

Marco Dorigo

List of Publications by Citations

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259
papers

34,663
citations

60
h-index

185
g-index

270
ext. papers

41,343
ext. citations

3.1
avg. IF

7.56
L-index

#	Paper	IF	Citations
259	Ant system: optimization by a colony of cooperating agents. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1996 , 26, 29-41		6150
258	Ant colony system: a cooperative learning approach to the traveling salesman problem. <i>IEEE Transactions on Evolutionary Computation</i> , 1997 , 1, 53-66	15.6	4401
257	Swarm Intelligence 1999 ,		3062
256	Ant colony optimization. <i>IEEE Computational Intelligence Magazine</i> , 2006 , 1, 28-39	5.6	2001
255	Ant Colony Optimization 2004 ,		1761
254	Ant algorithms for discrete optimization. <i>Artificial Life</i> , 1999 , 5, 137-72	1.4	1706
253	Ant colony optimization theory: A survey. <i>Theoretical Computer Science</i> , 2005 , 344, 243-278	1.1	1400
252	Ant colonies for the travelling salesman problem. <i>BioSystems</i> , 1997 , 43, 73-81	1.9	1175
251	Ant colony optimization for continuous domains. <i>European Journal of Operational Research</i> , 2008 , 185, 1155-1173	5.6	880
250	Swarm robotics: a review from the swarm engineering perspective. <i>Swarm Intelligence</i> , 2013 , 7, 1-41	3	782
249	Inspiration for optimization from social insect behaviour. <i>Nature</i> , 2000 , 406, 39-42	50.4	637
248	Ant Colony Optimization. <i>IEEE Computational Intelligence Magazine</i> , 2006 , 1, 28-39	5.6	574
247	Ant algorithms and stigmergy. <i>Future Generation Computer Systems</i> , 2000 , 16, 851-871	7.5	506
246	A survey on metaheuristics for stochastic combinatorial optimization. <i>Natural Computing</i> , 2009 , 8, 239-287		398
245	ARGoS: a modular, parallel, multi-engine simulator for multi-robot systems. <i>Swarm Intelligence</i> , 2012 , 6, 271-295	3	278
244	A short convergence proof for a class of ant colony optimization algorithms. <i>IEEE Transactions on Evolutionary Computation</i> , 2002 , 6, 358-365	15.6	248
243	Frankenstein's PSO: A Composite Particle Swarm Optimization Algorithm. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 1120-1132	15.6	246

242	An Ant Colony System Hybridized with a New Local Search for the Sequential Ordering Problem. <i>INFORMS Journal on Computing</i> , 2000 , 12, 237-255	2.4	240
241	The hyper-cube framework for ant colony optimization. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2004 , 34, 1161-72		235
240	Swarm-Bot: A New Distributed Robotic Concept. <i>Autonomous Robots</i> , 2004 , 17, 193-221	3	217
239	The Ant Colony Optimization Metaheuristic: Algorithms, Applications, and Advances. <i>Profiles in Operations Research</i> , 2003 , 250-285	1	217
238	Ant-Q: A Reinforcement Learning approach to the traveling salesman problem 1995 , 252-260		206
237	Autonomous Self-Assembly in Swarm-Bots 2006 , 22, 1115-1130		202
236	Evolving Self-Organizing Behaviors for a Swarm-Bot. <i>Autonomous Robots</i> , 2004 , 17, 223-245	3	200
235	Ant Colony Optimization: Overview and Recent Advances. <i>Profiles in Operations Research</i> , 2010 , 227-263		198
234	Swarmanoid: A Novel Concept for the Study of Heterogeneous Robotic Swarms. <i>IEEE Robotics and Automation Magazine</i> , 2013 , 20, 60-71	3.4	183
233	Ant Colony Optimization: Overview and Recent Advances. <i>Profiles in Operations Research</i> , 2019 , 311-351		155
232	Ant Colony Optimization for Mixed-Variable Optimization Problems. <i>IEEE Transactions on Evolutionary Computation</i> , 2014 , 18, 503-518	15.6	148
231	Model-Based Search for Combinatorial Optimization: A Critical Survey. <i>Annals of Operations Research</i> , 2004 , 131, 373-395	3.2	141
230	Ant-based clustering and topographic mapping. <i>Artificial Life</i> , 2006 , 12, 35-61	1.4	133
229	Division of labor in a group of robots inspired by ants' foraging behavior. <i>ACM Transactions on Autonomous and Adaptive Systems</i> , 2006 , 1, 4-25	1.2	130
228	. <i>IEEE Robotics and Automation Magazine</i> , 2005 , 12, 21-28	3.4	123
227	Robot shaping: developing autonomous agents through learning. <i>Artificial Intelligence</i> , 1994 , 71, 321-376	9.6	117
226	Ant colony optimization. <i>Scholarpedia Journal</i> , 2007 , 2, 1461	1.5	105
225	Path formation in a robot swarm. <i>Swarm Intelligence</i> , 2008 , 2, 1-23	3	97

224	Swarm intelligence. <i>Scholarpedia Journal</i> , 2007 , 2, 1462	1.5	93
223	From Fireflies to Fault-Tolerant Swarms of Robots. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 754-766	15.6	92
222	Teamwork in Self-Organized Robot Colonies. <i>IEEE Transactions on Evolutionary Computation</i> , 2009 , 13, 695-711	15.6	90
221	. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1993 , 23, 141-154		90
220	Self-organized flocking with a mobile robot swarm: a novel motion control method. <i>Adaptive Behavior</i> , 2012 , 20, 460-477	1.1	89
219	Self-Assembly at the Macroscopic Scale. <i>Proceedings of the IEEE</i> , 2008 , 96, 1490-1508	14.3	87
218	Swarm robotics. <i>Scholarpedia Journal</i> , 2014 , 9, 1463	1.5	86
217	A unified ant colony optimization algorithm for continuous optimization. <i>European Journal of Operational Research</i> , 2014 , 234, 597-609	5.6	84
216	The Best-of-n Problem in Robot Swarms: Formalization, State of the Art, and Novel Perspectives. <i>Frontiers in Robotics and AI</i> , 2017 , 4,	2.8	83
215	Incremental social learning in particle swarms. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2011 , 41, 368-84		79
214	A Design Pattern for Decentralised Decision Making. <i>PLoS ONE</i> , 2015 , 10, e0140950	3.7	78
213	Collective decision with 100 Kilobots: speed versus accuracy in binary discrimination problems. <i>Autonomous Agents and Multi-Agent Systems</i> , 2016 , 30, 553-580	2	77
212	Towards group transport by swarms of robots. <i>International Journal of Bio-Inspired Computation</i> , 2009 , 1, 1	2.9	77
211	Ant Colony Optimization for the Total Weighted Tardiness Problem. <i>Lecture Notes in Computer Science</i> , 2000 , 611-620	0.9	73
210	Self-organized coordinated motion in groups of physically connected robots. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 2007 , 37, 224-39		71
209	Majority-rule opinion dynamics with differential latency: a mechanism for self-organized collective decision-making. <i>Swarm Intelligence</i> , 2011 , 5, 305-327	3	69
208	Cooperative hole avoidance in a swarm-bot. <i>Robotics and Autonomous Systems</i> , 2006 , 54, 97-103	3.5	67
207	Ant colony optimization and stochastic gradient descent. <i>Artificial Life</i> , 2002 , 8, 103-21	1.4	67

206	Self-organized task allocation to sequentially interdependent tasks in swarm robotics. <i>Autonomous Agents and Multi-Agent Systems</i> , 2014 , 28, 101-125	2	64
205	Cooperation through self-assembly in multi-robot systems. <i>ACM Transactions on Autonomous and Adaptive Systems</i> , 2006 , 1, 115-150	1.2	64
204	Elasticity-based mechanism for the collective motion of self-propelled particles with springlike interactions: a model system for natural and artificial swarms. <i>Physical Review Letters</i> , 2013 , 111, 268302	7.4	62
203	Evolution of Self-Organized Task Specialization in Robot Swarms. <i>PLoS Computational Biology</i> , 2015 , 11, e1004273	5	62
202	A study of some properties of Ant-Q. <i>Lecture Notes in Computer Science</i> , 1996 , 656-665	0.9	61
201	Morphology control in a multirobot system. <i>IEEE Robotics and Automation Magazine</i> , 2007 , 14, 18-25	3.4	57
200	Search bias in ant colony optimization: on the role of competition-balanced systems. <i>IEEE Transactions on Evolutionary Computation</i> , 2005 , 9, 159-174	15.6	55
199	On the Invariance of Ant Colony Optimization. <i>IEEE Transactions on Evolutionary Computation</i> , 2007 , 11, 732-742	15.6	54
198	A Comparison of the Performance of Different Metaheuristics on the Timetabling Problem. <i>Lecture Notes in Computer Science</i> , 2003 , 329-351	0.9	54
197	Evolving Aggregation Behaviors in a Swarm of Robots. <i>Lecture Notes in Computer Science</i> , 2003 , 865-874	0.9	54
196	What Is a Learning Classifier System?. <i>Lecture Notes in Computer Science</i> , 2000 , 3-32	0.9	53
195	Ant colonies for adaptive routing in packet-switched communications networks. <i>Lecture Notes in Computer Science</i> , 1998 , 673-682	0.9	52
194	Fault detection in autonomous robots based on fault injection and learning. <i>Autonomous Robots</i> , 2008 , 24, 49-67	3	52
193	An analysis of communication policies for homogeneous multi-colony ACO algorithms. <i>Information Sciences</i> , 2010 , 180, 2390-2404	7.7	50
192	Cooperative navigation in robotic swarms. <i>Swarm Intelligence</i> , 2014 , 8, 1-33	3	49
191	Self-organisation and communication in groups of simulated and physical robots. <i>Biological Cybernetics</i> , 2006 , 95, 213-31	2.8	49
190	Open E-puck Range & Bearing miniaturized board for local communication in swarm robotics 2009 ,		48
189	ARGoS: A modular, multi-engine simulator for heterogeneous swarm robotics 2011 ,		48

188	Artificial pheromone for path selection by a foraging swarm of robots. <i>Biological Cybernetics</i> , 2010 , 103, 339-52	2.8	46
187	Parallel Ant Colony Optimization for the Traveling Salesman Problem. <i>Lecture Notes in Computer Science</i> , 2006 , 224-234	0.9	46
186	Behavior analysis and training-a methodology for behavior engineering. <i>IEEE Transactions on Systems, Man, and Cybernetics</i> , 1996 , 26, 365-80		46
185	An Open Localization and Local Communication Embodied Sensor. <i>Sensors</i> , 2008 , 8, 7545-7563	3.8	45
184	An Ant Colony Optimization Approach to the Probabilistic Traveling Salesman Problem. <i>Lecture Notes in Computer Science</i> , 2002 , 883-892	0.9	45
183	Metaheuristics for High School Timetabling. <i>Computational Optimization and Applications</i> , 1998 , 9, 275-292		44
182	Collective Perception of Environmental Features in a Robot Swarm. <i>Lecture Notes in Computer Science</i> , 2016 , 65-76	0.9	44
181	The k-Unanimity Rule for Self-Organized Decision-Making in Swarms of Robots. <i>IEEE Transactions on Cybernetics</i> , 2016 , 46, 1175-88	10.2	43
180	Parameter Adaptation in Ant Colony Optimization 2011 , 191-215		42
179	Reflections on the future of swarm robotics. <i>Science Robotics</i> , 2020 , 5,	18.6	41
178	A self-adaptive communication strategy for flocking in stationary and non-stationary environments. <i>Natural Computing</i> , 2014 , 13, 225-245	1.3	40
177	SWARMORPH: Multirobot Morphogenesis Using Directional Self-Assembly. <i>IEEE Transactions on Robotics</i> , 2009 , 25, 738-743	6.5	39
176	Estimation-based ant colony optimization and local search for the probabilistic traveling salesman problem. <i>Swarm Intelligence</i> , 2009 , 3, 223-242	3	39
175	A quantitative micro/macro link for collective decisions: the shortest path discovery/selection example. <i>Swarm Intelligence</i> , 2015 , 9, 75-102	3	38
174	Algodesk: An experimental comparison of eight evolutionary heuristics applied to the Quadratic Assignment Problem. <i>European Journal of Operational Research</i> , 1995 , 81, 188-204	5.6	38
173	Implicit parallelism in genetic algorithms. <i>Artificial Intelligence</i> , 1993 , 61, 307-314	3.6	38
172	Task partitioning in swarms of robots: an adaptive method for strategy selection. <i>Swarm Intelligence</i> , 2011 , 5, 283-304	3	37
171	Property-Driven Design for Robot Swarms. <i>ACM Transactions on Autonomous and Adaptive Systems</i> , 2015 , 9, 1-28	1.2	36

170	Evolving self-assembly in autonomous homogeneous robots: experiments with two physical robots. <i>Artificial Life</i> , 2009 , 15, 465-84	1.4	36
169	Collective decision-making based on social odometry. <i>Neural Computing and Applications</i> , 2010 , 19, 807-823	1.2	36
168	Evolution of Solitary and Group Transport Behaviors for Autonomous Robots Capable of Self-Assembling. <i>Adaptive Behavior</i> , 2008 , 16, 285-305	1.1	36
167	Self-organized discrimination of resources. <i>PLoS ONE</i> , 2011 , 6, e19888	3.7	35
166	Self-assembly strategies in a group of autonomous mobile robots. <i>Autonomous Robots</i> , 2010 , 28, 439-455		35
165	The SWARM-BOTS Project. <i>Lecture Notes in Computer Science</i> , 2005 , 31-44	0.9	35
164	SWARMORPH-script: a language for arbitrary morphology generation in self-assembling robots. <i>Swarm Intelligence</i> , 2008 , 2, 143-165	3	34
163	An incremental ant colony algorithm with local search for continuous optimization 2011 ,		33
162	Incremental Robot Shaping. <i>Connection Science</i> , 1998 , 10, 341-360	2.8	33
161	Alecsys and the AutonoMouse: Learning to control a real robot by distributed classifier systems. <i>Machine Learning</i> , 1995 , 19, 209-240	4	33
160	SWARM-BOT: an experiment in swarm robotics 2005 ,		32
159	Training Agents to Perform Sequential Behavior. <i>Adaptive Behavior</i> , 1994 , 2, 247-275	1.1	32
158	Ant Colony Optimization 2011 ,		31
157	How to assess and report the performance of a stochastic algorithm on a benchmark problem: mean or best result on a number of runs?. <i>Optimization Letters</i> , 2007 , 1, 309-311	1.1	31
156	Particle swarm optimization. <i>Scholarpedia Journal</i> , 2008 , 3, 1486	1.5	31
155	Heterogeneous particle swarm optimizers 2009 ,		29
154	Design of Iterated Local Search Algorithms. <i>Lecture Notes in Computer Science</i> , 2001 , 441-451	0.9	29
153	Genetic and Non-Genetic Operators in ALECSYS. <i>Evolutionary Computation</i> , 1993 , 1, 151-164	4.3	28

152	Efficient Multi-foraging in Swarm Robotics 2007 , 696-705		28
151	Collective motion dynamics of active solids and active crystals. <i>New Journal of Physics</i> , 2013 , 15, 095011	2.9	27
150	Estimation-based metaheuristics for the probabilistic traveling salesman problem. <i>Computers and Operations Research</i> , 2010 , 37, 1939-1951	4.6	27
149	Evolution of Signaling in a Multi-Robot System: Categorization and Communication. <i>Adaptive Behavior</i> , 2008 , 16, 5-26	1.1	27
148	Estimation-Based Local Search for Stochastic Combinatorial Optimization Using Delta Evaluations: A Case Study on the Probabilistic Traveling Salesman Problem. <i>INFORMS Journal on Computing</i> , 2008 , 20, 644-658	2.4	27
147	Analysing an Evolved Robotic Behaviour Using a Biological Model of Collegial Decision Making. <i>Lecture Notes in Computer Science</i> , 2012 , 381-390	0.9	27
146	Autonomous task partitioning in robot foraging: an approach based on cost estimation. <i>Adaptive Behavior</i> , 2013 , 21, 118-136	1.1	26
145	Mergeable nervous systems for robots. <i>Nature Communications</i> , 2017 , 8, 439	17.4	26
144	Swarm Robotics: Past, Present, and Future [Point of View]. <i>Proceedings of the IEEE</i> , 2021 , 109, 1152-1165	14.3	26
143	Kilogrid: a novel experimental environment for the Kilobot robot. <i>Swarm Intelligence</i> , 2018 , 12, 245-266	3	25
142	Bio-inspired construction with mobile robots and compliant pockets. <i>Robotics and Autonomous Systems</i> , 2015 , 74, 340-350	3.5	24
141	Strategies for the Increased Robustness of Ant-Based Clustering. <i>Lecture Notes in Computer Science</i> , 2004 , 90-104	0.9	24
140	Blockchain Technology Secures Robot Swarms: A Comparison of Consensus Protocols and Their Resilience to Byzantine Robots. <i>Frontiers in Robotics and AI</i> , 2020 , 7, 54	2.8	23
139	Adaptive sample size and importance sampling in estimation-based local search for the probabilistic traveling salesman problem. <i>European Journal of Operational Research</i> , 2009 , 199, 98-110	5.6	23
138	Negotiation of Goal Direction for Cooperative Transport. <i>Lecture Notes in Computer Science</i> , 2006 , 191-202	2	23
137	Toward the Formal Foundation of Ant Programming. <i>Lecture Notes in Computer Science</i> , 2002 , 188-201	0.9	23
136	Solving the Homogeneous Probabilistic Traveling Salesman Problem by the ACO Metaheuristic. <i>Lecture Notes in Computer Science</i> , 2002 , 176-187	0.9	22
135	Chain Based Path Formation in Swarms of Robots. <i>Lecture Notes in Computer Science</i> , 2006 , 120-131	0.9	22

134	The TAM: abstracting complex tasks in swarm robotics research. <i>Swarm Intelligence</i> , 2015 , 9, 1-22	3	21
133	On the use of Bio-PEPA for modelling and analysing collective behaviours in swarm robotics. <i>Swarm Intelligence</i> , 2013 , 7, 201-228	3	21
132	Investigating the effect of increasing robot group sizes on the human psychophysiological state in the context of human-swarm interaction. <i>Swarm Intelligence</i> , 2016 , 10, 193-210	3	20
131	Towards a theory of practice in metaheuristics design: A machine learning perspective. <i>RAIRO - Theoretical Informatics and Applications</i> , 2006 , 40, 353-369	0.5	20
130	A detailed analysis of the population-based ant colony optimization algorithm for the TSP and the QAP 2011 ,		19
129	Estimation-based metaheuristics for the single vehicle routing problem with stochastic demands and customers. <i>Computational Optimization and Applications</i> , 2015 , 61, 463-487	1.4	17
128	Feeling the flow of time through sensorimotor co-ordination. <i>Connection Science</i> , 2004 , 16, 301-324	2.8	17
127	SROCS: Leveraging Stigmergy on a Multi-robot Construction Platform for Unknown Environments. <i>Lecture Notes in Computer Science</i> , 2014 , 158-169	0.9	17
126	A Concise Overview of Applications of Ant Colony Optimization 2011 ,		16
125	Deception in Ant Colony Optimization. <i>Lecture Notes in Computer Science</i> , 2004 , 118-129	0.9	16
124	Evolution, Self-organization and Swarm Robotics. <i>Natural Computing Series</i> , 2008 , 163-191	2.5	16
123	Flocking in Stationary and Non-stationary Environments: A Novel Communication Strategy for Heading Alignment 2010 , 331-340		16
122	Self-Organizing and Scalable Shape Formation for a Swarm of Pico Satellites 2008 ,		15
121	Evolving homogeneous neurocontrollers for a group of heterogeneous robots: coordinated motion, cooperation, and acoustic communication. <i>Artificial Life</i> , 2008 , 14, 157-78	1.4	15
120	Transport of an object by six pre-attached robots interacting via physical links		15
119	Ant Colony Optimization: A Component-Wise Overview 2016 , 1-37		15
118	Autonomous Self-assembly in a Swarm-bot 2006 , 314-322		15
117	Task partitioning in a robot swarm: object retrieval as a sequence of subtasks with direct object transfer. <i>Artificial Life</i> , 2014 , 20, 291-317	1.4	14

116	Grey Wolf, Firefly and Bat Algorithms: Three Widespread Algorithms that Do Not Contain Any Novelty. <i>Lecture Notes in Computer Science</i> , 2020 , 121-133	0.9	14
115	Cooperative Transport of Objects of Different Shapes and Sizes. <i>Lecture Notes in Computer Science</i> , 2004 , 106-117	0.9	14
114	Evolution of Direct Communication for a Swarm-bot Performing Hole Avoidance. <i>Lecture Notes in Computer Science</i> , 2004 , 130-141	0.9	14
113	Towards a Formal Verification Methodology for Collective Robotic Systems. <i>Lecture Notes in Computer Science</i> , 2012 , 54-70	0.9	14
112	Self-assembly on Demand in a Group of Physical Autonomous Mobile Robots Navigating Rough Terrain. <i>Lecture Notes in Computer Science</i> , 2005 , 272-281	0.9	14
111	A Comparison of Particle Swarm Optimization Algorithms Based on Run-Length Distributions. <i>Lecture Notes in Computer Science</i> , 2006 , 1-12	0.9	14
110	2015 ,		13
109	Task partitioning in a robot swarm: a study on the effect of communication. <i>Swarm Intelligence</i> , 2013 , 7, 173-199	3	13
108	Object transport by modular robots that self-assemble		13
107	Efficiency and Task Allocation in Prey Retrieval. <i>Lecture Notes in Computer Science</i> , 2004 , 274-289	0.9	13
106	Ant Algorithms Solve Difficult Optimization Problems. <i>Lecture Notes in Computer Science</i> , 2001 , 11-22	0.9	13
105	Urban Swarms: A new approach for autonomous waste management 2019 ,		12
104	Costs and benefits of behavioral specialization. <i>Robotics and Autonomous Systems</i> , 2012 , 60, 1408-1420	3.5	12
103	Adaptation and Awareness in Robot Ensembles: Scenarios and Algorithms. <i>Lecture Notes in Computer Science</i> , 2015 , 471-494	0.9	12
102	Group Transport of an Object to a Target That Only Some Group Members May Sense. <i>Lecture Notes in Computer Science</i> , 2004 , 852-861	0.9	12
101	Task Partitioning in Swarms of Robots: Reducing Performance Losses Due to Interference at Shared Resources. <i>Lecture Notes in Electrical Engineering</i> , 2011 , 217-228	0.2	12
100	Kilogrid: A modular virtualization environment for the Kilobot robot 2016 ,		12
99	Evolving a Cooperative Transport Behavior for Two Simple Robots. <i>Lecture Notes in Computer Science</i> , 2004 , 305-316	0.9	11

98	Using transputers to increase speed and flexibility of genetics-based machine learning systems. <i>Microprocessing and Microprogramming</i> , 1992 , 34, 147-152		11
97	Towards a Cognitive Design Pattern for Collective Decision-Making. <i>Lecture Notes in Computer Science</i> , 2014 , 194-205	0.9	11
96	Derivation of a Micro-Macro Link for Collective Decision-Making Systems. <i>Lecture Notes in Computer Science</i> , 2014 , 181-190	0.9	11
95	The intelligent water drops algorithm: why it cannot be considered a novel algorithm. <i>Swarm Intelligence</i> , 2019 , 13, 173-192	3	10
94	Socially-Mediated Negotiation for Obstacle Avoidance in Collective Transport. <i>Springer Tracts in Advanced Robotics</i> , 2013 , 571-583	0.5	10
93	SWARMORPH: Morphogenesis with Self-Assembling Robots. <i>Understanding Complex Systems</i> , 2012 , 27-60.4		10
92	Updating ACO Pheromones Using Stochastic Gradient Ascent and Cross-Entropy Methods. <i>Lecture Notes in Computer Science</i> , 2002 , 21-30	0.9	10
91	Social Odometry: Imitation Based Odometry in Collective Robotics. <i>International Journal of Advanced Robotic Systems</i> , 2009 , 6, 11	1.4	9
90	Performance benefits of self-assembly in a swarm-bot 2007 ,		9
89	Autonomous Construction with Compliant Building Material. <i>Advances in Intelligent Systems and Computing</i> , 2016 , 1371-1388	0.4	9
88	Multi-armed Bandit Formulation of the Task Partitioning Problem in Swarm Robotics. <i>Lecture Notes in Computer Science</i> , 2012 , 109-120	0.9	9
87	Incremental Evolution of Robot Controllers for a Highly Integrated Task. <i>Lecture Notes in Computer Science</i> , 2006 , 473-484	0.9	9
86	Model-Based Search for Combinatorial Optimization: A Comparative Study. <i>Lecture Notes in Computer Science</i> , 2002 , 651-661	0.9	9
85	Balancing exploitation of renewable resources by a robot swarm. <i>Swarm Intelligence</i> , 2018 , 12, 307-326	3	8
84	Spatially targeted communication in decentralized multirobot systems. <i>Autonomous Robots</i> , 2015 , 38, 439-457	3	8
83	Spatially targeted communication and self-assembly 2012 ,		8
82	Training and delayed reinforcements in Q-learning agents 1997 , 12, 695-724		8
81	The ACO/F-Race Algorithm for Combinatorial Optimization Under Uncertainty 2007 , 189-203		8

80	Emergent collective decisions in a swarm of robots		8
79	Analysing Robot Swarm Decision-Making with Bio-PEPA. <i>Lecture Notes in Computer Science</i> , 2012 , 25-36	0.9	8
78	Self-Organised Task Allocation in a Group of Robots 2007 , 389-398		8
77	An open-source multi-robot construction system. <i>HardwareX</i> , 2019 , 5, e00050	2.7	7
76	Analysis of the population-based ant colony optimization algorithm for the TSP and the QAP 2017 ,		7
75	Can ants inspire robots? Self-organized decision making in robotic swarms 2012 ,		7
74	ARGoS: A modular, multi-engine simulator for heterogeneous swarm robotics 2011 ,		7
73	Automatic Synthesis of Fault Detection Modules for Mobile Robots 2007 ,		7
72	Division of Labour in Self-organised Groups. <i>Lecture Notes in Computer Science</i> , 2008 , 426-436	0.9	7
71	Swarm-Bots to the Rescue. <i>Lecture Notes in Computer Science</i> , 2011 , 165-172	0.9	7
70	Modeling Robot Swarms Using Integrals of Birth-Death Processes. <i>ACM Transactions on Autonomous and Adaptive Systems</i> , 2016 , 11, 1-16	1.2	7
69	Structure and markings as stimuli for autonomous construction 2017 ,		6
68	Gesturing at Subswarms: Towards Direct Human Control of Robot Swarms. <i>Lecture Notes in Computer Science</i> , 2014 , 390-403	0.9	6
67	Synchronization and fault detection in autonomous robots 2008 ,		6
66	Evolutionary Learning for Intelligent Automation: A Case Study. <i>Intelligent Automation and Soft Computing</i> , 1995 , 1, 29-42	2.6	6
65	Supervised morphogenesis: Exploiting morphological flexibility of self-assembling multirobot systems through cooperation with aerial robots. <i>Robotics and Autonomous Systems</i> , 2019 , 112, 154-167	3.5	6
64	Ant Colony Optimization: A Component-Wise Overview 2018 , 371-407		6
63	Adaptive learning of a robot arm. <i>Lecture Notes in Computer Science</i> , 1994 , 180-194	0.9	6

62	Yield prediction in parallel homogeneous assembly. <i>Soft Matter</i> , 2017 , 13, 7595-7608	3.6	5
61	Enhanced directional self-assembly based on active recruitment and guidance 2011 ,		5
60	Formation Control of UAVs and Mobile Robots Using Self-organized Communication Topologies. <i>Lecture Notes in Computer Science</i> , 2020 , 306-314	0.9	5
59	Majority Rule with Differential Latency: An Absorbing Markov Chain to Model Consensus. <i>Springer Proceedings in Complexity</i> , 2013 , 651-658	0.3	5
58	From Solitary to Collective Behaviours: Decision Making and Cooperation 2007 , 575-584		5
57	Self-organized Task Partitioning in a Swarm of Robots. <i>Lecture Notes in Computer Science</i> , 2010 , 287-298	0.9	5
56	Simulating Multi-robot Construction in ARGoS. <i>Lecture Notes in Computer Science</i> , 2018 , 188-200	0.9	5
55	New perspectives about default hierarchies formation in learning classifier systems. <i>Lecture Notes in Computer Science</i> , 1991 , 218-227	0.9	5
54	An ACO algorithm benchmarked on the BBOB noiseless function testbed 2012 ,		4
53	Praxis of Robot Shaping: An Experiment in Behavior Engineering. <i>Adaptive Behavior</i> , 1997 , 5, 391-405	1.1	4
52	Metaphor-based metaheuristics, a call for action: the elephant in the room. <i>Swarm Intelligence</i> , 1	3	4
51	Evolved Homogeneous Neuro-controllers for Robots with Different Sensory Capabilities: Coordinated Motion and Cooperation. <i>Lecture Notes in Computer Science</i> , 2006 , 679-690	0.9	4
50	Evolution of Signalling in a Group of Robots Controlled by Dynamic Neural Networks 2006 , 173-188		4
49	Social Odometry in Populations of Autonomous Robots. <i>Lecture Notes in Computer Science</i> , 2008 , 371-378	0.9	4
48	Secure and secret cooperation in robot swarms. <i>Science Robotics</i> , 2021 , 6,	18.6	4
47	A computational study on ant colony optimization for the traveling salesman problem with dynamic demands. <i>Computers and Operations Research</i> , 2021 , 135, 105359	4.6	4
46	Incremental Local Search in Ant Colony Optimization: Why It Fails for the Quadratic Assignment Problem. <i>Lecture Notes in Computer Science</i> , 2006 , 156-166	0.9	4
45	Self-assembly and morphology control in a swarm-bot 2007 ,		3

44	An analysis of why cuckoo search does not bring any novel ideas to optimization. <i>Computers and Operations Research</i> , 2022 , 142, 105747	4.6	3
43	Construction Task Allocation Through the Collective Perception of a Dynamic Environment. <i>Lecture Notes in Computer Science</i> , 2020 , 82-95	0.9	3
42	A Blockchain-Controlled Physical Robot Swarm Communicating via an Ad-Hoc Network. <i>Lecture Notes in Computer Science</i> , 2020 , 3-15	0.9	3
41	Autonomous Reconfiguration in a Self-assembling Multi-robot System. <i>Lecture Notes in Computer Science</i> , 2008 , 259-266	0.9	3
40	Coordinating Heterogeneous Swarms through Minimal Communication among Homogeneous Sub-swarms. <i>Lecture Notes in Computer Science</i> , 2010 , 558-559	0.9	3
39	Costs and Benefits of Behavioral Specialization. <i>Lecture Notes in Computer Science</i> , 2011 , 90-101	0.9	3
38	Opinion Dynamics for Decentralized Decision-Making in a Robot Swarm. <i>Lecture Notes in Computer Science</i> , 2010 , 251-262	0.9	3
37	Hybrid Control of Swarms for Resource Selection. <i>Lecture Notes in Computer Science</i> , 2018 , 57-70	0.9	3
36	Why the Intelligent Water Drops Cannot Be Considered as a Novel Algorithm. <i>Lecture Notes in Computer Science</i> , 2018 , 302-314	0.9	3
35	PSO-X: A Component-Based Framework for the Automatic Design of Particle Swarm Optimization Algorithms. <i>IEEE Transactions on Evolutionary Computation</i> , 2021 , 1-1	15.6	3
34	On the Invariance of Ant System. <i>Lecture Notes in Computer Science</i> , 2006 , 215-223	0.9	3
33	Language Evolution in Swarm Robotics: A Perspective. <i>Frontiers in Robotics and AI</i> , 2020 , 7, 12	2.8	2
32	zePPeLIN: Distributed Path Planning Using an Overhead Camera Network. <i>International Journal of Advanced Robotic Systems</i> , 2014 , 11, 119	1.4	2
31	Incremental Social Learning Applied to a Decentralized Decision-Making Mechanism: Collective Learning Made Faster 2010 ,		2
30	Exogenous Fault Detection in a Collective Robotic Task 2007 , 555-564		2
29	Information Aggregation Mechanisms in Social Odometry		2
28	HuGoS: A Multi-user Virtual Environment for Studying Human-Human Swarm Intelligence. <i>Lecture Notes in Computer Science</i> , 2020 , 161-175	0.9	2
27	Cooperation in a Heterogeneous Robot Swarm through Spatially Targeted Communication. <i>Lecture Notes in Computer Science</i> , 2010 , 400-407	0.9	2

26	Kinetics of orbitally shaken particles constrained to two dimensions. <i>Physical Review E</i> , 2018 , 98,	2.4	2
25	Evolving Neural Mechanisms for an Iterated Discrimination Task: A Robot Based Model. <i>Lecture Notes in Computer Science</i> , 2005 , 231-240	0.9	2
24	ANTS 2014 special issue: Editorial. <i>Swarm Intelligence</i> , 2015 , 9, 71-73	3	1
23	Human Responses to Stimuli Produced by Robot Swarms - the Effect of the Reality-Gap on Psychological State. <i>Springer Proceedings in Advanced Robotics</i> , 2018 , 531-543	0.6	1
22	ANTS 2010 special issue. <i>Swarm Intelligence</i> , 2011 , 5, 143-147	3	1
21	Engineering self-coordinating software intensive systems 2010 ,		1
20	Reply to Dario Floreano's "Engineering Adaptive Behavior". <i>Adaptive Behavior</i> , 1997 , 5, 417-420	1.1	1
19	Multi-robot Coverage Using Self-organized Networks for Central Coordination. <i>Lecture Notes in Computer Science</i> , 2020 , 216-228	0.9	1
18	A Mechanism to Self-Assemble Patterns with Autonomous Robots 2007 , 716-725		1
17	Enhancing the Cooperative Transport of Multiple Objects. <i>Lecture Notes in Computer Science</i> , 2008 , 307-314	0.9	1
16	Lattice Formation in Space for a Swarm of Pico Satellites. <i>Lecture Notes in Computer Science</i> , 2008 , 347-354	0.9	1
15	Look out! Socially-Mediated Obstacle Avoidance in Collective Transport. <i>Lecture Notes in Computer Science</i> , 2010 , 572-573	0.9	1
14	Population Coding: A New Design Paradigm for Embodied Distributed Systems. <i>Lecture Notes in Computer Science</i> , 2016 , 173-184	0.9	1
13	HuGoS: a virtual environment for studying collective human behavior from a swarm intelligence perspective. <i>Swarm Intelligence</i> , 1	3	1
12	ALECSYS and the AutoMouse: Learning to Control a Real Robot by Distributed Classifier Systems. <i>Machine Learning</i> , 1995 , 19, 209-240	4	0
11	Operational Aspects of the Evolved Signalling Behaviour in a Group of Cooperating and Communicating Robots. <i>Lecture Notes in Computer Science</i> , 2006 , 113-127	0.9	0
10	ANTS 2018 special issue: Editorial. <i>Swarm Intelligence</i> , 2019 , 13, 169-172	3	
9	ANTS 2012 special issue. <i>Swarm Intelligence</i> , 2013 , 7, 79-81	3	

- 8 ANTS 2016 special issue: Editorial. *Swarm Intelligence*, **2017**, 11, 181-183 3
- 7 Swarm-bot: A Novel Type of Self-Assembling Robot **2006**, 3-4
- 6 Swarms of Self-assembling Robots. *Lecture Notes in Computer Science*, **2007**, 1-2 0.9
- 5 ANTS 2020 Special Issue: Editorial. *Swarm Intelligence*, **2021**, 15, 311-313 3
- 4 On the Use of Transputers to Implement Neural Networks **1991**, 179-186
- 3 An application of evolutionary algorithms to the scheduling of robotic operations. *Lecture Notes in Computer Science*, **1996**, 345-354 0.9
- 2 Evolution of Signaling in a Multi-Robot System: Categorization and Communication **2010**, 161-178
- 1 Swarm Construction Coordinated Through the Building Material. *Communications in Computer and Information Science*, **2021**, 188-202 0.3