Andrew J Petruska

List of Publications by Year
in descending order

39	1,817	567281 15	477307 29
papers	citations	h-index	g-index

39	39	39	2017
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Active particle tracking microrheology using artificial thermal noise. Journal of Rheology, 2022, 66, 187-195.	2.6	1
2	Locomotion of Sensorâ€Integrated Soft Robotic Devices Inside Subâ€Millimeter Arteries with Impaired Flow Conditions. Advanced Intelligent Systems, 2022, 4, .	6.1	12
3	A Bi-State Shape Memory Material Composite Soft Actuator. Actuators, 2022, 11, 86.	2.3	2
4	Empirically Comparing Magnetic Needle Steering Models Using Expectation-Maximization. Robotics, 2022, 11, 49.	3.5	5
5	Map-Free Lidar Odometry (MFLO) Using a Range Flow Constraint and Point Patch Covariances. IEEE Robotics and Automation Letters, 2022, 7, 10073-10080.	5.1	1
6	Magnetic Control of a Flexible Needle in Neurosurgery. IEEE Transactions on Biomedical Engineering, 2021, 68, 616-627.	4.2	46
7	Unified Parameterization and Calibration of Serial, Parallel, and Hybrid Manipulators. Robotics, 2021, 10, 124.	3.5	5
8	Magnetic Methods in Robotics. Annual Review of Control, Robotics, and Autonomous Systems, 2020, 3, 57-90.	11.8	174
9	A Gesture-Controlled Rehabilitation Robot to Improve Engagement and Quantify Movement Performance. Sensors, 2020, 20, 4269.	3.8	3
10	Open-Loop Orientation Control Using Dynamic Magnetic Fields. IEEE Robotics and Automation Letters, 2020, 5, 5472-5476.	5.1	3
11	Optimal current shell approximation for solenoids of rectangular cross-section. AIP Advances, 2020, 10, .	1.3	1
12	Magnetically Steered Robotic Insertion of Cochlear-Implant Electrode Arrays: System Integration and First-In-Cadaver Results. IEEE Robotics and Automation Letters, 2020, 5, 2240-2247.	5.1	32
13	Magnetic Needle Steering Model Identification Using Expectation-Maximization. , 2019, , .		3
14	Stereo Holographic Diffraction Based Tracking of Microrobots. IEEE Robotics and Automation Letters, 2018, 3, 567-572.	5.1	1
15	A Robotic Diathermy System for Automated Capsulotomy. Journal of Medical Robotics Research, 2018, 03, 1850001.	1.2	6
16	Estimation-Based Control of a Magnetic Endoscope without Device Localization. Journal of Medical Robotics Research, 2018, 03, 1850002.	1.2	36
17	Real-Time Holographic Tracking and Control of Microrobots. IEEE Robotics and Automation Letters, 2017, 2, 143-148.	5.1	15
18	Model-Based Calibration for Magnetic Manipulation. IEEE Transactions on Magnetics, 2017, 53, 1-6.	2.1	50

#	Article	IF	Citations
19	Automated Particle Collection for Protein Crystal Harvesting. IEEE Robotics and Automation Letters, 2017, 2, 1391-1396.	5.1	7
20	Magnetic control of continuum devices. International Journal of Robotics Research, 2017, 36, 68-85.	8.5	125
21	Magnetic microrobots with addressable shape control. , 2016, , .		11
22	Perforation forces of the intact porcine anterior lens capsule. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 62, 347-354.	3.1	4
23	Self-folding hydrogel bilayer for enhanced drug loading, encapsulation, and transport. , 2016, 2016, 2103-2106.		6
24	Soft micromachines with programmable motility and morphology. Nature Communications, 2016, 7, 12263.	12.8	495
25	Catalytic Locomotion of Coreâ€“Shell Nanowire Motors. ACS Nano, 2016, 10, 9983-9991.	14.6	57
26	Magnetically Driven Silverâ€Coated Nanocoils for Efficient Bacterial Contact Killing. Advanced Functional Materials, 2016, 26, 1063-1069.	14.9	118
27	Magnetic needle guidance for neurosurgery: Initial design and proof of concept. , 2016, , .		33
28	3D Printed Microtransporters: Compound Micromachines for Spatiotemporally Controlled Delivery of Therapeutic Agents. Advanced Materials, 2015, 27, 6644-6650.	21.0	192
29	First demonstration of a modular and reconfigurable magnetic-manipulation system. , 2015, , .		21
30	Minimum Bounds on the Number of Electromagnets Required for Remote Magnetic Manipulation. IEEE Transactions on Robotics, 2015, 31, 714-722.	10.3	95
31	Tracking a magnetically guided catheter with a single rotating C-Arm. , 2015, , .		10
32	Remote Manipulation With a Stationary Computer-Controlled Magnetic Dipole Source. IEEE Transactions on Robotics, 2014, 30, 1222-1227.	10.3	25
33	Experimental Investigation of Wire Electrical Discharge Machining of NdFeB Permanent Magnets with an RC-Type Machine. Journal of Materials Engineering and Performance, 2014, 23, 1392-1401.	2.5	11
34	Factors affecting the design of untethered magnetic haptic interfaces. , 2014, , .		14
35	Omnimagnet: An Omnidirectional Electromagnet for Controlled Dipole-Field Generation. IEEE Transactions on Magnetics, 2014, 50, 1-10.	2.1	49
36	Optimal Permanent-Magnet Geometries for Dipole Field Approximation. IEEE Transactions on Magnetics, 2013, 49, 811-819.	2.1	129

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37	An omnidirectional electromagnet for remote manipulation. , 2013, , .		12
38	Non-drifting limb angle measurement relative to the gravitational vector during dynamic motions using accelerometers and rate gyros. , 2011, , .		2
39	Noise, bifurcations, and modeling of interacting particle systems. , 2011, , 3905-3910.		5