

Santosh Devasia

List of Publications by Citations

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76
papers

2,620
citations

21
h-index

50
g-index

85
ext. papers

3,136
ext. citations

3.5
avg. IF

5.43
L-index

#	Paper	IF	Citations
76	A Survey of Control Issues in Nanopositioning. <i>IEEE Transactions on Control Systems Technology</i> , 2007 , 15, 802-823	4.8	723
75	Feedback-Linearized Inverse Feedforward for Creep, Hysteresis, and Vibration Compensation in AFM Piezoactuators. <i>IEEE Transactions on Control Systems Technology</i> , 2007 , 15, 927-935	4.8	278
74	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,	1.6	251
73	A different look at output tracking: control of a vtol aircraft. <i>Automatica</i> , 1996 , 32, 101-107	5.7	234
72	Design of hysteresis-compensating iterative learning control for piezo-positioners: Application to atomic force microscopes. <i>Mechatronics</i> , 2006 , 16, 141-158	3	127
71	High-bandwidth control of a piezoelectric nanopositioning stage in the presence of plant uncertainties. <i>Nanotechnology</i> , 2008 , 19, 125503	3.4	91
70	Piezoelectric actuator design for vibration suppression - Placement and sizing. <i>Journal of Guidance, Control, and Dynamics</i> , 1993 , 16, 859-864	2.1	90
69	Bio-mimetic silicone cilia for microfluidic manipulation. <i>Lab on A Chip</i> , 2009 , 9, 1561-6	7.2	73
68	Optimal output-transitions for linear systems. <i>Automatica</i> , 2003 , 39, 181-192	5.7	70
67	Hysteresis and Vibration Compensation for Piezoactuators. <i>Journal of Guidance, Control, and Dynamics</i> , 1998 , 21, 710-717	2.1	53
66	Precision preview-based stable-inversion for nonlinear nonminimum-phase systems: The VTOL example. <i>Automatica</i> , 2007 , 43, 117-127	5.7	49
65	Characterization of mixing performance for bio-mimetic silicone cilia. <i>Microfluidics and Nanofluidics</i> , 2010 , 9, 645-655	2.8	37
64	Output Tracking with Nonhyperbolic and Near Nonhyperbolic Internal Dynamics: Helicopter Hover Control. <i>Journal of Guidance, Control, and Dynamics</i> , 1997 , 20, 573-580	2.1	33
63	Nonlinear Passive Cam-Based Springs for Powered Ankle Prostheses. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2015 , 9,	1.3	31
62	Exact-output tracking theory for systems with parameter jumps. <i>International Journal of Control</i> , 1997 , 67, 117-131	1.5	28
61	Nonlinear minimum-time control with pre- and post-actuation. <i>Automatica</i> , 2011 , 47, 1379-1387	5.7	27
60	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	1.6	26

59	Mechatronics education in the Department of Mechanical Engineering at the University of Utah. <i>Mechatronics</i> , 2003 , 13, 1-11	3	26
58	Output Tracking for Actuator Deficient/Redundant Systems: Multiple Piezoactuator Example. <i>Journal of Guidance, Control, and Dynamics</i> , 2000 , 23, 370-373	2.1	24
57	Decoupled Conflict-Resolution Procedures for Decentralized Air Traffic Control. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2011 , 12, 422-437	6.1	22
56	Optimal Output Transitions for Dual-Stage Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2008 , 16, 869-881	4.8	21
55	Resistive embedded heating for homogeneous curing of adhesively bonded joints. <i>International Journal of Adhesion and Adhesives</i> , 2015 , 57, 34-39	3.4	19
54	Iterative learning control with time-partitioned update for collaborative output tracking. <i>Automatica</i> , 2016 , 69, 258-264	5.7	19
53	Precision tracking of driving wave forms for inertial reaction devices. <i>Review of Scientific Instruments</i> , 2005 , 76, 023701	1.7	16
52	. <i>IEEE Transactions on Human-Machine Systems</i> , 2016 , 46, 510-521	4.1	14
51	An Efficient Scheduling Algorithm for Multi-Robot Task Allocation in Assembling Aircraft Structures. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 3844-3851	4.2	13
50	Iterative Control for Networked Heterogeneous Multi-Agent Systems With Uncertainties. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 431-437	5.9	12
49	Iterative Control of Piezoactuator for Evaluating Biomimetic, Cilia-Based Micromixing. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013 , 18, 944-953	5.5	11
48	Design of Feedforward Input for Output-Settling Control With Dual-Stage Actuators. <i>IEEE/ASME Transactions on Mechatronics</i> , 2007 , 12, 670-679	5.5	11
47	. <i>IEEE Transactions on Control Systems Technology</i> , 2019 , 27, 516-526	4.8	10
46	Inferring Intent for Novice Human-in-the-Loop Iterative Learning Control. <i>IEEE Transactions on Control Systems Technology</i> , 2017 , 25, 1698-1710	4.8	9
45	On-Demand Conflict Resolution Procedures for Air-Traffic Intersections. <i>IEEE Transactions on Intelligent Transportation Systems</i> , 2014 , 15, 1538-1549	6.1	9
44	Conditions for Image-Based Identification of SPM-Nanopositioner Dynamics. <i>IEEE/ASME Transactions on Mechatronics</i> , 2009 , 14, 405-413	5.5	9
43	. <i>IEEE Transactions on Control Systems Technology</i> , 2007 , 15, 799-801	4.8	9
42	Individually Controllable Magnetic Cilia: Mixing Application. <i>Journal of Medical Devices, Transactions of the ASME</i> , 2017 , 11,	1.3	7

41	Rapid Information Transfer in Swarms Under Update-Rate-Bounds Using Delayed Self-Reinforcement. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2019 , 141,	1.6	6
40	Stability of Velocity Control for a Piezoelectric Stepper. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015 , 20, 910-923	5.5	6
39	Bondline Temperature Control for Joining Composites With an Embedded Heater. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2016 , 138,	3.3	6
38	Output-Boundary Regulation Using Event-Based Feedforward for Nonminimum-Phase Systems. <i>IEEE Transactions on Control Systems Technology</i> , 2016 , 24, 265-275	4.8	6
37	Preliminary Investigation of Symmetry Learning Control for Powered Ankle-Foot Prostheses 2019 ,		6
36	Toward Ergonomic Risk Prediction via Segmentation of Indoor Object Manipulation Actions Using Spatiotemporal Convolutional Networks. <i>IEEE Robotics and Automation Letters</i> , 2019 , 4, 3153-3160	4.2	6
35	Minimum-Time/Energy, Output Transitions for Dual-Stage Systems. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2009 , 131,	1.6	6
34	A comparison of reduced-order modelling techniques for application in hyperthermia control and estimation. <i>International Journal of Hyperthermia</i> , 1998 , 14, 135-56	3.7	6
33	Scalable Low-Cost Unmanned-Aerial-Vehicle Traffic Network. <i>Journal of Air Transportation</i> , 2016 , 24, 74-83	0.6	6
32	Accelerated Consensus for Multi-Agent Networks through Delayed Self Reinforcement 2019 ,		5
31	Data-Inferred Personalized Human-Robot Models for Iterative Collaborative Output Tracking. <i>Journal of Intelligent and Robotic Systems: Theory and Applications</i> , 2018 , 91, 137-153	2.9	5
30	Provably Safe Conflict Resolution With Bounded Turn Rate for Air Traffic Control. <i>IEEE Transactions on Control Systems Technology</i> , 2013 , 21, 2280-2289	4.8	5
29	Inverse dynamics of spatial open-chain flexible manipulators with lumped and distributed actuators. <i>Journal of Field Robotics</i> , 1994 , 11, 327-338		5
28	Inverse control for inferring intent in novice human-in-the-loop iterative learning 2016 ,		4
27	Iterative learning control for human-robot collaborative output tracking 2016 ,		4
26	A Review of Manufacturing Process Control. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2020 , 142,	3.3	4
25	Embedded resistive heating in composite scarf repairs. <i>Journal of Composite Materials</i> , 2017 , 51, 2575-2583	5.8	3
24	Faster Confined Space Manufacturing Teleoperation Through Dynamic Autonomy With Task Dynamics Imitation Learning. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 2357-2364	4.2	3

23	. <i>IEEE/ASME Transactions on Mechatronics</i> , 2018 , 23, 2186-2195	5.5	3
22	Rapid AFM imaging of large soft samples in liquid with small forces. <i>Asian Journal of Control</i> , 2009 , 11, 154-165	1.7	3
21	Flow-capacity-maintaining, decentralized, conflict resolution with aircraft turn dynamics 2011 ,		3
20	Lorentz violation in high-energy ions. <i>European Physical Journal C</i> , 2010 , 69, 343-346	4.2	3
19	Inverse dynamics of articulated flexible structures: Simultaneous trajectory tracking and vibration reduction. <i>Journal of Dynamical and Control Systems</i> , 1994 , 4, 299-309		3
18	Cohesive networks using delayed self reinforcement. <i>Automatica</i> , 2020 , 112, 108699	5.7	3
17	Accelerated-Gradient-Based Flexible-Object Transport With Decentralized Robot Teams. <i>IEEE Robotics and Automation Letters</i> , 2021 , 6, 151-158	4.2	3
16	Faster response in bounded-update-rate, discrete-time linear networks using delayed self-reinforcement. <i>International Journal of Control</i> , 2021 , 94, 1286-1296	1.5	3
15	Boundary Control of Embedded Heaters for Uniform Bondline Temperatures During Composite Joining. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2018 , 140,	3.3	2
14	Faster Response Discrete-Time Networks under Update-Rate Limits 2019 ,		2
13	Low-cost assistive robot for mirror therapy rehabilitation 2017 ,		2
12	AFM imaging of large soft samples in liquid medium using iterative inverse feedforward control 2008 ,		2
11	Cohesive Velocity Transitions in Robotic Platoons Using Nesterov-type Accelerated Delayed Self Reinforcement (A-DSR) 2019 ,		2
10	Kernel-Based Human-Dynamics Inversion for Precision Robot Motion-Primitives 2018 ,		2
9	A scheduling method for multi-robot assembly of aircraft structures with soft task precedence constraints. <i>Robotics and Computer-Integrated Manufacturing</i> , 2021 , 71, 102154	9.2	2
8	Context-Specific Separable Gesture Selection For Control of a Robotic Manufacturing Assistant. <i>IFAC-PapersOnLine</i> , 2019 , 51, 89-96	0.7	1
7	On-demand Conflict Resolution Procedures for Air Traffic intersections 2013 ,		1
6	Minimum-Energy Output Transitions for Linear Discrete-Time Systems: Flexible Structure Applications. <i>Journal of Guidance, Control, and Dynamics</i> , 2004 , 27, 572-585	2.1	1

5	Nonlinear Models for Magnet Placement in Individually Actuated Magnetic Cilia Devices. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2018 , 140,	1.6	1
4	Managing Off-Nominal Events in Shared Teleoperation with Learned Task Compliance 2018 ,		1
3	MIMO ILC using complex-kernel regression and application to Precision SEA robots. <i>Automatica</i> , 2021 , 127, 109550	5.7	0
2	Rapid Transitions With Robust Accelerated Delayed-Self-Reinforcement for Consensus-Based Networks. <i>IEEE Transactions on Control Systems Technology</i> , 2021 , 29, 2115-2128	4.8	0
1	How to Train Your Robot?. <i>Mechanical Engineering</i> , 2017 , 139, S19-S23	0.9	