication in swarm robotics. , 2009, , .		63
79	Artificial pheromone for path selection by a foraging swarm of robots. Biological Cybernetics, 2010, 103, 339-352.	0.6	63
80	The ${k}$ -Unanimity Rule for Self-Organized Decision-Making in Swarms of Robots. IEEE Transactions on Cybernetics, 2016, 46, 1175-1188.	6.2	62
81	Cooperative navigation in robotic swarms. Swarm Intelligence, 2014, 8, 1-33.	1.3	61
82	An Open Localization and Local Communication Embodied Sensor. Sensors, 2008, 8, 7545-7563.	2.1	55
83	Evolution of Solitary and Group Transport Behaviors for Autonomous Robots Capable of Self-Assembling. Adaptive Behavior, 2008, 16, 285-305.	1.1	54
84	A self-adaptive communication strategy for flocking in stationary and non-stationary environments. Natural Computing, 2014, 13, 225-245.	1.8	54
85	SWARMORPH: Multirobot Morphogenesis Using Directional Self-Assembly. IEEE Transactions on Robotics, 2009, 25, 738-743.	7.3	53
86	Estimation-based ant colony optimization and local search for the probabilistic traveling salesman problem. Swarm Intelligence, 2009, 3, 223-242.	1.3	53
87	Implicit parallelism in genetic algorithms. Artificial Intelligence, 1993, 61, 307-314.	3.9	52
88	Self-assembly strategies in a group of autonomous mobile robots. Autonomous Robots, 2010, 28, 439-455.	3.2	52
89	A quantitative micro–macro link for collective decisions: the shortest path discovery/selection example. Swarm Intelligence, 2015, 9, 75-102.	1.3	51
90	Incremental Robot Shaping. Connection Science, 1998, 10, 341-360.	1.8	49

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91	The SWARM-BOTS Project. Lecture Notes in Computer Science, 2005, , 31-44.	1.0	49
92	Evolving Self-Assembly in Autonomous Homogeneous Robots: Experiments with Two Physical Robots. Artificial Life, 2009, 15, 465-484.	1.0	49
93	Task partitioning in swarms of robots: an adaptive method for strategy selection. Swarm Intelligence, 2011, 5, 283-304.	1.3	49
94	An incremental ant colony algorithm with local search for continuous optimization. , 2011, , .		49
95	Property-Driven Design for Robot Swarms. ACM Transactions on Autonomous and Adaptive Systems, 2015, 9, 1-28.	0.4	48
96	Training Agents to Perform Sequential Behavior. Adaptive Behavior, 1994, 2, 247-275.	1.1	47
97	Algodesk: An experimental comparison of eight evolutionary heuristics applied to the Quadratic Assignment Problem. European Journal of Operational Research, 1995, 81, 188-204.	3.5	47
98	Alecsys and the AutonoMouse: Learning to control a real robot by distributed classifier systems. Machine Learning, 1995, 19, 209-240.	3.4	46
99	Metaphor-based metaheuristics, a call for action: the elephant in the room. Swarm Intelligence, 2022, 16, 1-6.	1.3	45
100	Collective decision-making based on social odometry. Neural Computing and Applications, 2010, 19, 807-823.	3.2	44
101	Grey Wolf, Firefly and Bat Algorithms: Three Widespread Algorithms that Do Not Contain Any Novelty. Lecture Notes in Computer Science, 2020, , 121-133.	1.0	44
102	SWARM-BOT: an experiment in swarm robotics. , 2005, , .		43
103	Self-Organized Discrimination of Resources. PLoS ONE, 2011, 6, e19888.	1.1	43
104	Mergeable nervous systems for robots. Nature Communications, 2017, 8, 439.	5.8	43
105	SWARMORPH-script: a language for arbitrary morphology generation in self-assembling robots. Swarm Intelligence, 2008, 2, 143-165.	1.3	42
106	Efficient Multi-foraging in Swarm Robotics. , 2007, , 696-705.		41
107	Bio-inspired construction with mobile robots and compliant pockets. Robotics and Autonomous Systems, 2015, 74, 340-350.	3.0	39
108	Heterogeneous particle swarm optimizers. , 2009, , .		38

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109	Particle swarm optimization. Scholarpedia Journal, 2008, 3, 1486.	0.3	38
110	Estimation-Based Local Search for Stochastic Combinatorial Optimization Using Delta Evaluations: A Case Study on the Probabilistic Traveling Salesman Problem. INFORMS Journal on Computing, 2008, 20, 644-658.	1.0	37
111	Toward the Formal Foundation of Ant Programming. Lecture Notes in Computer Science, 2002, , 188-201.	1.0	37
112	Collective motion dynamics of active solids and active crystals. New Journal of Physics, 2013, 15, 095011.	1.2	35
113	Kilogrid: a novel experimental environment for the Kilobot robot. Swarm Intelligence, 2018, 12, 245-266.	1.3	35
114	Evolution of Signaling in a Multi-Robot System: Categorization and Communication. Adaptive Behavior, 2008, 16, 5-26.	1.1	34
115	Analysing an Evolved Robotic Behaviour Using a Biological Model of Collegial Decision Making. Lecture Notes in Computer Science, 2012, , 381-390.	1.0	34
116	Solving the Homogeneous Probabilistic Traveling Salesman Problem by the ACO Metaheuristic. Lecture Notes in Computer Science, 2002, , 176-187.	1.0	33
117	How to assess and report the performance of a stochastic algorithm on a benchmark problem: mean or best result on a number of runs?. Optimization Letters, 2007, 1, 309-311.	0.9	33
118	Genetic and Non-Genetic Operators in ALECSYS. Evolutionary Computation, 1993, 1, 151-164.	2.3	32
119	Estimation-based metaheuristics for the probabilistic traveling salesman problem. Computers and Operations Research, 2010, 37, 1939-1951.	2.4	32
120	On the use of Bio-PEPA for modelling and analysing collective behaviours in swarm robotics. Swarm Intelligence, 2013, 7, 201-228.	1.3	32
121	Autonomous task partitioning in robot foraging: an approach based on cost estimation. Adaptive Behavior, 2013, 21, 118-136.	1.1	32
122	Investigating the effect of increasing robot group sizes on the human psychophysiological state in the context of human–swarm interaction. Swarm Intelligence, 2016, 10, 193-210.	1.3	32
123	Chain Based Path Formation in Swarms of Robots. Lecture Notes in Computer Science, 2006, , 120-131.	1.0	31
124	Self-Organizing and Scalable Shape Formation for a Swarm of Pico Satellites. , 2008, , .		30
125	The intelligent water drops algorithm: why it cannot be considered a novel algorithm. Swarm Intelligence, 2019, 13, 173-192.	1.3	30
126	Negotiation of Goal Direction for Cooperative Transport. Lecture Notes in Computer Science, 2006, , 191-202.	1.0	29

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127	Adaptive sample size and importance sampling in estimation-based local search for the probabilistic traveling salesman problem. European Journal of Operational Research, 2009, 199, 98-110.	3.5	29
128	Object transport by modular robots that self-assemble. , 0, , .		28
129	Transport of an object by six pre-attached robots interacting via physical links. , 0, , .		28
130	The TAM: abstracting complex tasks in swarm robotics research. Swarm Intelligence, 2015, 9, 1-22.	1.3	28
131	Secure and secret cooperation in robot swarms. Science Robotics, 2021, 6, .	9.9	28
132	Evolution, Self-organization and Swarm Robotics. Natural Computing Series, 2008, , 163-191.	2.2	27
133	Strategies for the Increased Robustness of Ant-Based Clustering. Lecture Notes in Computer Science, 2004, , 90-104.	1.0	26
134	Evolution of Direct Communication for a Swarm-bot Performing Hole Avoidance. Lecture Notes in Computer Science, 2004, , 130-141.	1.0	26
135	Flocking in Stationary and Non-stationary Environments: A Novel Communication Strategy for Heading Alignment. , 2010, , 331-340.		26
136	Urban Swarms: A new approach for autonomous waste management. , 2019, , .		24
137	SRoCS: Leveraging Stigmergy on a Multi-robot Construction Platform for Unknown Environments. Lecture Notes in Computer Science, 2014, , 158-169.	1.0	24
138	Deception in Ant Colony Optimization. Lecture Notes in Computer Science, 2004, , 118-129.	1.0	24
139	ALECSYS and the AutonoMouse: Learning to Control a Real Robot by Distributed Classifier Systems. Machine Learning, 1995, 19, 209-240.	3.4	23
140	Towards a theory of practice inÂmetaheuristics design: A machine learning perspective. RAIRO - Theoretical Informatics and Applications, 2006, 40, 353-369.	0.5	23
141	Estimation-based metaheuristics for the single vehicle routing problem with stochastic demands and customers. Computational Optimization and Applications, 2015, 61, 463-487.	0.9	23
142	PSO-X: A Component-Based Framework for the Automatic Design of Particle Swarm Optimization Algorithms. IEEE Transactions on Evolutionary Computation, 2022, 26, 402-416.	7.5	23
143	Cooperative Transport of Objects of Different Shapes and Sizes. Lecture Notes in Computer Science, 2004, , 106-117.	1.0	23
144	A detailed analysis of the population-based ant colony optimization algorithm for the TSP and the QAP. , 2011, , .		22

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145	Task Partitioning in a Robot Swarm: Object Retrieval as a Sequence of Subtasks with Direct Object Transfer. Artificial Life, 2014, 20, 291-317.	1.0	22
146	Autonomous Self-assembly in a Swarm-bot. , 2006, , 314-322.		22
147	Ant Algorithms Solve Difficult Optimization Problems. Lecture Notes in Computer Science, 2001, , 11-22.	1.0	22
148	Augmented reality for robots: Virtual sensing technology applied to a swarm of e-pucks. , 2015, , .		21
149	Group Transport of an Object to a Target That Only Some Group Members May Sense. Lecture Notes in Computer Science, 2004, , 852-861.	1.0	21
150	Efficiency and Task Allocation in Prey Retrieval. Lecture Notes in Computer Science, 2004, , 274-289.	1.0	20
151	Towards a Formal Verification Methodology for Collective Robotic Systems. Lecture Notes in Computer Science, 2012, , 54-70.	1.0	20
152	â€˜Feelingâ€™ the flow of time through sensorimotor co-ordination. Connection Science, 2004, 16, 301-324.	1.8	19
153	Self-assembly on Demand in a Group of Physical Autonomous Mobile Robots Navigating Rough Terrain. Lecture Notes in Computer Science, 2005, , 272-281.	1.0	19
154	Ant Colony Optimization: A Component-Wise Overview. , 2016, , 1-37.		19
155	Training and delayed reinforcements in Q-learning agents. , 1997, 12, 695-724.		18
156	Socially-Mediated Negotiation for Obstacle Avoidance in Collective Transport. Springer Tracts in Advanced Robotics, 2013, , 571-583.	0.3	18
157	A Comparison of Particle Swarm Optimization Algorithms Based on Run-Length Distributions. Lecture Notes in Computer Science, 2006, , 1-12.	1.0	18
158	Evolving Homogeneous Neurocontrollers for a Group of Heterogeneous Robots: Coordinated Motion, Cooperation, and Acoustic Communication. Artificial Life, 2008, 14, 157-178.	1.0	17
159	Costs and benefits of behavioral specialization. Robotics and Autonomous Systems, 2012, 60, 1408-1420.	3.0	17
160	Task Partitioning in Swarms of Robots: Reducing Performance Losses Due to Interference at Shared Resources. Lecture Notes in Electrical Engineering, 2011, , 217-228.	0.3	17
161	An analysis of why cuckoo search does not bring any novel ideas to optimization. Computers and Operations Research, 2022, 142, 105747.	2.4	17
162	Task partitioning in a robot swarm: a study on the effect of communication. Swarm Intelligence, 2013, 7, 173-199.	1.3	16

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163	Kilogrid: A modular virtualization environment for the Kilobot robot. , 2016, , .		16
164	A computational study on ant colony optimization for the traveling salesman problem with dynamic demands. Computers and Operations Research, 2021, 135, 105359.	2.4	16
165	Model-Based Search for Combinatorial Optimization: A Comparative Study. Lecture Notes in Computer Science, 2002, , 651-661.	1.0	16
166	Self-Organised Task Allocation in a Group of Robots. , 2007, , 389-398.		16
167	Analysis of the population-based ant colony optimization algorithm for the TSP and the QAP. , 2017, , .		15
168	Updating ACO Pheromones Using Stochastic Gradient Ascent and Cross-Entropy Methods. Lecture Notes in Computer Science, 2002, , 21-30.	1.0	15
169	Derivation of a Micro-Macro Link for Collective Decision-Making Systems. Lecture Notes in Computer Science, 2014, , 181-190.	1.0	15
170	Using transputers to increase speed and flexibility of genetics-based machine learning systems. Microprocessing and Microprogramming, 1992, 34, 147-152.	0.3	14
171	Evolving a Cooperative Transport Behavior for Two Simple Robots. Lecture Notes in Computer Science, 2004, , 305-316.	1.0	14
172	The ACO/F-Race Algorithm for Combinatorial Optimization Under Uncertainty. , 2007, , 189-203.		14
173	Ant Colony Optimization: A Component-Wise Overview. , 2018, , 371-407.		14
174	Towards a Cognitive Design Pattern for Collective Decision-Making. Lecture Notes in Computer Science, 2014, , 194-205.	1.0	14
175	Social Odometry: Imitation Based Odometry in Collective Robotics. International Journal of Advanced Robotic Systems, 2009, 6, 11.	1.3	13
176	Balancing exploitation of renewable resources by a robot swarm. Swarm Intelligence, 2018, 12, 307-326.	1.3	13
177	An open-source multi-robot construction system. HardwareX, 2019, 5, e00050.	1.1	13
178	Multi-armed Bandit Formulation of the Task Partitioning Problem in Swarm Robotics. Lecture Notes in Computer Science, 2012, , 109-120.	1.0	13
179	SWARMORPH: Morphogenesis with Self-Assembling Robots. Understanding Complex Systems, 2012, , 27-60.	0.3	13
180	Synchronization and fault detection in autonomous robots. , 2008, , .		12

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181	Structure and markings as stimuli for autonomous construction. , 2017, , .		12
182	Supervised morphogenesis: Exploiting morphological flexibility of self-assembling multirobot systems through cooperation with aerial robots. Robotics and Autonomous Systems, 2019, 112, 154-167.	3.0	12
183	Autonomous Construction with Compliant Building Material. Advances in Intelligent Systems and Computing, 2016, , 1371-1388.	0.5	12
184	Adaptation and Awareness in Robot Ensembles: Scenarios and Algorithms. Lecture Notes in Computer Science, 2015, , 471-494.	1.0	12
185	Spatially targeted communication and self-assembly. , 2012, , .		11
186	“Can ants inspire robots?” Self-organized decision making in robotic swarms. , 2012, , .		11
187	Gesturing at Subswarms: Towards Direct Human Control of Robot Swarms. Lecture Notes in Computer Science, 2014, , 390-403.	1.0	11
188	Why the Intelligent Water Drops Cannot Be Considered as a Novel Algorithm. Lecture Notes in Computer Science, 2018, , 302-314.	1.0	11
189	Incremental Evolution of Robot Controllers for a Highly Integrated Task. Lecture Notes in Computer Science, 2006, , 473-484.	1.0	11
190	Formation Control of UAVs and Mobile Robots Using Self-organized Communication Topologies. Lecture Notes in Computer Science, 2020, , 306-314.	1.0	11
191	Division of Labour in Self-organised Groups. Lecture Notes in Computer Science, 2008, , 426-436.	1.0	11
192	A Blockchain-Controlled Physical Robot Swarm Communicating via an Ad-Hoc Network. Lecture Notes in Computer Science, 2020, , 3-15.	1.0	11
193	Emergent collective decisions in a swarm of robots. , 0, , .		10
194	Performance benefits of self-assembly in a swarm-bot. , 2007, , .		10
195	Majority Rule with Differential Latency: An Absorbing Markov Chain to Model Consensus. Springer Proceedings in Complexity, 2013, , 651-658.	0.2	10
196	Swarm-Bots to the Rescue. Lecture Notes in Computer Science, 2011, , 165-172.	1.0	10
197	Automatic Synthesis of Fault Detection Modules for Mobile Robots. , 2007, , .		9
198	Spatially targeted communication in decentralized multirobot systems. Autonomous Robots, 2015, 38, 439-457.	3.2	9

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199	Simulating Multi-robot Construction in ARGoS. Lecture Notes in Computer Science, 2018, , 188-200.	1.0	9
200	Self-organized Task Partitioning in a Swarm of Robots. Lecture Notes in Computer Science, 2010, , 287-298.	1.0	9
201	Evolutionary Learning for Intelligent Automation: A Case Study. Intelligent Automation and Soft Computing, 1995, 1, 29-42.	1.6	8
202	Modeling Robot Swarms Using Integrals of Birth-Death Processes. ACM Transactions on Autonomous and Adaptive Systems, 2016, 11, 1-16.	0.4	8
203	New perspectives about default hierarchies formation in learning classifier systems. Lecture Notes in Computer Science, 1991, , 218-227.	1.0	8
204	Adaptive learning of a robot arm. Lecture Notes in Computer Science, 1994, , 180-194.	1.0	8
205	From Solitary to Collective Behaviours: Decision Making and Cooperation. , 2007, , 575-584.		8
206	Analysing Robot Swarm Decision-Making with Bio-PEPA. Lecture Notes in Computer Science, 2012, , 25-36.	1.0	8
207	PrÃ©cis of Robot Shaping: An Experiment in Behavior Engineering. Adaptive Behavior, 1997, 5, 391-405.	1.1	7
208	ARGoS: A modular, multi-engine simulator for heterogeneous swarm robotics. , 2011, , .		7
209	Language Evolution in Swarm Robotics: A Perspective. Frontiers in Robotics and AI, 2020, 7, 12.	2.0	7
210	Autonomous Reconfiguration in a Self-assembling Multi-robot System. Lecture Notes in Computer Science, 2008, , 259-266.	1.0	7
211	Construction Task Allocation Through the Collective Perception of a Dynamic Environment. Lecture Notes in Computer Science, 2020, , 82-95.	1.0	7
212	Enhanced directional self-assembly based on active recruitment and guidance. , 2011, , .		6
213	An ACO algorithm benchmarked on the BBOB noiseless function testbed. , 2012, , .		6
214	Incremental Local Search in Ant Colony Optimization: Why It Fails for the Quadratic Assignment Problem. Lecture Notes in Computer Science, 2006, , 156-166.	1.0	6
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