

Radhika Nagpal

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2277526/publications.pdf>

Version: 2024-02-01

49
papers

3,632
citations

331670

21
h-index

395702

33
g-index

50
all docs

50
docs citations

50
times ranked

3589
citing authors

#	ARTICLE	IF	CITATIONS
1	Programmable self-assembly in a thousand-robot swarm. <i>Science</i> , 2014, 345, 795-799.	12.6	927
2	Designing Collective Behavior in a Termite-Inspired Robot Construction Team. <i>Science</i> , 2014, 343, 754-758.	12.6	475
3	The emergence of geometric order in proliferating metazoan epithelia. <i>Nature</i> , 2006, 442, 1038-1041.	27.8	380
4	Firefly-inspired sensor network synchronicity with realistic radio effects. , 2005, , .		234
5	Control of the Mitotic Cleavage Plane by Local Epithelial Topology. <i>Cell</i> , 2011, 144, 427-438.	28.9	173
6	Kilobot: A low cost robot with scalable operations designed for collective behaviors. <i>Robotics and Autonomous Systems</i> , 2014, 62, 966-975.	5.1	158
7	Implicit coordination for 3D underwater collective behaviors in a fish-inspired robot swarm. <i>Science Robotics</i> , 2021, 6, .	17.6	130
8	Flight of the Robobees. <i>Scientific American</i> , 2013, 308, 60-65.	1.0	85
9	Three-Dimensional Construction with Mobile Robots and Modular Blocks. <i>International Journal of Robotics Research</i> , 2008, 27, 463-479.	8.5	80
10	Bio-inspired active soft orthotic device for ankle foot pathologies. , 2011, , .		77
11	Applicability of Shape Memory Alloy Wire for an Active, Soft Orthotic. <i>Journal of Materials Engineering and Performance</i> , 2011, 20, 658-662.	2.5	65
12	Design of control policies for spatially inhomogeneous robot swarms with application to commercial pollination. , 2011, , .		56
13	Towards Desynchronization of Multi-hop Topologies. , 2008, , .		50
14	Modeling and Inferring Cleavage Patterns in Proliferating Epithelia. <i>PLoS Computational Biology</i> , 2009, 5, e1000412.	3.2	49
15	Experimental Results for and Theoretical Analysis of a Self-Organizing Global Coordinate System for Ad Hoc Sensor Networks. <i>Telecommunication Systems</i> , 2004, 26, 213-233.	2.5	44
16	Desynchronization: The Theory of Self-Organizing Algorithms for Round-Robin Scheduling. , 2007, , .		43
17	A computational framework for identifying design guidelines to increase the penetration of targeted nanoparticles into tumors. <i>Nano Today</i> , 2013, 8, 566-576.	11.9	43
18	Tunable Multi-Modal Locomotion in Soft Dielectric Elastomer Robots. <i>IEEE Robotics and Automation Letters</i> , 2020, 5, 3868-3875.	5.1	39

#	ARTICLE	IF	CITATIONS
19	Morpho: A Self-Deformable Modular Robot Inspired by Cellular Structure. , 2008, , .		36
20	Bio-Inspired Design of Soft Robotic Assistive Devices: The Interface of Physics, Biology, and Behavior. Ecological Psychology, 2012, 24, 300-327.	1.1	35
21	Fish-like three-dimensional swimming with an autonomous, multi-fin, and biomimetic robot. Bioinspiration and Biomimetics, 2021, 16, 026018.	2.9	33
22	Distributed amorphous ramp construction in unstructured environments. Robotica, 2014, 32, 279-290.	1.9	32
23	Hydrodynamic advantages of in-line schooling. Bioinspiration and Biomimetics, 2021, 16, 046002.	2.9	29
24	Epithelial topology. BioEssays, 2008, 30, 260-266.	2.5	28
25	Collective strategy for obstacle navigation during cooperative transport by ants. Journal of Experimental Biology, 2016, 219, 3366-3375.	1.7	25
26	Robust Maneuverability of a Miniature, Low-Cost Underwater Robot Using Multiple Fin Actuation. IEEE Robotics and Automation Letters, 2018, 3, 140-147.	5.1	25
27	Self-adapting modular robotics: A generalized distributed consensus framework. , 2009, , .		23
28	Task Allocation in Ant Colonies. Lecture Notes in Computer Science, 2014, , 46-60.	1.3	23
29	Autonomous MAV guidance with a lightweight omnidirectional vision sensor. , 2014, , .		22
30	Surface curvature guides early construction activity in mound-building termites. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180374.	4.0	22
31	A Self-adaptive Framework for Modular Robots in a Dynamic Environment: Theory and Applications. International Journal of Robotics Research, 2011, 30, 1015-1036.	8.5	21
32	Flippy: A soft, autonomous climber with simple sensing and control. , 2017, , .		21
33	Excavation and aggregation as organizing factors in de novo construction by mound-building termites. Proceedings of the Royal Society B: Biological Sciences, 2017, 284, 20162730.	2.6	20
34	A comparison of deterministic and stochastic approaches for allocating spatially dependent tasks in micro-aerial vehicle collectives. , 2012, , .		13
35	Arrestant property of recently manipulated soil on <i>Macrotermes michaelseni</i> as determined through visual tracking and automatic labeling of individual termite behaviors. Behavioural Processes, 2015, 116, 8-11.	1.1	12
36	Complex Design by Simple Robots: A Collective Embodied Intelligence Approach to Construction. Architectural Design, 2017, 87, 44-49.	0.1	11

#	ARTICLE	IF	CITATIONS
37	Optimization of stochastic strategies for spatially inhomogeneous robot swarms: A case study in commercial pollination. , 2011, , .		10
38	Fast, Accurate, Small-Scale 3D Scene Capture Using a Low-Cost Depth Sensor. , 2017, 2017, 1268-1276.		10
39	Self-organization of environmentally-adaptive shapes on a modular robot. , 2007, , .		9
40	The extension of internal humidity levels beyond the soil surface facilitates mound expansion in Macrotermes. Proceedings of the Royal Society B: Biological Sciences, 2020, 287, 20200894.	2.6	9
41	Hysteresis stabilizes dynamic control of self-assembled army ant constructions. Nature Communications, 2022, 13, 1160.	12.8	9
42	Differential construction response to humidity by related species of mound-building termites. Journal of Experimental Biology, 2019, 222, .	1.7	8
43	Self-Organized Evasive Fountain Maneuvers with a Bioinspired Underwater Robot Collective. , 2021, , .		7
44	Biomimetic actuation method for a miniature, low-cost multi-jointed robotic fish. , 2018, , .		5
45	Validating a Termite-Inspired Construction Coordination Mechanism Using an Autonomous Robot. Frontiers in Robotics and AI, 2021, 8, 645728.	3.2	5
46	Costs of task allocation with local feedback: Effects of colony size and extra workers in social insects and other multi-agent systems. PLoS Computational Biology, 2017, 13, e1005904.	3.2	3
47	Effects of load mass and size on cooperative transport in ants over multiple transport challenges. Journal of Experimental Biology, 2019, 222, .	1.7	3
48	Optimization of personal distribution for evacuation guidance based on vector field. , 2011, , .		3
49	Bio-inspired active soft orthotic device for ankle foot pathologies. , 2011, , .		3