Prabhakar Pagilla

List of Publications by Year
in descending order

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104	1,263	430442	454577
papers	citations	18 h-index	30 g-index

105	105	105	829
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Benefits of V2V Communication for Autonomous and Connected Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 1954-1963.	4.7	129
2	A Decentralized Model Reference Adaptive Controller for Large-Scale Systems. IEEE/ASME Transactions on Mechatronics, 2007, 12, 154-163.	3.7	88
3	A stable transition controller for constrained robots. IEEE/ASME Transactions on Mechatronics, 2001, 6, 65-74.	3.7	52
4	Output Regulation of Nonlinear Systems With Application to Roll-to-Roll Manufacturing Systems. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1089-1098.	3.7	49
5	Periodic event-triggered dynamic output feedback control of switched systems. Nonlinear Analysis: Hybrid Systems, 2019, 31, 247-264.	2.1	49
6	Design and implementation of adaptive PI control schemes for web tension control in roll-to-roll (R2R) manufacturing. ISA Transactions, 2015, 56, 276-287.	3.1	45
7	Periodic Tension Disturbance Attenuation in Web Process Lines Using Active Dancers. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2003, 125, 361-371.	0.9	43
8	Robotic Surface Finishing Processes: Modeling, Control, and Experiments. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2001, 123, 93-102.	0.9	42
9	Effect of Cognitive Fatigue, Operator Sex, and Robot Assistance on Task Performance Metrics, Workload, and Situation Awareness in Human-Robot Collaboration. IEEE Robotics and Automation Letters, 2021, 6, 3049-3056.	3.3	42
10	Robust observer-based control of an aluminum strip processing line. IEEE Transactions on Industry Applications, 2000, 36, 865-870.	3.3	40
11	Dynamic Output Feedback Asynchronous Control of Networked Markovian Jump Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2020, 50, 2705-2715.	5.9	40
12	Controller and observer design for Lipschitz nonlinear systems. , 2004, , .		39
13	An Experimental Study of Planar Impact of a Robot Manipulator. IEEE/ASME Transactions on Mechatronics, 2004, 9, 123-128.	3.7	34
14	Limitations of employing undirected information flow graphs for the maintenance of rigid formations for heterogeneous vehicles. International Journal of Engineering Science, 2010, 48, 1164-1178.	2.7	28
15	Dynamics and control of accumulators in continuous strip processing lines. IEEE Transactions on Industry Applications, 2001, 37, 934-940.	3.3	22
16	Adaptive Estimation of Time-Varying Parameters in Linearly Parametrized Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2006, 128, 691-695.	0.9	22
17	Fixed-Order H_{infty} Tension Control in the Unwinding Section of a Web Handling System Using a Pendulum Dancer. IEEE Transactions on Control Systems Technology, 2011, , .	3.2	22
18	Robust observer-based control of an aluminum strip processing line. , 0, , .		21

#	Article	IF	Citations
19	Task Learning, Intent Prediction, and Adaptive Blended Shared Control With Application to Excavators. IEEE Transactions on Control Systems Technology, 2021, 29, 18-28.	3.2	20
20	Vehicle Platooning with Multiple Vehicle Look-ahead Information. IFAC-PapersOnLine, 2017, 50, 5768-5773.	0.5	19
21	Static and dynamic friction compensation in trajectory tracking control of robots. , 0, , .		18
22	Reactive Power Control for Multiple Synchronous Generators Connected in Parallel. IEEE Transactions on Power Systems, 2016, 31, 4371-4378.	4.6	18
23	Blended Shared Control of a Hydraulic Excavator. IFAC-PapersOnLine, 2017, 50, 14928-14933.	0.5	18
24	Adaptive control of robotic surface finishing processes. , 2001, , .		16
25	Optimal Web Guiding. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2010, 132, .	0.9	15
26	Dual-edge robotic gear chamfering with registration error compensation. Robotics and Computer-Integrated Manufacturing, 2021, 69, 102082.	6.1	15
27	Modeling of Temperature Distribution in Moving Webs in Roll-to-Roll Manufacturing. Journal of Thermal Science and Engineering Applications, 2014, 6, .	0.8	14
28	A Review of Manufacturing Process Control. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	1.3	14
29	Intent aware shared control in off-nominal situations. , 2016, , .		13
30	Vehicle platooning with constant spacing strategies and multiple vehicle look ahead information. IET Intelligent Transport Systems, 2020, 14, 589-600.	1.7	13
31	A Novel Robotic System for Finishing of Freeform Surfaces. , 2019, , .		12
32	Modeling and Analysis of Web Span Tension Dynamics Considering Thermal and Viscoelastic Effects in Roll-to-Roll Manufacturing. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	1.3	11
33	A Design Technique for Multirate Linear Systems. IEEE Transactions on Control Systems Technology, 2009, 17, 1342-1349.	3.2	10
34	Location of optical mouse sensors on mobile robots for odometry. , 2010, , .		10
35	Robust repetitive control of semi-Markovian jump systems. International Journal of Systems Science, 2019, 50, 116-129.	3.7	10
36	Effect of Compliance and Backlash on the Output Speed of a Mechanical Transmission System. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2012, 134, .	0.9	9

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37	Dissipativity-Based Asynchronous Repetitive Control for Networked Markovian Jump Systems: 2-D System Approach. IEEE Transactions on Control of Network Systems, 2020, 7, 1212-1224.	2.4	9
38	A novel 3D path following control framework for robots performing surface finishing tasks. Mechatronics, 2021, 76, 102540.	2.0	9
39	Dynamics and control of accumulators in continuous strip processing lines. , 0, , .		8
40	Design and implementation of a robust switching control scheme for a class of constrained robot tasks. International Journal of Systems Science, 2006, 37, 303-321.	3.7	8
41	Uniform Coverage Tool Path Generation for Robotic Surface Finishing of Curved Surfaces. IEEE Robotics and Automation Letters, 2022, 7, 4931-4938.	3.3	8
42	Adaptive Controller and Observer Design for a Class of Nonlinear Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2006, 128, 712-717.	0.9	7
43	H<inf>∞</inf> unwinding web tension control of a strip processing plant using a pendulum dancer. , 2009, , .		7
44	Analysis and Minimization of Interaction in Decentralized Control Systems With Application to Roll-to-Roll Manufacturing. IEEE Transactions on Control Systems Technology, 2014, 22, 520-530.	3.2	7
45	Methods for Blended Shared Control of Hydraulic Excavators with Learning and Prediction. , 2018, , .		7
46	A thermomechanical and photochemical description of the phase change process in roll-to-roll nanoimprinting lithography. International Journal of Engineering Science, 2021, 169, 103564.	2.7	7
47	Mechatronic design and control of a robot system interacting with an external environment. Mechatronics, 2002, 12, 791-811.	2.0	6
48	Blended Shared Control with Subgoal Adjustment. , 2018, , .		6
49	Robotic deburring and chamfering of complex geometries in high-mix/low-volume production applications. , 2020, , .		6
50	Design and Development of a New Edge Sensor for Web Guiding. IEEE Sensors Journal, 2007, 7, 698-706.	2.4	5
51	Distributed Constraint Force Approach for Coordination of Multiple Mobile Robots. Journal of Intelligent and Robotic Systems: Theory and Applications, 2009, 56, 5-21.	2.0	5
52	Effect of backlash on web tension in roll-to-roll manufacturing systems: Mathematical model, mitigation method and experimental evaluation. , 2013, , .		5
53	Design of a model-based observer for estimation of steel strip tension in continuous galvanizing/annealing lines. , 2016, , .		5
54	Asynchronous repetitive control of switched systems via periodic event-based dynamic output feedback. IMA Journal of Mathematical Control and Information, 2020, 37, 644-673.	1.1	5

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55	Path-constrained optimal trajectory planning for robot manipulators with obstacle avoidance. , 2021, , .		5
56	Path-Constrained and Collision-Free Optimal Trajectory Planning for Robot Manipulators. IEEE Transactions on Automation Science and Engineering, 2023, 20, 763-774.	3.4	5
57	A 3D Path Following Control Scheme for Robot Manipulators. IFAC-PapersOnLine, 2020, 53, 9968-9973.	0.5	4
58	View Planning for Object Pose Estimation Using Point Clouds: An Active Robot Perception Approach. IEEE Robotics and Automation Letters, 2022, 7, 9248-9255.	3.3	4
59	Design and experimental evaluation of a stable transition controller for geometrically constrained robots. , 0, , .		3
60	A study on control of accumulators in web processing lines. , 0, , .		3
61	A decentralized output feedback controller for a class of large-scale interconnected nonlinear systems. , 2004, , .		3
62	A note on the necessary conditions for the algebraic Riccati equation. IMA Journal of Mathematical Control and Information, 2005, 22, 181-186.	1.1	3
63	Load speed regulation in compliant mechanical transmission systems using feedback and feedforward control actions. ISA Transactions, 2016, 63, 355-364.	3.1	3
64	Two-Channel Periodic Event-Triggered Observer-Based Repetitive Control for Periodic Reference Tracking. , 2018, , .		3
65	Periodic event-based asynchronous filtering of switched systems. Journal of the Franklin Institute, 2019, 356, 10058-10075.	1.9	3
66	Adaptive control of time-varying mechanical systems: modeling, controller design and experiments. , 0, , .		2
67	An experimental study of planar impact of a robot manipulator. , 0, , .		2
68	A switching control scheme for constrained robot tasks. , 0, , .		2
69	Semi-globally stable decentralized control of a class of large-scale interconnected nonlinear systems. , 0, , .		2
70	Control of a Magnetized Spherical Particle Utilizing a Minimum Coil Set. Proceedings of the American Control Conference, 2007, , .	0.0	2
71	Modeling and design of LTI controllers for multirate systems. , 2009, , .		2
72	Repetitive Control of Discrete-Time Markov Jump Linear Systems. , 2018, , .		2

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73	Collaborative Operation of Robotic Manipulators with Human Intent Prediction and Shared Control. , 2020, , .		2
74	Subgoal Learning via Operator Command Quantification for Human-Machine Shared Control Task Modeling. , 2020, , .		2
75	A Novel Path Following Scheme for Robot End-Effectors. , 2020, , .		2
76	State-Estimator-Based Asynchronous Repetitive Control of Discrete-Time Markovian Switching Systems. Complexity, 2020, 2020, 1-13.	0.9	2
77	Event-triggered equivalent-input-disturbance estimation and control for disturbance attenuation. IFAC Journal of Systems and Control, 2021, 16, 100137.	1.1	2
78	The next-best-view for workpiece localization in robot workspace. , 2021, , .		2
79	Analysis and control of a class of large-scale interconnected nonlinear systems. , 1998, , .		1
80	Adaptive control of a robot carrying a time-varying payload. , 0, , .		1
81	Design and seek control of a disc drive actuator with nonlinear magnetic bias. , 2004, , .		1
82	Uncontrollable Singularities in Nonlinear Systems. , 2006, , .		1
83	Modeling and Analysis of a Permanently Magnetized Sphere's Motion Facilitated by Field Manipulation. , 2006, , .		1
84	Distributed Formation control of multiple aircraft using constraint forces. , 2008, , .		1
85	Fiber-Optic Sensor for Web Velocity Measurement. IEEE Sensors Journal, 2008, 8, 1099-1104.	2.4	1
86	Fault tolerant robust flight control using surface actuator hinge moments. , 2008, , .		1
87	An interaction metric for decentralized control systems based on the Perron root. , 2010, , .		1
88	Modeling and Control of Web Lateral Dynamics in Roll-to-Roll Manufacturing: New Governing Equations and Control Strategies. , 2018, , .		1
89	Periodic Event-Triggered Dynamic Output Feedback Dissipative Control With Stochastic Detection. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 1069-1073.	2.2	1
90	Operator Intent Prediction with Subgoal Transition Probability Learning for Shared Control Applications. , 2020, , .		1

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91	Blended Shared Control in Collaborative Robotics. , 2021, , 153-186.		1
92	Shared Control With Efficient Subgoal Identification and Adjustment for Humanâ€“Robot Collaborative Tasks. IEEE Transactions on Control Systems Technology, 2022, 30, 326-335.	3.2	1
93	A novel force and motion control strategy for robotic chamfering of gears. IFAC-PapersOnLine, 2020, 53, 8710-8715.	0.5	1
94	A novel path following control framework for robot manipulators using a rotation minimizing frame. , 2021, , .		1
95	Adaptive controller and observer design for a class of nonlinear systems. , 0, , .		0
96	Bounds on the solution of the time-varying linear matrix differential equation P/spl dot/ (t) = A/sup H/(t)P(t) +P(t)A(t) + Q(t). , 2004, , .		0
97	Robust H<inf>∞</inf> fixed order control strategies for large scale web winding systems. , 2006, , .		0
98	Output feedback control for disk drive commutational ramp loading. , 2006, , .		0
99	Design and Analysis of a Disk Drive Actuator for Commutational Ramp Loading. Journal of Mechanical Design, Transactions of the ASME, 2007, 129, 346-360.	1.7	0
100	Commutational Output Feedback Control for Disk Drive Ramp Loading. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2008, 130, .	0.9	0
101	Web Flutter Measurement Sensor. IEEE Sensors Journal, 2009, 9, 834-835.	2.4	0
102	Input-state model matching for multirate systems. , 2011, , .		0
103	Modeling and analysis of a rotating turret winder in roll-to-roll manufacturing systems. , 2013, , .		0
104	Preview Control of Switched Systems. , 2019, , .		0