

# David J Cappelleri

## List of Publications by Year in descending order

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Version: 2024-02-01

68  
papers

1,399  
citations

361413

20  
h-index

377865

34  
g-index

69  
all docs

69  
docs citations

69  
times ranked

1186  
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic Actuation Methods in Bio/Soft Robotics. <i>Advanced Functional Materials</i> , 2021, 31, 2005137.	14.9	126
2	Transcriptome transfer produces a predictable cellular phenotype. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 7624-7629.	7.1	86
3	Controlling multiple microrobots: recent progress and future challenges. <i>Journal of Micro-Bio Robotics</i> , 2015, 10, 1-11.	2.1	81
4	High-accuracy, high-speed 3D structured light imaging techniques and potential applications to intelligent robotics. <i>International Journal of Intelligent Robotics and Applications</i> , 2017, 1, 86-103.	2.8	66
5	Design of Microscale Magnetic Tumbling Robots for Locomotion in Multiple Environments and Complex Terrains. <i>Micromachines</i> , 2018, 9, 68.	2.9	62
6	Towards Mobile Microrobot Swarms for Additive Micromanufacturing. <i>International Journal of Advanced Robotic Systems</i> , 2014, 11, 150.	2.1	58
7	A novel micro-scale magnetic tumbling microrobot. <i>Journal of Micro-Bio Robotics</i> , 2013, 8, 1-12.	2.1	49
8	A two dimensional vision-based force sensor for microrobotic applications. <i>Sensors and Actuators A: Physical</i> , 2011, 171, 340-351.	4.1	48
9	Smart Polymers for Microscale Machines. <i>Advanced Functional Materials</i> , 2021, 31, 2007125.	14.9	48
10	A Microforce-Sensing Mobile Microrobot for Automated Micromanipulation Tasks. <i>IEEE Transactions on Automation Science and Engineering</i> , 2019, 16, 518-530.	5.2	47
11	Towards Independent Control of Multiple Magnetic Mobile Microrobots. <i>Micromachines</i> , 2016, 7, 3.	2.9	45
12	4D Printing: Enabling Technology for Microrobotics Applications. <i>Advanced Intelligent Systems</i> , 2021, 3, 2000216.	6.1	43
13	Control of Magnetic Microrobot Teams for Temporal Micromanipulation Tasks. <i>IEEE Transactions on Robotics</i> , 2018, 34, 1472-1489.	10.3	38
14	Designing local magnetic fields and path planning for independent actuation of multiple mobile microrobots. <i>Journal of Micro-Bio Robotics</i> , 2017, 12, 21-31.	2.1	34
15	3D-Printed Microrobots with Integrated Structural Color for Identification and Tracking. <i>Advanced Intelligent Systems</i> , 2020, 2, 1900147.	6.1	32
16	Automated Assembly for Mesoscale Parts. <i>IEEE Transactions on Automation Science and Engineering</i> , 2011, 8, 598-613.	5.2	30
17	Modeling and global trajectory tracking control for an over-actuated MAV. <i>Advanced Robotics</i> , 2014, 28, 145-155.	1.8	30
18	A Tumbling Magnetic Microrobot System for Biomedical Applications. <i>Micromachines</i> , 2020, 11, 861.	2.9	26

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19	Local Magnetic Field Design and Characterization for Independent Closed-Loop Control of Multiple Mobile Microrobots. IEEE/ASME Transactions on Mechatronics, 2020, 25, 526-534.	5.8	26
20	Caging micromanipulation for automated microassembly. , 2011, , .		22
21	A Magnetic Microrobot with in situ Force Sensing Capabilities. Robotics, 2014, 3, 106-119.	3.5	22
22	Automated Complete Blood Cell Count and Malaria Pathogen Detection Using Convolution Neural Network. IEEE Robotics and Automation Letters, 2020, 5, 1047-1054.	5.1	22
23	Toward the Design of a Decoupled, Two-Dimensional, Vision-Based $\hat{1}4$ N Force Sensor. Journal of Mechanisms and Robotics, 2010, 2, .	2.2	21
24	A magnetic thin film microrobot with two operating modes. , 2011, , .		21
25	Towards Functional Mobile Microbotic Systems. Robotics, 2019, 8, 69.	3.5	20
26	Magnetically Aligned Nanorods in Alginate Capsules (MANiACs): Soft Matter Tumbling Robots for Manipulation and Drug Delivery. Micromachines, 2019, 10, 230.	2.9	19
27	Linear control design, allocation, and implementation for the Omnicopter MAV. , 2013, , .		18
28	A tumbling magnetic microrobot with flexible operating modes. , 2013, , .		16
29	Design of the I-BoomCopter UAV for environmental interaction. , 2017, , .		15
30	Real-Time Force-Feedback Micromanipulation Using Mobile Microrobots With Colored Fiducials. IEEE Robotics and Automation Letters, 2018, 3, 3591-3597.	5.1	15
31	Caging for 2D and 3D micromanipulation. Journal of Micro-Nano Mechatronics, 2012, 7, 115-129.	1.0	13
32	Towards flexible, automated microassembly with caging micromanipulation. , 2013, , .		13
33	Autonomous Control of the Interacting-BoomCopter UAV for Remote Sensor Mounting. , 2018, , .		13
34	Path Planning and Micromanipulation Using a Learned Model. IEEE Robotics and Automation Letters, 2018, 3, 3089-3096.	5.1	12
35	Design of the Interacting-BoomCopter Unmanned Aerial Vehicle for Remote Sensor Mounting. Journal of Mechanisms and Robotics, 2018, 10, .	2.2	11
36	Design of the $\mu$ MAZE Platform and Microrobots for Independent Control and Micromanipulation Tasks. IEEE Robotics and Automation Letters, 2020, 5, 5677-5684.	5.1	10

#	ARTICLE	IF	CITATIONS
37	Soft Capsule Magnetic Millirobots for Region-Specific Drug Delivery in the Central Nervous System. <i>Frontiers in Robotics and AI</i> , 2021, 8, 702566.	3.2	10
38	Caging grasps for micromanipulation & microassembly. , 2011, , .		9
39	Path Planning and Control for Autonomous Navigation of Single and Multiple Magnetic Mobile Microrobots. , 2015, , .		9
40	Toward a Fully Automated High-Throughput Phototransfection System. <i>Journal of the Association for Laboratory Automation</i> , 2010, 15, 329-341.	2.8	8
41	Incorporating in-situ force sensing capabilities in a magnetic microrobot. , 2014, , .		8
42	Towards a real-time 3D vision-based micro-force sensing probe. <i>Journal of Micro-Bio Robotics</i> , 2020, 16, 23-32.	2.1	7
43	Towards a Comprehensive and Robust Micromanipulation System with Force-Sensing and VR Capabilities. <i>Micromachines</i> , 2021, 12, 784.	2.9	7
44	A Micro-Scale Magnetic Tumbling Microrobot. , 2012, , .		6
45	Tumbling Magnetic Microrobots for Biomedical Applications. , 2019, , .		6
46	Cooperative Micromanipulators for 3D Micromanipulation and Assembly. , 2012, , .		5
47	A Novel Micro Aerial Vehicle Design: The Evolution of the Omnicopter MAV. , 2014, , .		5
48	Stiffness Characterization and Micromanipulation for Biomedical Applications using the Vision-based Force-Sensing Magnetic Mobile Microrobot. , 2020, , .		5
49	Autonomous Door Opening With the Interacting-BoomCopter Unmanned Aerial Vehicle. <i>Journal of Mechanisms and Robotics</i> , 2020, 12, .	2.2	5
50	Modular End-Effector System for Autonomous Robotic Maintenance & Repair. , 2022, , .		5
51	Complete dynamic modeling, control and optimization for an over-actuated MAV. , 2013, , .		4
52	Independent actuation of multiple microrobots using localized magnetic fields. , 2016, , .		4
53	Magnetic mobile microrobots for mechanobiology and automated biomanipulation. , 2017, , 197-219.		4
54	Tumbling Microrobots for Future Medicine. <i>American Scientist</i> , 2018, 106, 210.	0.1	4

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55	Automated Microassembly Sequence Planning With Sub-Assemblies. , 2016, , .		3
56	Development of an Automated Flexible Micro-Soldering Station. , 2017, , .		3
57	Pose-Estimate-Based Target Tracking for Human-Guided Remote Sensor Mounting with a UAV. , 2020, , .		3
58	P-AgBot: In-Row & Under-Canopy Agricultural Robot for Monitoring and Physical Sampling. IEEE Robotics and Automation Letters, 2022, 7, 7942-7949.	5.1	3
59	Design of Compliant Three-Dimensional Printed Surgical End-Effectors for Robotic Lumbar Discectomy. Journal of Mechanisms and Robotics, 2019, 11, .	2.2	2
60	Design of a 3D Vision-based Micro-Force Sensing Probe. , 2019, , .		2
61	3D-Printed Microrobots with Integrated Structural Color for Identification and Tracking. Advanced Intelligent Systems, 2020, 2, 2070052.	6.1	2
62	Dynamic Simulation-Guided Design of Tumbling Magnetic Microrobots. Journal of Mechanisms and Robotics, 2021, 13, .	2.2	2
63	Caging grasps for micromanipulation & microassembly. , 2011, , .		2
64	Going Hands-Free: MagnetoSutureâ„¢ for Untethered Guided Needle Penetration of Human Tissue Ex Vivo. Robotics, 2021, 10, 129.	3.5	2
65	Modeling of Bilayer Hydrogel Springs for Microrobots with Adaptive Locomotion. , 2021, , .		2
66	Modeling, Control and Planning for Multiple Mobile Microrobots. , 2019, , .		1
67	Towards fully automated phototransfection. , 2009, , .		0
68	Design of the I-BoomCopter UAV for Remote Sensor Mounting. , 2017, , .		0