Santosh Devasia

List of Publications by Year
in descending order

85 papers	3,458 citations	257101 24 h-index	138251 58 g-index
85 all docs	85 docs citations	85 times ranked	1828 citing authors

#	Article	IF	Citations
1	Decentralized Cohesive Response During Transitions for Higher-Order Agents Under Network Delays. IEEE Transactions on Automatic Control, 2022, 67, 6303-6309.	3.6	2
2	Accelerated-Gradient-Based Flexible-Object Transport With Decentralized Robot Teams. IEEE Robotics and Automation Letters, 2021, 6, 151-158.	3.3	6
3	Faster response in bounded-update-rate, discrete-time linear networks using delayed self-reinforcement. International Journal of Control, 2021, 94, 1286-1296.	1.2	7
4	Communication-free Cohesive Flexible-Object Transport using Decentralized Robot Networks. , 2021, , .		3
5	MIMO ILC using complex-kernel regression and application to Precision SEA robots. Automatica, 2021, 127, 109550.	3.0	3
6	Rapid Transitions With Robust Accelerated Delayed-Self-Reinforcement for Consensus-Based Networks. IEEE Transactions on Control Systems Technology, 2021, 29, 2115-2128.	3.2	1
7	A scheduling method for multi-robot assembly of aircraft structures with soft task precedence constraints. Robotics and Computer-Integrated Manufacturing, 2021, 71, 102154.	6.1	13
8	Improving network's transition cohesion by approximating strongly damped waves using delayed self reinforcement. , 2021, , .		0
9	Cohesive networks using delayed self reinforcement. Automatica, 2020, 112, 108699.	3.0	11
10	Faster Confined Space Manufacturing Teleoperation Through Dynamic Autonomy With Task Dynamics Imitation Learning. IEEE Robotics and Automation Letters, 2020, 5, 2357-2364.	3.3	11
11	A Review of Manufacturing Process Control. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	1.3	14
12	Iterative Machine Learning for Output Tracking. IEEE Transactions on Control Systems Technology, 2019, 27, 516-526.	3.2	24
13	Faster Response Discrete-Time Networks under Update-Rate Limits. , 2019, , .		2
14	Preliminary Investigation of Symmetry Learning Control for Powered Ankle-Foot Prostheses. , 2019, , .		11
15	Toward Ergonomic Risk Prediction via Segmentation of Indoor Object Manipulation Actions Using Spatiotemporal Convolutional Networks. IEEE Robotics and Automation Letters, 2019, 4, 3153-3160.	3.3	17
16	Accelerated Consensus for Multi-Agent Networks through Delayed Self Reinforcement. , 2019, , .		6
17	An Efficient Scheduling Algorithm for Multi-Robot Task Allocation in Assembling Aircraft Structures. IEEE Robotics and Automation Letters, 2019, 4, 3844-3851.	3.3	31
18	Context-Specific Separable Gesture Selection For Control of a Robotic Manufacturing Assistant. IFAC-PapersOnLine, 2019, 51, 89-96.	0.5	2

#	ARTICLE	IF	CITATIONS
19	Rapid Information Transfer in Swarms Under Update-Rate-Bounds Using Delayed Self-Reinforcement. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	8
20	Cohesive Velocity Transitions in Robotic Platoons Using Nesterov-type Accelerated Delayed Self Reinforcement (A-DSR). , 2019, , .		2
21	Data-Inferred Personalized Human-Robot Models for Iterative Collaborative Output Tracking. Journal of Intelligent and Robotic Systems: Theory and Applications, 2018, 91, 137-153.	2.0	6
22	Nonlinear Models for Magnet Placement in Individually Actuated Magnetic Cilia Devices. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2018, 140, .	0.9	1
23	Kernel-Based Human-Dynamics Inversion for Precision Robot Motion-Primitives. , 2018, , .		2
24	Managing Off-Nominal Events in Shared Teleoperation with Learned Task Compliance. , 2018, , .		1
25	Guest editorial: focused section on human-centered robotics. International Journal of Intelligent Robotics and Applications, 2018, 2, 133-135.	1.6	1
26	Application of Iterative Machine Learning for Output Tracking With Magnetic Soft Actuators. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2186-2195.	3.7	8
27	Boundary Control of Embedded Heaters for Uniform Bondline Temperatures During Composite Joining. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	1.3	2
28	Iterative Control for Networked Heterogeneous Multi-Agent Systems With Uncertainties. IEEE Transactions on Automatic Control, 2017, 62, 431-437.	3.6	21
29	Inferring Intent for Novice Human-in-the-Loop Iterative Learning Control. IEEE Transactions on Control Systems Technology, 2017, 25, 1698-1710.	3.2	14
30	Embedded resistive heating in composite scarf repairs. Journal of Composite Materials, 2017, 51, 2575-2583.	1.2	7
31	Individually Controllable Magnetic Cilia: Mixing Application. Journal of Medical Devices, Transactions of the ASME, 2017, 11, .	0.4	10
32	Low-cost assistive robot for mirror therapy rehabilitation. , 2017, , .		2
33	How to Train Your Robot?. Mechanical Engineering, 2017, 139, S19-S23.	0.0	0
34	Scalable Low-Cost Unmanned-Aerial-Vehicle Traffic Network. Journal of Air Transportation, 2016, 24, 74-83.	1.0	9
35	Inverse control for inferring intent in novice human-in-the-loop iterative learning. , 2016, , .		4
36	Iterative learning control for human-robot collaborative output tracking. , 2016, , .		7

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37	Iterative Learning From Novice Human Demonstrations for Output Tracking. IEEE Transactions on Human-Machine Systems, 2016, 46, 510-521.	2.5	26
38	Bondline Temperature Control for Joining Composites With an Embedded Heater. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016, 138, .	1.3	6
39	Output-Boundary Regulation Using Event-Based Feedforward for Nonminimum-Phase Systems. IEEE Transactions on Control Systems Technology, 2016, 24, 265-275.	3.2	10
40	Iterative learning control with time-partitioned update for collaborative output tracking. Automatica, 2016, 69, 258-264.	3.0	26
41	Stability of Velocity Control for a Piezoelectric Stepper. IEEE/ASME Transactions on Mechatronics, 2015, 20, 910-923.	3.7	7
42	Nonlinear Passive Cam-Based Springs for Powered Ankle Prostheses. Journal of Medical Devices, Transactions of the ASME, 2015, 9, .	0.4	41
43	Output-boundary regulation for nonminimum-phase systems. , 2015, , .		1
44	Resistive embedded heating for homogeneous curing of adhesively bonded joints. International Journal of Adhesion and Adhesives, 2015, 57, 34-39.	1.4	25
45	On-Demand Conflict Resolution Procedures for Air-Traffic Intersections. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 1538-1549.	4.7	11
46	Iterative Control of Piezoactuator for Evaluating Biomimetic, Cilia-Based Micromixing. IEEE/ASME Transactions on Mechatronics, 2013, 18, 944-953.	3.7	17
47	Provably Safe Conflict Resolution With Bounded Turn Rate for Air Traffic Control. IEEE Transactions on Control Systems Technology, 2013, 21, 2280-2289.	3.2	5
48	On-demand Conflict Resolution Procedures for Air Traffic intersections. , 2013, , .		1
49	Iterative inversion-based control of piezoactuator for evaluating cilia-based micro-mixing. , 2012, , .		0
50	Decoupled Conflict-Resolution Procedures for Decentralized Air Traffic Control. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 422-437.	4.7	26
51	Nonlinear minimum-time control with pre- and post-actuation. Automatica, 2011, 47, 1379-1387.	3.0	37
52	Flow-capacity-maintaining, decentralized, conflict resolution with aircraft turn dynamics. , 2011, , .		4
53	Modeling and feedforward control of a large-range, piezo nano-stepper. , 2011, , .		0
54	Lorentz violation in high-energy ions. European Physical Journal C, 2010, 69, 343-346.	1.4	4

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55	Characterization of mixing performance for bio-mimetic silicone cilia. Microfluidics and Nanofluidics, 2010, 9, 645-655.	1.0	42
56	Nonlinear minimum-time feedforward control for output transition with pre- and post-actuation. , 2010, , .		0
57	Minimum-Time/Energy, Output Transitions for Dual-Stage Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2009, 131, .	0.9	8
58	A Review of Feedforward Control Approaches in Nanopositioning for High-Speed SPM. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2009, 131, .	0.9	329
59	Rapid AFM imaging of large soft samples in liquid with small forces. Asian Journal of Control, 2009, 11, 154-165.	1.9	5
60	Bio-mimetic silicone cilia for microfluidic manipulation. Lab on A Chip, 2009, 9, 1561.	3.1	83
61	Conditions for Image-Based Identification of SPM-Nanopositioner Dynamics. IEEE/ASME Transactions on Mechatronics, 2009, 14, 405-413.	3.7	13
62	Optimal Output Transitions for Dual-Stage Systems. IEEE Transactions on Control Systems Technology, 2008, 16, 869-881.	3.2	27
63	High-bandwidth control of a piezoelectric nanopositioning stage in the presence of plant uncertainties. Nanotechnology, 2008, 19, 125503.	1.3	111
64	AFM imaging of large soft samples in liquid medium using iterative inverse feedforward control. , 2008, , .		3
65	Feedforward input design for minimum-time/energy, output transitions for dual-stage systems. , 2008, , .		1
66	Guest Editorial Introduction to the Special Issue on Dynamics and Control of Micro- and Nanoscale Systems. IEEE Transactions on Control Systems Technology, 2007, 15, 799-801.	3.2	14
67	Design of Feedforward Input for Output-Settling Control With Dual-Stage Actuators. IEEE/ASME Transactions on Mechatronics, 2007, 12, 670-679.	3.7	14
68	Feedback-Linearized Inverse Feedforward for Creep, Hysteresis, and Vibration Compensation in AFM Piezoactuators. IEEE Transactions on Control Systems Technology, 2007, 15, 927-935.	3.2	342
69	A Survey of Control Issues in Nanopositioning. IEEE Transactions on Control Systems Technology, 2007, 15, 802-823.	3.2	934
70	Precision preview-based stable-inversion for nonlinear nonminimum-phase systems: The VTOL example. Automatica, 2007, 43, 117-127.	3.0	71
71	Design of hysteresis-compensating iterative learning control for piezo-positioners: Application to atomic force microscopes. Mechatronics, 2006, 16, 141-158.	2.0	153
72	Precision tracking of driving wave forms for inertial reaction devices. Review of Scientific Instruments, 2005, 76, 023701.	0.6	23

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73	Design and Control of Optimal Scan Trajectories: Scanning Tunneling Microscope Example. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2004, 126, 187-197.	0.9	30
74	Minimum-Energy Output Transitions for Linear Discrete-Time Systems: Flexible Structure Applications. Journal of Guidance, Control, and Dynamics, 2004, 27, 572-585.	1.6	6
75	Mechatronics education in the Department of Mechanical Engineering at the University of Utah. Mechatronics, 2003, 13, 1-11.	2.0	37
76	Optimal output-transitions for linear systems. Automatica, 2003, 39, 181-192.	3.0	101
77	Output Tracking for Actuator Deficient/Redundant Systems: Multiple Piezoactuator Example. Journal of Guidance, Control, and Dynamics, 2000, 23, 370-373.	1.6	28
78	A comparison of reduced-order modelling techniques for application in hyperthermia control and estimation. International Journal of Hyperthermia, 1998, 14, 135-156.	1.1	6
79	Hysteresis and Vibration Compensation for Piezoactuators. Journal of Guidance, Control, and Dynamics, 1998, 21, 710-717.	1.6	68
80	Exact-output tracking theory for systems with parameter jumps. International Journal of Control, 1997, 67, 117-131.	1.2	32
81	Output Tracking with Nonhyperbolic and Near Nonhyperbolic Internal Dynamics: Helicopter Hover Control. Journal of Guidance, Control, and Dynamics, 1997, 20, 573-580.	1.6	47
82	A different look at output tracking: control of a vtol aircraft. Automatica, 1996, 32, 101-107.	3.0	293
83	Inverse dynamics of articulated flexible structures: Simultaneous trajectory tracking and vibration reduction. Journal of Dynamical and Control Systems, 1994, 4, 299-309.	0.4	3
84	Inverse dynamics of spatial open-chain flexible manipulators with lumped and distributed actuators. Journal of Field Robotics, 1994, 11, 327-338.	0.7	6
85	Piezoelectric actuator design for vibration suppression - Placement and sizing. Journal of Guidance, Control, and Dynamics, 1993, 16, 859-864.	1.6	112