Nikolaus Correll

List of Publications by Year
in descending order

64 papers	2,723 citations	471509 17 h-index	302126 39 g-index
65 all docs	65 docs citations	65 times ranked	3507 citing authors

#	Article	IF	Citations
1	SIRONA: Sustainable Integration of Regenerative Outer-space Nature and Agriculture. Part 2 â€" Design Development and Projected Performance. Acta Astronautica, 2022, 196, 350-368.	3.2	5
2	Embedded Neural Networks forÂRobot Autonomy. Springer Proceedings in Advanced Robotics, 2022, , 242-257.	1.3	0
3	Electro-Hydraulic Rolling Soft Wheel: Design, Hybrid Dynamic Modeling, and Model Predictive Control. IEEE Transactions on Robotics, 2022, 38, 3044-3063.	10.3	8
4	Augmented reality for humanâ€"swarm interaction in a swarm-robotic chemistry simulation. Artificial Life and Robotics, 2022, 27, 407-415.	1.2	0
5	Miniaturized Circuitry for Capacitive Self-Sensing and Closed-Loop Control of Soft Electrostatic Transducers. Soft Robotics, 2021, 8, 673-686.	8.0	19
6	High-Bandwidth Nonlinear Control for Soft Actuators with Recursive Network Models. Springer Proceedings in Advanced Robotics, 2021, , 589-599.	1.3	4
7	Mobile Manipulation Hackathon: Moving into Real World Applications. IEEE Robotics and Automation Magazine, 2021, 28, 112-124.	2.0	6
8	Identification and Control of a Nonlinear Soft Actuator and Sensor System. IEEE Robotics and Automation Letters, 2020, 5, 3783-3790.	5.1	17
9	Fault-tolerant Covariance Intersection for localizing robot swarms. Robotics and Autonomous Systems, 2019, 122, 103306.	5.1	13
10	Materials that make robots smart. International Journal of Robotics Research, 2019, 38, 1338-1351.	8.5	16
11	Multi-modal prosthetic fingertip sensor with proximity, contact, and force localization capabilities. Advances in Mechanical Engineering, 2019, 11, 168781401984464.	1.6	16
12	Robotic materials for robot autonomy. , 2019, , 295-307.		0
13	A Robotic Skin for Collision Avoidance and Affective Touch Recognition. IEEE Robotics and Automation Letters, 2018, 3, 1386-1393.	5.1	56
14	Dynamic teams of robots as ad hoc distributed computers: reducing the complexity of multi-robot motion planning via subspace selection. Autonomous Robots, 2018, 42, 1691-1713.	4.8	4
15	Distributed Convolutional Neural Networks for Human Activity Recognition in Wearable Robotics. Springer Proceedings in Advanced Robotics, 2018, , 619-631.	1.3	2
16	Analysis and Observations From the First Amazon Picking Challenge. IEEE Transactions on Automation Science and Engineering, 2018, 15, 172-188.	5.2	269
17	Shape-Changing Materials Using Variable Stiffness and Distributed Control. Soft Robotics, 2018, 5, 737-747.	8.0	9
18	Distributed camouflage for swarm robotics and smart materials. Autonomous Robots, 2018, 42, 1635-1650.	4.8	4

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19	Integrated proximity, contact and force sensing using elastomer-embedded commodity proximity sensors. Autonomous Robots, 2018, 42, 1443-1458.	4.8	30
20	Soft Robotics: Review of Fluidâ€Driven Intrinsically Soft Devices; Manufacturing, Sensing, Control, and Applications in Humanâ€Robot Interaction. Advanced Engineering Materials, 2017, 19, 1700016.	3.5	707
21	Recognizing social touch gestures using recurrent and convolutional neural networks. , 2017, , .		19
22	Functionalized textiles for interactive soft robotics. , 2017, , .		13
23	Will robots be bodies with brains or brains with bodies?. Science Robotics, 2017, 2, .	17.6	19
24	Intelligent RF-Based Gesture Input Devices Implemented Using e-Textiles. Sensors, 2017, 17, 219.	3.8	6
25	Consensus or Deadlock? Consequences of Simple Behavioral Rules for Coordination in Group Decisions. PLoS ONE, 2016, 11, e0162768.	2.5	11
26	Modeling multi-robot task allocation with limited information as global game. Swarm Intelligence, 2016, 10, 147-160.	2.2	38
27	Distributed Inverse Kinematics for Shape-changing Robotic Materials. Procedia Technology, 2016, 26, 4-11.	1.1	10
28	Shape Change Through Programmable Stiffness. Springer Tracts in Advanced Robotics, 2016, , 893-907.	0.4	13
29	A Response Threshold Sigmoid Function Model for Swarm Robot Collaboration. Springer Tracts in Advanced Robotics, 2016, , 193-206.	0.4	9
30	Texture recognition and localization in amorphous robotic skin. Bioinspiration and Biomimetics, 2015, 10, 055002.	2.9	42
31	Detecting and Identifying Tactile Gestures using Deep Autoencoders, Geometric Moments and Gesture Level Features. , 2015, , .		20
32	Precise assembly of 3D truss structures using MLE-based error prediction and correction. International Journal of Robotics Research, 2015, 34, 1622-1644.	8.5	9
33	Experience-based planning with sparse roadmap spanners. , 2015, , .		41
34	Simultaneous localization, mapping, and manipulation for unsupervised object discovery. , 2015, , .		13
35	A soft pneumatic actuator that can sense grasp and touch. , 2015, , .		66
36	Materials that couple sensing, actuation, computation, and communication. Science, 2015, 347, 1261689.	12.6	471

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37	Flutter. , 2015, , .		20
38	Distributed Spatiotemporal Gesture Recognition in Sensor Arrays. ACM Transactions on Autonomous and Adaptive Systems, 2015, 10, 1-19.	0.8	6
39	Thermoplastic variable stiffness composites with embedded, networked sensing, actuation, and control. Journal of Composite Materials, 2015, 49, 1799-1808.	2.4	58
40	Truss assembly and welding by Intelligent Precision Jigging Robots. , 2014, , .		9
41	A soft, amorphous skin that can sense and localize textures. , 2014, , .		13
42	Miniature six-channel range and bearing system: Algorithm, analysis and experimental validation. , 2014, , .		17
43	Precise truss assembly using commodity parts and low precision welding. Intelligent Service Robotics, 2014, 7, 93-102.	2.6	8
44	Assembly path planning for stable robotic construction. , 2014, , .		13
45	A stick-slip omnidirectional powertrain for low-cost swarm robotics: Mechanism, calibration, and control. , 2014, , .		27
46	Soft Autonomous Materialsâ€"Using Active Elasticity and Embedded Distributed Computation. Springer Tracts in Advanced Robotics, 2014, , 227-240.	0.4	61
47	C-FOREST: Parallel Shortest Path Planning With Superlinear Speedup. IEEE Transactions on Robotics, 2013, 29, 798-806.	10.3	71
48	Precise truss assembly using commodity parts and low precision welding. , 2013, , .		5
49	A One-Year Introductory Robotics Curriculum for Computer Science Upperclassmen. IEEE Transactions on Education, 2013, 56, 54-60.	2.4	33
50	Navigation with foraging. , 2013, , .		4
51	Establishing Multi-cast Groups in Computational Robotic Materials. , 2012, , .		5
52	Modeling and designing self-organized aggregation in a swarm of miniature robots. International Journal of Robotics Research, 2011, 30, 615-626.	8.5	56
53	From swarm robotics to smart materials. Neural Computing and Applications, 2010, 19, 785-786.	5.6	3
54	Indoor robot gardening: design and implementation. Intelligent Service Robotics, 2010, 3, 219-232.	2.6	14

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55	Object Interaction Language (OIL): An intent-based language for programming self-organized sensor/actuator networks. , 2010, , .		2
56	Ad-hoc wireless network coverage with networked robots that cannot localize. , 2009, , .		26
57	Multirobot inspection of industrial machinery. IEEE Robotics and Automation Magazine, 2009, 16, 103-112.	2.0	34
58	Collaborative coverage using a swarm of networked miniature robots. Robotics and Autonomous Systems, 2009, 57, 517-525.	5.1	49
59	Building a distributed robot garden. , 2009, , .		38
60	Distributed boundary coverage with a team of networked miniature robots using a robust market-based algorithm. Annals of Mathematics and Artificial Intelligence, 2008, 52, 307-333.	1.3	23
61	Parameter estimation and optimal control of swarm-robotic systems: A case study in distributed task allocation. , 2008, , .		16
62	SwisTrack - A Flexible Open Source Tracking Software for Multi-Agent Systems. , 2008, , .		108
63	Robots assembling machines: learning from the World Robot Summit 2018 Assembly Challenge. Advanced Robotics, 0, , 1-14.	1.8	10
64	Autonomous industrial assembly using force, torque, and RGB-D sensing. Advanced Robotics, 0, , 1-14.	1.8	9