Marco Dorigo

List of Publications by Year in Descending Order

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	An analysis of why cuckoo search does not bring any novel ideas to optimization. *Computers and Operations Research*, **2022**, 142, 105747	4.6	3
258	ANTS 2020 Special Issue: Editorial. *Swarm Intelligence*, **2021**, 15, 311-313	3	
257	Secure and secret cooperation in robot swarms. *Science Robotics*, **2021**, 6,	18.6	4
256	Swarm Robotics: Past, Present, and Future [Point of View]. *Proceedings of the IEEE*, **2021**, 109, 1152-1165	14.3	26
255	Swarm Construction Coordinated Through the Building Material. *Communications in Computer and Information Science*, **2021**, 188-202	0.3	
254	A computational study on ant colony optimization for the traveling salesman problem with dynamic demands. *Computers and Operations Research*, **2021**, 135, 105359	4.6	4
253	PSO-X: A Component-Based Framework for the Automatic Design of Particle Swarm Optimization Algorithms. *IEEE Transactions on Evolutionary Computation*, **2021**, 1-1	15.6	3
252	Reflections on the future of swarm robotics. *Science Robotics*, **2020**, 5,	18.6	41
251	Blockchain Technology Secures Robot Swarms: A Comparison of Consensus Protocols and Their Resilience to Byzantine Robots. *Frontiers in Robotics and AI*, **2020**, 7, 54	2.8	23
250	Language Evolution in Swarm Robotics: A Perspective. *Frontiers in Robotics and AI*, **2020**, 7, 12	2.8	2
249	Construction Task Allocation Through the Collective Perception of a Dynamic Environment. *Lecture Notes in Computer Science*, **2020**, 82-95	0.9	3
248	Multi-robot Coverage Using Self-organized Networks for Central Coordination. *Lecture Notes in Computer Science*, **2020**, 216-228	0.9	1
247	A Blockchain-Controlled Physical Robot Swarm Communicating via an Ad-Hoc Network. *Lecture Notes in Computer Science*, **2020**, 3-15	0.9	3
246	Grey Wolf, Firefly and Bat Algorithms: Three Widespread Algorithms that Do Not Contain Any Novelty. *Lecture Notes in Computer Science*, **2020**, 121-133	0.9	14
245	HuGoS: A Multi-user Virtual Environment for Studying Human-Human Swarm Intelligence. *Lecture Notes in Computer Science*, **2020**, 161-175	0.9	2
244	Formation Control of UAVs and Mobile Robots Using Self-organized Communication Topologies. *Lecture Notes in Computer Science*, **2020**, 306-314	0.9	5
243	Urban Swarms: A new approach for autonomous waste management **2019**,		12

242	The intelligent water drops algorithm: why it cannot be considered a novel algorithm. *Swarm Intelligence*, **2019**, 13, 173-192	3	10
241	An open-source multi-robot construction system. *HardwareX*, **2019**, 5, e00050	2.7	7
240	ANTS 2018 special issue: Editorial. *Swarm Intelligence*, **2019**, 13, 169-172	3	
239	Supervised morphogenesis: Exploiting morphological flexibility of self-assembling multirobot systems through cooperation with aerial robots. *Robotics and Autonomous Systems*, **2019**, 112, 154-167	3.5	6
238	Ant Colony Optimization: Overview and Recent Advances. *Profiles in Operations Research*, **2019**, 311-351	1	155
237	Kilogrid: a novel experimental environment for the Kilobot robot. *Swarm Intelligence*, **2018**, 12, 245-266	3	25
236	Human Responses to Stimuli Produced by Robot Swarms - the Effect of the Reality-Gap on Psychological State. *Springer Proceedings in Advanced Robotics*, **2018**, 531-543	0.6	1
235	Balancing exploitation of renewable resources by a robot swarm. *Swarm Intelligence*, **2018**, 12, 307-326	3	8
234	Hybrid Control of Swarms for Resource Selection. *Lecture Notes in Computer Science*, **2018**, 57-70	0.9	3
233	Kinetics of orbitally shaken particles constrained to two dimensions. *Physical Review E*, **2018**, 98,	2.4	2
232	Simulating Multi-robot Construction in ARGoS. *Lecture Notes in Computer Science*, **2018**, 188-200	0.9	5
231	Why the Intelligent Water Drops Cannot Be Considered as a Novel Algorithm. *Lecture Notes in Computer Science*, **2018**, 302-314	0.9	3
230	Ant Colony Optimization: A Component-Wise Overview **2018**, 371-407		6
229	Structure and markings as stimuli for autonomous construction **2017**,		6
228	Mergeable nervous systems for robots. *Nature Communications*, **2017**, 8, 439	17.4	26
227	ANTS 2016 special issue: Editorial. *Swarm Intelligence*, **2017**, 11, 181-183	3	
226	Analysis of the population-based ant colony optimization algorithm for the TSP and the QAP **2017**,		7
225	Yield prediction in parallel homogeneous assembly. *Soft Matter*, **2017**, 13, 7595-7608	3.6	5

224	The Best-of-n Problem in Robot Swarms: Formalization, State of the Art, and Novel Perspectives. *Frontiers in Robotics and AI*, **2017**, 4,	2.8	83
223	The k -Unanimity Rule for Self-Organized Decision-Making in Swarms of Robots. *IEEE Transactions on Cybernetics*, **2016**, 46, 1175-88	10.2	43
222	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	3	20
221	Collective decision with 100 Kilobots: speed versus accuracy in binary discrimination problems. *Autonomous Agents and Multi-Agent Systems*, **2016**, 30, 553-580	2	77
220	Ant Colony Optimization: A Component-Wise Overview **2016**, 1-37		15
219	Autonomous Construction with Compliant Building Material. *Advances in Intelligent Systems and Computing*, **2016**, 1371-1388	0.4	9
218	Collective Perception of Environmental Features in a Robot Swarm. *Lecture Notes in Computer Science*, **2016**, 65-76	0.9	44
217	Population Coding: A New Design Paradigm for Embodied Distributed Systems. *Lecture Notes in Computer Science*, **2016**, 173-184	0.9	1
216	Modeling Robot Swarms Using Integrals of Birth-Death Processes. *ACM Transactions on Autonomous and Adaptive Systems*, **2016**, 11, 1-16	1.2	7
215	Kilogrid: A modular virtualization environment for the Kilobot robot **2016**,		12
214	ANTS 2014 special issue: Editorial. *Swarm Intelligence*, **2015**, 9, 71-73	3	1
213	The TAM: abstracting complex tasks in swarm robotics research. *Swarm Intelligence*, **2015**, 9, 1-22	3	21
212	Bio-inspired construction with mobile robots and compliant pockets. *Robotics and Autonomous Systems*, **2015**, 74, 340-350	3.5	24
211	Property-Driven Design for Robot Swarms. *ACM Transactions on Autonomous and Adaptive Systems*, **2015**, 9, 1-28	1.2	36
210	**2015**,		13
209	A quantitative micro–macro link for collective decisions: the shortest path discovery/selection example. *Swarm Intelligence*, **2015**, 9, 75-102	3	38
208	Estimation-based metaheuristics for the single vehicle routing problem with stochastic demands and customers. *Computational Optimization and Applications*, **2015**, 61, 463-487	1.4	17
207	Spatially targeted communication in decentralized multirobot systems. *Autonomous Robots*, **2015**, 38, 439-457	3	8

206	Evolution of Self-Organized Task Specialization in Robot Swarms. *PLoS Computational Biology*, **2015**, 11, e1004273	5	62
205	A Design Pattern for Decentralised Decision Making. *PLoS ONE*, **2015**, 10, e0140950	3.7	78
204	Adaptation and Awareness in Robot Ensembles: Scenarios and Algorithms. *Lecture Notes in Computer Science*, **2015**, 471-494	0.9	12
203	A unified ant colony optimization algorithm for continuous optimization. *European Journal of Operational Research*, **2014**, 234, 597-609	5.6	84
202	Task partitioning in a robot swarm: object retrieval as a sequence of subtasks with direct object transfer. *Artificial Life*, **2014**, 20, 291-317	1.4	14
201	Self-organized task allocation to sequentially interdependent tasks in swarm robotics. *Autonomous Agents and Multi-Agent Systems*, **2014**, 28, 101-125	2	64
200	Cooperative navigation in robotic swarms. *Swarm Intelligence*, **2014**, 8, 1-33	3	49
199	Ant Colony Optimization for Mixed-Variable Optimization Problems. *IEEE Transactions on Evolutionary Computation*, **2014**, 18, 503-518	15.6	148
198	A self-adaptive communication strategy for flocking in stationary and non-stationary environments. *Natural Computing*, **2014**, 13, 225-245	1.3	40
197	zePPeLIN: Distributed Path Planning Using an Overhead Camera Network. *International Journal of Advanced Robotic Systems*, **2014**, 11, 119	1.4	2
196	Gesturing at Subswarms: Towards Direct Human Control of Robot Swarms. *Lecture Notes in Computer Science*, **2014**, 390-403	0.9	6
195	Swarm robotics. *Scholarpedia Journal*, **2014**, 9, 1463	1.5	86
194	SRoCS: Leveraging Stigmergy on a Multi-robot Construction Platform for Unknown Environments. *Lecture Notes in Computer Science*, **2014**, 158-169	0.9	17
193	Towards a Cognitive Design Pattern for Collective Decision-Making. *Lecture Notes in Computer Science*, **2014**, 194-205	0.9	11
192	Derivation of a Micro-Macro Link for Collective Decision-Making Systems. *Lecture Notes in Computer Science*, **2014**, 181-190	0.9	11
191	Socially-Mediated Negotiation for Obstacle Avoidance in Collective Transport. *Springer Tracts in Advanced Robotics*, **2013**, 571-583	0.5	10
190	ANTS 2012 special issue. *Swarm Intelligence*, **2013**, 7, 79-81	3	
189	Task partitioning in a robot swarm: a study on the effect of communication. *Swarm Intelligence*, **2013**, 7, 173-199	3	13

188	On the use of Bio-PEPA for modelling and analysing collective behaviours in swarm robotics. *Swarm Intelligence*, **2013**, 7, 201-228	3	21
187	Swarmanoid: A Novel Concept for the Study of Heterogeneous Robotic Swarms. *IEEE Robotics and Automation Magazine*, **2013**, 20, 60-71	3.4	183
186	Autonomous task partitioning in robot foraging: an approach based on cost estimation. *Adaptive Behavior*, **2013**, 21, 118-136	1.1	26
185	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	7.4	62
184	Swarm robotics: a review from the swarm engineering perspective. *Swarm Intelligence*, **2013**, 7, 1-41	3	782
183	Collective motion dynamics of active solids and active crystals. *New Journal of Physics*, **2013**, 15, 095011	2.9	27
182	Majority Rule with Differential Latency: An Absorbing Markov Chain to Model Consensus. *Springer Proceedings in Complexity*, **2013**, 651-658	0.3	5
181	Can ants inspire robots? Self-organized decision making in robotic swarms **2012**,		7
180	Costs and benefits of behavioral specialization. *Robotics and Autonomous Systems*, **2012**, 60, 1408-1420	3.5	12
179	ARGoS: a modular, parallel, multi-engine simulator for multi-robot systems. *Swarm Intelligence*, **2012**, 6, 271-295	3	278
178	An ACO algorithm benchmarked on the BBOB noiseless function testbed **2012**,		4
177	Spatially targeted communication and self-assembly **2012**,		8
176	Self-organized flocking with a mobile robot swarm: a novel motion control method. *Adaptive Behavior*, **2012**, 20, 460-477	1.1	89
175	Multi-armed Bandit Formulation of the Task Partitioning Problem in Swarm Robotics. *Lecture Notes in Computer Science*, **2012**, 109-120	0.9	9
174	Analysing Robot Swarm Decision-Making with Bio-PEPA. *Lecture Notes in Computer Science*, **2012**, 25-36	0.9	8
173	Analysing an Evolved Robotic Behaviour Using a Biological Model of Collegial Decision Making. *Lecture Notes in Computer Science*, **2012**, 381-390	0.9	27
172	SWARMORPH: Morphogenesis with Self-Assembling Robots. *Understanding Complex Systems*, **2012**, 27-60	0.4	10
171	Towards a Formal Verification Methodology for Collective Robotic Systems. *Lecture Notes in Computer Science*, **2012**, 54-70	0.9	14

170	A Concise Overview of Applications of Ant Colony Optimization **2011**,		16
169	Incremental social learning in particle swarms. *IEEE Transactions on Systems, Man, and Cybernetics*, **2011**, 41, 368-84		79
168	Self-organized discrimination of resources. *PLoS ONE*, **2011**, 6, e19888	3.7	35
167	ARGoS: A modular, multi-engine simulator for heterogeneous swarm robotics **2011**,		7
166	Ant Colony Optimization **2011**,		31
165	Task partitioning in swarms of robots: an adaptive method for strategy selection. *Swarm Intelligence*, **2011**, 5, 283-304	3	37
164	Majority-rule opinion dynamics with differential latency: a mechanism for self-organized collective decision-making. *Swarm Intelligence*, **2011**, 5, 305-327	3	69
163	ANTS 2010 special issue. *Swarm Intelligence*, **2011**, 5, 143-147	3	1
162	An incremental ant colony algorithm with local search for continuous optimization **2011**,		33
161	A detailed analysis of the population-based ant colony optimization algorithm for the TSP and the QAP **2011**,		19
160	Parameter Adaptation in Ant Colony Optimization **2011**, 191-215		42
159	ARGoS: A modular, multi-engine simulator for heterogeneous swarm robotics **2011**,		48
158	Enhanced directional self-assembly based on active recruitment and guidance **2011**,		5
157	Task Partitioning in Swarms of Robots: Reducing Performance Losses Due to Interference at Shared Resources. *Lecture Notes in Electrical Engineering*, **2011**, 217-228	0.2	12
156	Swarm-Bots to the Rescue. *Lecture Notes in Computer Science*, **2011**, 165-172	0.9	7
155	Costs and Benefits of Behavioral Specialization. *Lecture Notes in Computer Science*, **2011**, 90-101	0.9	3
154	Engineering self-coordinating software intensive systems **2010**,		1
153	Ant Colony Optimization: Overview and Recent Advances. *Profiles in Operations Research*, **2010**, 227-2631		198

152	Incremental Social Learning Applied to a Decentralized Decision-Making Mechanism: Collective Learning Made Faster **2010**,		2
151	Artificial pheromone for path selection by a foraging swarm of robots. *Biological Cybernetics*, **2010**, 103, 339-52	2.8	46
150	Self-assembly strategies in a group of autonomous mobile robots. *Autonomous Robots*, **2010**, 28, 439-455	3	35
149	Collective decision-making based on social odometry. *Neural Computing and Applications*, **2010**, 19, 807-823	4.3	36
148	Estimation-based metaheuristics for the probabilistic traveling salesman problem. *Computers and Operations Research*, **2010**, 37, 1939-1951	4.6	27
147	An analysis of communication policies for homogeneous multi-colony ACO algorithms. *Information Sciences*, **2010**, 180, 2390-2404	7.7	50
146	Self-organized Task Partitioning in a Swarm of Robots. *Lecture Notes in Computer Science*, **2010**, 287-298	0.9	5
145	Cooperation in a Heterogeneous Robot Swarm through Spatially Targeted Communication. *Lecture Notes in Computer Science*, **2010**, 400-407	0.9	2
144	Coordinating Heterogeneous Swarms through Minimal Communication among Homogeneous Sub-swarms. *Lecture Notes in Computer Science*, **2010**, 558-559	0.9	3
143	look out! Socially-Mediated Obstacle Avoidance in Collective Transport. *Lecture Notes in Computer Science*, **2010**, 572-573	0.9	1
142	Flocking in Stationary and Non-stationary Environments: A Novel Communication Strategy for Heading Alignment **2010**, 331-340		16
141	Evolution of Signaling in a Multi-Robot System: Categorization and Communication **2010**, 161-178		
140	Opinion Dynamics for Decentralized Decision-Making in a Robot Swarm. *Lecture Notes in Computer Science*, **2010**, 251-262	0.9	3
139	Heterogeneous particle swarm optimizers **2009**,		29
138	SWARMORPH: Multirobot Morphogenesis Using Directional Self-Assembly. *IEEE Transactions on Robotics*, **2009**, 25, 738-743	6.5	39
137	Evolving self-assembly in autonomous homogeneous robots: experiments with two physical robots. *Artificial Life*, **2009**, 15, 465-84	1.4	36
136	Teamwork in Self-Organized Robot Colonies. *IEEE Transactions on Evolutionary Computation*, **2009**, 13, 695-711	15.6	90
135	From Fireflies to Fault-Tolerant Swarms of Robots. *IEEE Transactions on Evolutionary Computation*, **2009**, 13, 754-766	15.6	92

134	Frankenstein's PSO: A Composite Particle Swarm Optimization Algorithm. *IEEE Transactions on Evolutionary Computation*, **2009**, 13, 1120-1132	15.6	246
133	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	5.6	23
132	A survey on metaheuristics for stochastic combinatorial optimization. *Natural Computing*, **2009**, 8, 239-287	1.3	398
131	Estimation-based ant colony optimization and local search for the probabilistic traveling salesman problem. *Swarm Intelligence*, **2009**, 3, 223-242	3	39
130	Open E-puck Range & Bearing miniaturized board for local communication in swarm robotics **2009**,		48
129	Towards group transport by swarms of robots. *International Journal of Bio-Inspired Computation*, **2009**, 1, 1	2.9	77
128	Social Odometry: Imitation Based Odometry in Collective Robotics. *International Journal of Advanced Robotic Systems*, **2009**, 6, 11	1.4	9
127	Self-Assembly at the Macroscopic Scale. *Proceedings of the IEEE*, **2008**, 96, 1490-1508	14.3	87
126	Self-Organizing and Scalable Shape Formation for a Swarm of Pico Satellites **2008**,		15
125	Evolution of Solitary and Group Transport Behaviors for Autonomous Robots Capable of Self-Assembling. *Adaptive Behavior*, **2008**, 16, 285-305	1.1	36
124	Synchronization and fault detection in autonomous robots **2008**,		6
123	Evolution of Signaling in a Multi-Robot System: Categorization and Communication. *Adaptive Behavior*, **2008**, 16, 5-26	1.1	27
122	Evolving homogeneous neurocontrollers for a group of heterogeneous robots: coordinated motion, cooperation, and acoustic communication. *Artificial Life*, **2008**, 14, 157-78	1.4	15
121	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	2.4	27
120	An Open Localization and Local Communication Embodied Sensor. *Sensors*, **2008**, 8, 7545-7563	3.8	45
119	Path formation in a robot swarm. *Swarm Intelligence*, **2008**, 2, 1-23	3	97
118	SWARMORPH-script: a language for arbitrary morphology generation in self-assembling robots. *Swarm Intelligence*, **2008**, 2, 143-165	3	34
117	Fault detection in autonomous robots based on fault injection and learning. *Autonomous Robots*, **2008**, 24, 49-67	3	52

116	Ant colony optimization for continuous domains. *European Journal of Operational Research*, **2008**, 185, 1155-1173	5.6	880
115	Particle swarm optimization. *Scholarpedia Journal*, **2008**, 3, 1486	1.5	31
114	Division of Labour in Self-organised Groups. *Lecture Notes in Computer Science*, **2008**, 426-436	0.9	7
113	Evolution, Self-organization and Swarm Robotics. *Natural Computing Series*, **2008**, 163-191	2.5	16
112	Autonomous Reconfiguration in a Self-assembling Multi-robot System. *Lecture Notes in Computer Science*, **2008**, 259-266	0.9	3
111	Enhancing the Cooperative Transport of Multiple Objects. *Lecture Notes in Computer Science*, **2008**, 307-314	0.9	1
110	Lattice Formation in Space for a Swarm of Pico Satellites. *Lecture Notes in Computer Science*, **2008**, 347-354	0.9	1
109	Social Odometry in Populations of Autonomous Robots. *Lecture Notes in Computer Science*, **2008**, 371-378	0.9	4
108	Automatic Synthesis of Fault Detection Modules for Mobile Robots **2007**,		7
107	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	1.1	31
106	Self-sssembly and morphology control in a swarm-bot **2007**,		3
105	Performance benefits of self-assembly in a swarm-bot **2007**,		9
104	The ACO/F-Race Algorithm for Combinatorial Optimization Under Uncertainty **2007**, 189-203		8
103	On the Invariance of Ant Colony Optimization. *IEEE Transactions on Evolutionary Computation*, **2007**, 11, 732-742	15.6	54
102	Morphology control in a multirobot system. *IEEE Robotics and Automation Magazine*, **2007**, 14, 18-25	3.4	57
101	Self-organized coordinated motion in groups of physically connected robots. *IEEE Transactions on Systems, Man, and Cybernetics*, **2007**, 37, 224-39		71
100	Exogenous Fault Detection in a Collective Robotic Task **2007**, 555-564		2
99	Swarms of Self-assembling Robots. *Lecture Notes in Computer Science*, **2007**, 1-2	0.9	

98	Ant colony optimization. *Scholarpedia Journal*, **2007**, 2, 1461	1.5	105
97	Swarm intelligence. *Scholarpedia Journal*, **2007**, 2, 1462	1.5	93
96	From Solitary to Collective Behaviours: Decision Making and Cooperation **2007**, 575-584		5
95	Efficient Multi-foraging in Swarm Robotics **2007**, 696-705		28
94	A Mechanism to Self-Assemble Patterns with Autonomous Robots **2007**, 716-725		1
93	Self-Organised Task Allocation in a Group of Robots **2007**, 389-398		8
92	Cooperative hole avoidance in a swarm-bot. *Robotics and Autonomous Systems*, **2006**, 54, 97-103	3.5	67
91	Ant colony optimization. *IEEE Computational Intelligence Magazine*, **2006**, 1, 28-39	5.6	2001
90	Division of labor in a group of robots inspired by ants' foraging behavior. *ACM Transactions on Autonomous and Adaptive Systems*, **2006**, 1, 4-25	1.2	130
89	Cooperation through self-assembly in multi-robot systems. *ACM Transactions on Autonomous and Adaptive Systems*, **2006**, 1, 115-150	1.2	64
88	Negotiation of Goal Direction for Cooperative Transport. *Lecture Notes in Computer Science*, **2006**, 191-202	0.9	23
87	Parallel Ant Colony Optimization for the Traveling Salesman Problem. *Lecture Notes in Computer Science*, **2006**, 224-234	0.9	46
86	Ant-based clustering and topographic mapping. *Artificial Life*, **2006**, 12, 35-61	1.4	133
85	Autonomous Self-Assembly in Swarm-Bots **2006**, 22, 1115-1130		202
84	Towards a theory of practice in´metaheuristics design: A machine learning perspective. *RAIRO - Theoretical Informatics and Applications*, **2006**, 40, 353-369	0.5	20
83	Ant Colony Optimization. *IEEE Computational Intelligence Magazine*, **2006**, 1, 28-39	5.6	574
82	Self-organisation and communication in groups of simulated and physical robots. *Biological Cybernetics*, **2006**, 95, 213-31	2.8	49
81	Swarm-bot: A Novel Type of Self-Assembling Robot **2006**, 3-4		

80	Evolved Homogeneous Neuro-controllers for Robots with Different Sensory Capabilities: Coordinated Motion and Cooperation. *Lecture Notes in Computer Science*, **2006**, 679-690	0.9	4
79	Operational Aspects of the Evolved Signalling Behaviour in a Group of Cooperating and Communicating Robots. *Lecture Notes in Computer Science*, **2006**, 113-127	0.9	0
78	Evolution of Signalling in a Group of Robots Controlled by Dynamic Neural Networks **2006**, 173-188		4
77	A Comparison of Particle Swarm Optimization Algorithms Based on Run-Length Distributions. *Lecture Notes in Computer Science*, **2006**, 1-12	0.9	14
76	Chain Based Path Formation in Swarms of Robots. *Lecture Notes in Computer Science*, **2006**, 120-131	0.9	22
75	Incremental Local Search in Ant Colony Optimization: Why It Fails for the Quadratic Assignment Problem. *Lecture Notes in Computer Science*, **2006**, 156-166	0.9	4
74	On the Invariance of Ant System. *Lecture Notes in Computer Science*, **2006**, 215-223	0.9	3
73	Incremental Evolution of Robot Controllers for a Highly Integrated Task. *Lecture Notes in Computer Science*, **2006**, 473-484	0.9	9
72	Autonomous Self-assembly in a Swarm-bot **2006**, 314-322		15
71	Search bias in ant colony optimization: on the role of competition-balanced systems. *IEEE Transactions on Evolutionary Computation*, **2005**, 9, 159-174	15.6	55
70	SWARM-BOT: an experiment in swarm robotics **2005**,		32
69	The SWARM-BOTS Project. *Lecture Notes in Computer Science*, **2005**, 31-44	0.9	35
68	. *IEEE Robotics and Automation Magazine*, **2005**, 12, 21-28	3.4	123
67	Ant colony optimization theory: A survey. *Theoretical Computer Science*, **2005**, 344, 243-278	1.1	1400
66	Evolving Neural Mechanisms for an Iterated Discrimination Task: A Robot Based Model. *Lecture Notes in Computer Science*, **2005**, 231-240	0.9	2
65	Self-assembly on Demand in a Group of Physical Autonomous Mobile Robots Navigating Rough Terrain. *Lecture Notes in Computer Science*, **2005**, 272-281	0.9	14
64	Efficiency and Task Allocation in Prey Retrieval. *Lecture Notes in Computer Science*, **2004**, 274-289	0.9	13
63	Evolving a Cooperative Transport Behavior for Two Simple Robots. *Lecture Notes in Computer Science*, **2004**, 305-316	0.9	11

62	Feeling the flow of time through sensorimotor co-ordination. *Connection Science*, **2004**, 16, 301-324	2.8	17
61	Strategies for the Increased Robustness of Ant-Based Clustering. *Lecture Notes in Computer Science* , **2004**, 90-104	0.9	24
60	Model-Based Search for Combinatorial Optimization: A Critical Survey. *Annals of Operations Research*, **2004**, 131, 373-395	3.2	141
59	Swarm-Bot: A New Distributed Robotic Concept. *Autonomous Robots*, **2004**, 17, 193-221	3	217
58	Evolving Self-Organizing Behaviors for a Swarm-Bot. *Autonomous Robots*, **2004**, 17, 223-245	3	200
57	The hyper-cube framework for ant colony optimization. *IEEE Transactions on Systems, Man, and Cybernetics*, **2004**, 34, 1161-72		235
56	Ant Colony Optimization **2004**,		1761
55	Cooperative Transport of Objects of Different Shapes and Sizes. *Lecture Notes in Computer Science*, **2004**, 106-117	0.9	14
54	Deception in Ant Colony Optimization. *Lecture Notes in Computer Science*, **2004**, 118-129	0.9	16
53	Evolution of Direct Communication for a Swarm-bot Performing Hole Avoidance. *Lecture Notes in Computer Science*, **2004**, 130-141	0.9	14
52	Group Transport of an Object to a Target That Only Some Group Members May Sense. *Lecture Notes in Computer Science*, **2004**, 852-861	0.9	12
51	A Comparison of the Performance of Different Metaheuristics on the Timetabling Problem. *Lecture Notes in Computer Science*, **2003**, 329-351	0.9	54
50	Evolving Aggregation Behaviors in a Swarm of Robots. *Lecture Notes in Computer Science*, **2003**, 865-874	0.9	54
49	The Ant Colony Optimization Metaheuristic: Algorithms, Applications, and Advances. *Profiles in Operations Research*, **2003**, 250-285	1	217
48	An Ant Colony Optimization Approach to the Probabilistic Traveling Salesman Problem. *Lecture Notes in Computer Science*, **2002**, 883-892	0.9	45
47	Ant colony optimization and stochastic gradient descent. *Artificial Life*, **2002**, 8, 103-21	1.4	67
46	Solving the Homogeneous Probabilistic Traveling Salesman Problem by the ACO Metaheuristic. *Lecture Notes in Computer Science*, **2002**, 176-187	0.9	22
45	A short convergence proof for a class of ant colony optimization algorithms. *IEEE Transactions on Evolutionary Computation*, **2002**, 6, 358-365	15.6	248

44	Model-Based Search for Combinatorial Optimization: A Comparative Study. *Lecture Notes in Computer Science*, **2002**, 651-661	0.9	9
43	Toward the Formal Foundation of Ant Programming. *Lecture Notes in Computer Science*, **2002**, 188-201	0.9	23
42	Updating ACO Pheromones Using Stochastic Gradient Ascent and Cross-Entropy Methods. *Lecture Notes in Computer Science*, **2002**, 21-30	0.9	10
41	Design of Iterated Local Search Algorithms. *Lecture Notes in Computer Science*, **2001**, 441-451	0.9	29
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