Roderich GroÃ

List of Publications by Year
in descending order

79 papers	2,232 citations	361388 20 h-index	289230 40 g-index
80 all docs	80 docs citations	80 times ranked	1323 citing authors

#	ARTICLE	IF	CITATIONS
1	Evolving Self-Organizing Behaviors for a Swarm-Bot. Autonomous Robots, 2004, 17, 223-245.	4.8	265
2	Autonomous Self-Assembly in Swarm-Bots. , 2006, 22, 1115-1130.		255
3	Teamwork in Self-Organized Robot Colonies. IEEE Transactions on Evolutionary Computation, 2009, 13, 695-711.	10.0	118
4	Towards group transport by swarms of robots. International Journal of Bio-Inspired Computation, 2009, 1, 1.	0.9	117
5	Occlusion-Based Cooperative Transport with a Swarm of Miniature Mobile Robots. IEEE Transactions on Robotics, 2015, 31, 307-321.	10.3	114
6	Self-Assembly at the Macroscopic Scale. Proceedings of the IEEE, 2008, 96, 1490-1508.	21.3	112
7	Self-organized aggregation without computation. International Journal of Robotics Research, 2014, 33, 1145-1161.	8.5	112
8	Cooperation through self-assembly in multi-robot systems. ACM Transactions on Autonomous and Adaptive Systems, 2006, 1, 115-150.	0.8	83
9	Evolving Aggregation Behaviors in a Swarm of Robots. Lecture Notes in Computer Science, 2003, , 865-874.	1.3	82
10	Supervisory control theory applied to swarm robotics. Swarm Intelligence, 2016, 10, 65-97.	2.2	67
11	Turing learning: a metric-free approach to inferring behavior and its application to swarms. Swarm Intelligence, 2016, 10, 211-243.	2.2	56
12	Evolution of Solitary and Group Transport Behaviors for Autonomous Robots Capable of Self-Assembling. Adaptive Behavior, 2008, 16, 285-305.	1.9	54
13	Self-assembly strategies in a group ofÂautonomous mobile robots. Autonomous Robots, 2010, 28, 439-455.	4.8	52
14	The SWARM-BOTS Project. Lecture Notes in Computer Science, 2005, , 31-44.	1.3	49
15	Why â€˜GSA: a gravitational search algorithmâ€™ is not genuinely based on the law of gravity. Natural Computing, 2012, 11, 719-720.	3.0	45
16	Simple learning rules to cope with changing environments. Journal of the Royal Society Interface, 2008, 5, 1193-1202.	3.4	39
17	Evolving Aggregation Behaviors in Multi-Robot Systems with Binary Sensors. Springer Tracts in Advanced Robotics, 2014, , 355-367.	0.4	34
18	Negotiation of Goal Direction for Cooperative Transport. Lecture Notes in Computer Science, 2006, , 191-202.	1.3	29

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19	Object transport by modular robots that self-assemble. , 0, , .		28
20	Transport of an object by six pre-attached robots interacting via physical links. , 0, , .		28
21	A strategy for transporting tall objects with a swarm of miniature mobile robots. , 2013, , .		28
22	Sparse Robot Swarms: Moving Swarms to Real-World Applications. Frontiers in Robotics and AI, 2020, 7, 83.	3.2	26
23	Segregation in swarms of mobile robots based on the Brazil nut effect. , 2009, , .		23
24	Cooperative Transport of Objects of Different Shapes and Sizes. Lecture Notes in Computer Science, 2004, , 106-117.	1.3	23
25	Autonomous Self-assembly in a Swarm-bot. , 2006, , 314-322.		22
26	HiGen: A high-speed genderless mechanical connection mechanism with single-sided disconnect for self-reconfigurable modular robots. , 2014, , .		21
27	Group Transport of an Object to a Target That Only Some Group Members May Sense. Lecture Notes in Computer Science, 2004, , 852-861.	1.3	21
28	Moving targets: collective decisions and flexible choices in house-hunting ants. Swarm Intelligence, 2007, 1, 81-94.	2.2	20
29	HyMod: A 3-DOF Hybrid Mobile and Self-Reconfigurable Modular Robot and its Extensions. Springer Proceedings in Advanced Robotics, 2018, , 401-414.	1.3	20
30	Self-assembly on Demand in a Group of Physical Autonomous Mobile Robots Navigating Rough Terrain. Lecture Notes in Computer Science, 2005, , 272-281.	1.3	19
31	Swarm Intelligence in Optimization and Robotics. , 2015, , 1291-1309.		18
32	A Self-Organising Model of Thermoregulatory Huddling. PLoS Computational Biology, 2015, 11, e1004283.	3.2	17
33	Finding Consensus Without Computation. IEEE Robotics and Automation Letters, 2018, 3, 1346-1353.	5.1	15
34	Evolving a Cooperative Transport Behavior for Two Simple Robots. Lecture Notes in Computer Science, 2004, , 305-316.	1.3	14
35	Application of Supervisory Control Theory to Swarms of e-puck and Kilobot Robots. Lecture Notes in Computer Science, 2014, , 62-73.	1.3	14
36	Turn-minimizing multirobot coverage. , 2019, , .		12

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37	Beyond Local Nash Equilibria for Adversarial Networks. Communications in Computer and Information Science, 2019, , 73-89.	0.5	11
38	Division of Labour in Self-organised Groups. Lecture Notes in Computer Science, 2008, , 426-436.	1.3	11
39	Performance benefits of self-assembly in a swarm-bot. , 2007, , .		10
40	Modular Hydraulic Propulsion: A robot that moves by routing fluid through itself. , 2016, , .		10
41	Human-Robot Swarm Interaction with Limited Situational Awareness. Lecture Notes in Computer Science, 2016, , 125-136.	1.3	10
42	Control of Synchronization Regimes in Networks of Mobile Interacting Agents. Physical Review Applied, 2017, 7, .	3.8	10
43	Spatial Coverage Without Computation. , 2019, , .		10
44	Swarm-Bots to the Rescue. Lecture Notes in Computer Science, 2011, , 165-172.	1.3	10
45	A coevolutionary approach to learn animal behavior through controlled interaction. , 2013, , .		9
46	SwarmCom: an infra-red-based mobile ad-hoc network for severely constrained robots. Autonomous Robots, 2020, 44, 93-114.	4.8	8
47	Modular Fluidic Propulsion Robots. IEEE Transactions on Robotics, 2021, 37, 532-549.	10.3	8
48	Using Google Glass in Humanâ€"Robot Swarm Interaction. Lecture Notes in Computer Science, 2016, , 196-201.	1.3	8
49	OpenSwarm: An event-driven embedded operating system for miniature robots. , 2016, , .		6
50	Towards a Swarm Robotic System for Autonomous Cereal Harvesting. Lecture Notes in Computer Science, 2019, , 458-461.	1.3	6
51	Towards an Autonomous Evolution of Non-biological Physical Organisms. Lecture Notes in Computer Science, 2011, , 173-180.	1.3	6
52	A Soft-Bodied Modular Reconfigurable Robotic System Composed of Interconnected Kilobots. , 2019, , .		5
53	Re-Establishing Communication in Teams of Mobile Robots. , 2018, , .		4
54	Controllability analysis and controller design for variableâ€pitch propeller quadcopters with one propeller failure. Advanced Control for Applications, 2020, 2, e29.	1.7	4

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55	From swarm robotics to smart materials. Neural Computing and Applications, 2010, 19, 785-786.	5.6	3
56	Evo-Bots: A Simple, Stochastic Approach to Self-assembling Artificial Organisms. Springer Proceedings in Advanced Robotics, 2018, , 373-385.	1.3	3
57	Emergence and Inhibition of Synchronization in Robot Swarms. Springer Proceedings in Advanced Robotics, 2018, , 475-486.	1.3	3
58	Supervisory Control of Robot Swarms Using Public Events. , 2020, , .		3
59	Control of centrally-powered variable pitch propeller quadcopters subject to propeller faults. Aerospace Science and Technology, 2022, 120, 107245.	4.8	3
60	ANTS 2010 special issue. Swarm Intelligence, 2011, 5, 143-147.	2.2	2
61	Coevolutionary learning of swarm behaviors without metrics. , 2014, , .		2
62	Guest editorial: Special issue on distributed roboticsâ€"from fundamentals to applications. Autonomous Robots, 2018, 42, 1521-1523.	4.8	2
63	Decentralized Pose Control of Modular Reconfigurable Robots Operating in Liquid Environments. , 2019, , .		2
64	Human Management of a Robotic Swarm. Lecture Notes in Computer Science, 2016, , 282-287.	1.3	2
65	Forming Nested 3D Structures Based on the Brazil Nut Effect. Lecture Notes in Computer Science, 2011, , 394-395.	1.3	2
66	Decentralized Gathering of Stochastic, Oblivious Agents on a Grid: A Case Study with 3D M-Blocks. , 2019, , .		1
67	A Stochastic Self-reconfigurable Modular Robot with Mobility Control. Lecture Notes in Computer Science, 2012, , 416-417.	1.3	1
68	A Minimal Model of the Phase Transition into Thermoregulatory Huddling. Lecture Notes in Computer Science, 2013, , 381-383.	1.3	1
69	Boundary Detection in a Swarm of Kilobots. Lecture Notes in Computer Science, 2019, , 462-466.	1.3	1
70	A Minimalist Solution to the Multi-robot Barrier Coverage Problem. Lecture Notes in Computer Science, 2021, , 349-353.	1.3	1
71	Aerobatic Tic-Toc Control of Planar Quadcopters via Reinforcement Learning. IEEE Robotics and Automation Letters, 2022, 7, 2140-2147.	5.1	1
72	Design of a Switched Control Lyapunov Function for Mobile Robots Aggregation. , 2022, , .		1

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73	TAROS2011. Robotics and Autonomous Systems, 2012, 60, 1355.	5.1	0
74	ANTS 2012 special issue. Swarm Intelligence, 2013, 7, 79-81.	2.2	0
75	Vision-Based Segregation Behaviours in a Swarm of Autonomous Robots. Lecture Notes in Computer Science, 2011, , 428-429.	1.3	0
76	Cooperative Multi-robot Box Pushing Inspired by Human Behaviour. Lecture Notes in Computer Science, 2011, , 380-381.	1.3	0
77	Self-Assembly. , 2014, , 1-2.		0
78	Self-Assembly. , 2015, , 2239-2240.		0
79	Turing learning with hybrid discriminators. , 2020, , .		0