

Qingze Zou

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

70
papers

1,674
citations

20
h-index

40
g-index

95
ext. papers

2,046
ext. citations

3.3
avg, IF

4.95
L-index

#	Paper	IF	Citations
70	A Review of Feedforward Control Approaches in Nanopositioning for High-Speed SPM. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2009 , 131,	1.5	225
69	Feedforward control of piezoactuators in atomic force microscope systems. <i>IEEE Control Systems</i> , 2009 , 29, 70-82	1.4	166
68	Iterative control of dynamics-coupling-caused errors in piezoscanners during high-speed AFM operation. <i>IEEE Transactions on Control Systems Technology</i> , 2005 , 13, 921-931	4.3	147
67	Iterative Control Approach to Compensate for Both the Hysteresis and the Dynamics Effects of Piezo Actuators. <i>IEEE Transactions on Control Systems Technology</i> , 2007 , 15, 936-944	4.3	128
66	Preview-Based Stable-Inversion for Output Tracking of Linear Systems. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 1999 , 121, 625-630	1.5	92
65	Preview-based optimal inversion for output tracking: application to scanning tunneling microscopy. <i>IEEE Transactions on Control Systems Technology</i> , 2004 , 12, 375-386	4.3	84
64	A Modeling-Free Inversion-Based Iterative Feedforward Control for Precision Output Tracking of Linear Time-Invariant Systems. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013 , 18, 1767-1777	4.8	77
63	Optimal preview-based stable-inversion for output tracking of nonminimum-phase linear systems. <i>Automatica</i> , 2009 , 45, 230-237	5.1	58
62	Robust Inversion-Based 2-DOF Control Design for Output Tracking: Piezoelectric-Actuator Example. <i>IEEE Transactions on Control Systems Technology</i> , 2009 , 17, 1069-1082	4.3	47
61	A control approach to cross-coupling compensation of piezotube scanners in tapping-mode atomic force microscope imaging. <i>Review of Scientific Instruments</i> , 2009 , 80, 043709	1.6	35
60	Iterative control approach to high-speed force-distance curve measurement using AFM: time-dependent response of PDMS example. <i>Ultramicroscopy</i> , 2008 , 108, 911-20	3	28
59	An Atomic Force Microscope Study Revealed Two Mechanisms in the Effect of Anticancer Drugs on Rate-Dependent Young's Modulus of Human Prostate Cancer Cells. <i>PLoS ONE</i> , 2015 , 10, e0126107	3.6	27
58	A decoupled inversion-based iterative control approach to multi-axis precision positioning: 3D nanopositioning example. <i>Automatica</i> , 2012 , 48, 167-176	5.1	26
57	Broadband measurement of rate-dependent viscoelasticity at nanoscale using scanning probe microscope: Poly(dimethylsiloxane) example. <i>Applied Physics Letters</i> , 2008 , 93, 133103	3.3	24
56	Inversion-based optimal output tracking-transition switching with preview for nonminimum-phase linear systems. <i>Automatica</i> , 2012 , 48, 1364-1371	5.1	23
55	Design and Control of Optimal Scan Trajectories: Scanning Tunneling Microscope Example. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2004 , 126, 187-197	1.5	23
54	High-speed adaptive contact-mode atomic force microscopy imaging with near-minimum-force. <i>Review of Scientific Instruments</i> , 2014 , 85, 073706	1.6	17

53	. <i>IEEE Transactions on Control Systems Technology</i> , 2014 , 22, 1573-1580	4.3	19
52	-spline-decomposition-based output tracking with preview for nonminimum-phase linear systems. <i>Automatica</i> , 2013 , 49, 1295-1303	5.1	18
51	Indentation quantification for in-liquid nanomechanical measurement of soft material using an atomic force microscope: rate-dependent elastic modulus of live cells. <i>Physical Review E</i> , 2013 , 88, 052714	4.1	21
50	Acoustic Softening and Hardening of Aluminum in High-Frequency Vibration-Assisted Micro/Meso Forming. <i>Materials and Manufacturing Processes</i> , 2013 , 28, 584-588	4.1	19
49	An integrated approach to piezoactuator positioning in high-speed atomic force microscope imaging. <i>Review of Scientific Instruments</i> , 2008 , 79, 073704	1.6	17
48	A control approach to high-speed probe-based nanofabrication. <i>Nanotechnology</i> , 2009 , 20, 175301	3.3	19
47	A Control-Based Approach to Accurate Nanoindentation Quantification in Broadband Nanomechanical Measurement Using Scanning Probe Microscope. <i>IEEE Nanotechnology Magazine</i> , 2014 , 13, 46-54	2.5	16
46	A New Approach to Scan-Trajectory Design and Track: AFM Force Measurement Example. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2008 , 130,	1.5	14
45	Design and characterization of a flextensional stage based on Terfenol-D actuator. <i>International Journal of Precision Engineering and Manufacturing</i> , 2014 , 15, 135-141	1.7	13
44	Mechanical-plowing-based high-speed patterning on hard material via advanced-control and ultrasonic probe vibration. <i>Review of Scientific Instruments</i> , 2013 , 84, 113704	1.6	12
43	Control of a Magnetostrictive-Actuator-Based Micromachining System for Optimal High-Speed Microforming Process. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015 , 20, 1046-1055	4.8	10
42	Experimental Study of High-Frequency Vibration Assisted Micro/Mesoscale Forming of Metallic Materials. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2011 , 133,	3.2	12
41	High-speed atomic force microscope imaging: adaptive multiloop mode. <i>Physical Review E</i> , 2014 , 90, 012405	2.4	10
40	Enhanced measurement of broadband nanomechanical property of polymers using atomic force microscope. <i>Applied Physics Letters</i> , 2013 , 102, 183116	3.3	10
39	An Iterative-Based Feedforward-Feedback Control Approach to High-Speed Atomic Force Microscope Imaging. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2009 , 131,	1.5	10
38	Adaptive-scanning, near-minimum-deformation atomic force microscope imaging of soft sample in liquid: Live mammalian cell example. <i>Ultramicroscopy</i> , 2018 , 186, 150-157	3	9
37	Elevating EGFR-MAPK program by a nonconventional Cdc42 enhances intestinal epithelial survival and regeneration. <i>JCI Insight</i> , 2020 , 5,	9.6	8
36	Receptor-mediated endocytosis generates nanomechanical force reflective of ligand identity and cellular property. <i>Journal of Cellular Physiology</i> , 2018 , 233, 5908-5919	6.8	6

35	A model-based approach to compensate for the dynamics convolution effect on nanomechanical property measurement. <i>Journal of Applied Physics</i> , 2010 , 107, 064315	2.4	6
34	Self-limiting electrospray deposition on polymer templates. <i>Scientific Reports</i> , 2020 , 10, 17290	4.7	6
33	Active control of acoustics-caused nano-vibration in atomic force microscope imaging. <i>Ultramicroscopy</i> , 2018 , 195, 101-110	3	4
32	Study of Cholesterol Repletion Effect on Nanomechanical Properties of Human Umbilical Vein Endothelial Cell Via Rapid Broadband Atomic Force Microscopy. <i>Journal of Biomechanical Engineering</i> , 2017 , 139,	2.1	5
31	Optimal time-distributed fast Fourier transform: Application to online iterative learning control. Experimental high-speed nanopositioning example. <i>Mechatronics</i> , 2017 , 41, 114-124	2.8	5
30	Iteration-based Scan-Trajectory Design and Control with Output-Oscillation Minimization: Atomic Force Microscope Example. <i>Proceedings of the American Control Conference</i> , 2007 ,	1.2	5
29	A decomposition-based learning approach to hysteresis-dynamics system control: Piezoelectric actuator example 2015 ,		3
28	A modeling-free differential-inversion-based iterative control approach to simultaneous hysteresis-dynamics compensation: High-speed large-range motion tracking example 2015 ,		3
27	On single-basis online asymptotic trajectory decomposition for control applications 2016 ,		3
26	Simultaneous topography imaging and broadband nanomechanical mapping on atomic force microscope. <i>Nanotechnology</i> , 2017 , 28, 505502	3.3	2
25	On superposition of Hammerstein systems: Application to simultaneous hysteresis-dynamics compensation. <i>International Journal of Robust and Nonlinear Control</i> , 2018 , 28, 4075-4092	3.3	3
24	Optimal Excitation Force Design in Indentation-Based Rapid Broadband Nanomechanical Spectroscopy: Poly(dimethylsiloxane) Example. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 1618-1628	4.3	3
23	High-speed broadband monitoring of cell viscoelasticity in real time shows myosin-dependent oscillations. <i>Biomechanics and Modeling in Mechanobiology</i> , 2017 , 16, 1857-1868	3.7	3
22	Development of High-Throughput Control Techniques for Tip-Based Nanofabrication 2011 , 325-355		3
21	Low power femtosecond tip-based nanofabrication with advanced control. <i>Applied Physics B: Lasers and Optics</i> , 2018 , 124, 1	1.8	2
20	Teaching Modules on Modeling and Control of Piezoactuators for System Dynamics, Controls, and Mechatronics Courses. <i>IEEE Transactions on Education</i> , 2010 , 53, 372-383	1.8	2
19	A current cycle feedback iterative learning control approach to AFM imaging 2008 ,		1
18	An iterative based feedforward-feedback control approach to high-speed AFM imaging 2009 ,		2

17	Inversion-based precision-positioning of switching inertial reaction devices 2004 ,		2
16	Rapid Broadband Discrete Nanomechanical Mapping on Atomic Force Microscope 2019 ,		1
15	High-speed dynamic-mode atomic force microscopy imaging of polymers: an adaptive multiloop-mode approach. <i>Beilstein Journal of Nanotechnology</i> , 2017 , 8, 1563-1570	3	1
14	A decoupled inversion-based iterative control approach to multi-axis precision positioning: 3-d nanopositioning example 2010 ,		1
13	Adaptive Simultaneous Topography and Broadband Nanomechanical Mapping of Heterogeneous Materials on Atomic Force Microscope. <i>IEEE Nanotechnology Magazine</i> , 2020 , 19, 689-698	2.5	1
12	Rapid broadband discrete nanomechanical mapping of soft samples on atomic force microscope. <i>Nanotechnology</i> , 2020 , 31, 335705	3.3	1
11	Rapid Probe Engagement and Withdrawal With Force Minimization in Atomic Force Microscopy: A Learning-Based Online-Searching Approach. <i>IEEE/ASME Transactions on Mechatronics</i> , 2020 , 25, 581-593	4.8	1
10	High speed force-volume mapping using atomic force microscope. 2009 ,		1
9	A control approach to high-speed probe-based nanofabrication 2009 ,		1
8	Robust-inversion-based 2DOF-control design for output tracking: Piezoelectric actuator example 2007 ,		1
7	Iterative Control Approach to High-Speed Force-Distance Curve Measurement Using AFM for Biological Applications 2007 ,		1
6	Iterative control approach to compensate for the hysteresis and the vibrational dynamics effects of piezo actuators 2006 ,		1
5	Multi-objective optimal trajectory design and tracking with non-periodic tracking-transition switching for non-minimum phase linear systems. <i>International Journal of Control</i> , 2016 , 89, 2371-2383	1.4	0
4	Decomposition-Learning-Based Output Tracking to Simultaneous Hysteresis and Dynamics Control: High-Speed Large-Range Nanopositioning Example. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 29, 1775-1782	4.3	0
3	Modeling of Soft Sample Deformation in Atomic Force Microscope Imaging: Live Mammalian Cell Example. <i>Advanced Theory and Simulations</i> , 2019 , 2, 1800036	3.3	
2	Mobile Measurement of a Dynamic Field via Compressed Sensing. <i>IEEE Transactions on Mobile Computing</i> , 2021 , 1-1	3.8	
1	Optimal Data-Driven Difference-Inversion-Based Iterative Control: High-Speed Nanopositioning Tracking Example. <i>IEEE Transactions on Control Systems Technology</i> , 2022 , 1-11	4.3	