Indra Narayan Kar

List of Publications by Year
in descending order

157 papers	2,625 citations	185998 28 h-index	223531 46 g-index
159 all docs	159 docs citations	159 times ranked	1920 citing authors

#	ARTICLE	IF	CITATIONS
1	Design and implementation of an adaptive fuzzy logic-based controller for wheeled mobile robots. IEEE Transactions on Control Systems Technology, 2006, 14, 501-510.	3.2	275
2	Combined MRAC for Unknown MIMO LTI Systems With Parameter Convergence. IEEE Transactions on Automatic Control, 2018, 63, 283-290.	3.6	115
3	On-line system identification of complex systems using Chebyshev neural networks. Applied Soft Computing Journal, 2007, 7, 364-372.	4.1	101
4	Adaptive-Robust Time-Delay Control for a Class of Uncertain Euler–Lagrange Systems. IEEE Transactions on Industrial Electronics, 2017, 64, 7109-7119.	5.2	88
5	Adaptive–Robust Control of Euler–Lagrange Systems With Linearly Parametrizable Uncertainty Bound. IEEE Transactions on Control Systems Technology, 2018, 26, 1842-1850.	3.2	87
6	Simple neuron-based adaptive controller for a nonholonomic mobile robot including actuator dynamics. Neurocomputing, 2006, 69, 2140-2151.	3.5	72
7	Non-linear HVAC computations using least square support vector machines. Energy Conversion and Management, 2009, 50, 1411-1418.	4.4	72
8	Adaptive output feedback tracking control of robot manipulators using position measurements only. Expert Systems With Applications, 2008, 34, 2789-2798.	4.4	71
9	Bounded robust control of nonlinear systems using neural network–based HJB solution. Neural Computing and Applications, 2011, 20, 91-103.	3.2	70
10	Bending and torsional vibration control of a flexible plate structure using H/sub â˘ž/-based robust control law. IEEE Transactions on Control Systems Technology, 2000, 8, 545-553.	3.2	64
11	Observer-based synchronization scheme for a class ofÂchaotic systems using contraction theory. Nonlinear Dynamics, 2011, 63, 429-445.	2.7	61
12	Multimode vibration control of a flexible structure using H/sub â˘ž/-based robust control. IEEE/ASME Transactions on Mechatronics, 2000, 5, 23-31.	3.7	56
13	Fixed final time optimal control approach for bounded robust controller design using Hamilton–Jacobi–Bellman solution. IET Control Theory and Applications, 2009, 3, 1183-1195.	1.2	50
14	Adaptive sliding mode control of a class of nonlinear systems with artificial delay. Journal of the Franklin Institute, 2017, 354, 8156-8179.	1.9	49
15	Adaptive control of robot manipulators using fuzzy logic systems under actuator constraints. Fuzzy Sets and Systems, 2005, 152, 651-664.	1.6	48
16	Robust linear quadratic Gaussian–based discrete mode wide area power system damping controller. IET Generation, Transmission and Distribution, 2016, 10, 1470-1478.	1.4	47
17	Composite Adaptive Control of Uncertain Euler–Lagrange Systems with Parameter Convergence without PE Condition. Asian Journal of Control, 2020, 22, 1-10.	1.9	46
18	Estimation of furnace exit gas temperature (FEGT) using optimized radial basis and back-propagation neural networks. Energy Conversion and Management, 2008, 49, 1989-1998.	4.4	45

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19	Smoothing of wind power using flywheel energy storage system. IET Renewable Power Generation, 2017, 11, 289-298.	1.7	38
20	Analysis and Design of a Wide-Area Damping Controller for Inter-Area Oscillation With Artificially Induced Time Delay. IEEE Transactions on Smart Grid, 2019, 10, 3654-3663.	6.2	38
21	Design of Asymptotically Convergent Frequency Estimator Using Contraction Theory. IEEE Transactions on Automatic Control, 2008, 53, 1932-1937.	3.6	37
22	Sliding Mode Control of Planar Snake Robot With Uncertainty Using Virtual Holonomic Constraints. IEEE Robotics and Automation Letters, 2017, 2, 1077-1084.	3.3	37
23	Stabilization of Uncertain Discrete-Time Linear System With Limited Communication. IEEE Transactions on Automatic Control, 2017, 62, 4727-4733.	3.6	36
24	Adaptive-Robust Control of a Class of EL Systems With Parametric Variations Using Artificially Delayed Input and Position Feedback. IEEE Transactions on Control Systems Technology, 2019, 27, 603-615.	3.2	36
25	Contraction theory based adaptive synchronization of chaotic systems. Chaos, Solitons and Fractals, 2009, 41, 2437-2447.	2.5	35
26	Wind Turbine Structural Modeling Consideration for Dynamic Studies of DFIG Based System. IEEE Transactions on Sustainable Energy, 2017, 8, 1463-1472.	5.9	35
27	Adaptive robust tracking control of a class of nonlinear systems with input delay. Nonlinear Dynamics, 2016, 85, 1127-1139.	2.7	34
28	Adaptive stick–slip friction and backlash compensation using dynamic fuzzy logic system. Applied Soft Computing Journal, 2005, 6, 26-37.	4.1	33
29	Toward Position-Only Time-Delayed Control for Uncertain Euler–Lagrange Systems: Experiments on Wheeled Mobile Robots. IEEE Robotics and Automation Letters, 2017, 2, 1925-1932.	3.3	32
30	Nonlinear System Identification using Neural Networks. IETE Journal of Research, 2007, 53, 35-42.	1.8	31
31	Contraction theory-based recursive design of stabilising controller for a class of non-linear systems. IET Control Theory and Applications, 2010, 4, 1005-1018.	1.2	29
32	Parameter convergence via a novel PI-like composite adaptive controller for uncertain Euler-Lagrange systems. , 2016, , .		27
33	Contraction based adaptive control of a class of nonlinear systems. , 2009, , .		26
34	Stability enhancement of DFIG–based wind turbine system through linear quadratic regulator. IET Generation, Transmission and Distribution, 2018, 12, 1331-1338.	1.4	24
35	State Space Based Modeling and Performance Evaluation of an Air-Conditioning System. HVAC and R Research, 2008, 14, 797-816.	0.9	21
36	Aerodynamic parameter estimation using adaptive unscented Kalman filter. Aircraft Engineering and Aerospace Technology, 2013, 85, 267-279.	0.8	21

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37	Iterative learning control scheme for manipulators including actuator dynamics. Mechanism and Machine Theory, 2004, 39, 1367-1384.	2.7	20
38	Synchronization of Coupled Oscillator Dynamics. IFAC-PapersOnLine, 2016, 49, 320-325.	0.5	19
39	Contraction-based stabilisation of nonlinear singularly perturbed systems and application to high gain feedback. International Journal of Control, 2017, 90, 1778-1792.	1.2	19
40	Robust Absolute Stability Criteria for Uncertain Lurie System With Interval Time-Varying Delay. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2014, 136, .	0.9	18
41	Adaptive-Robust Control of uncertain Euler-Lagrange systems with past data: A time-delayed approach. , 2016, , .		17
42	Event‐triggered communication in wide‐area damping control: a limited output feedback‐based approach. IET Generation, Transmission and Distribution, 2016, 10, 4094-4104.	1.4	16
43	A Double-Layered Artificial Delay-Based Approach for Maneuvering Control of Planar Snake Robots. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	16
44	Identification of Aerodynamic Derivatives of a Flexible Aircraft. Journal of Aircraft, 2012, 49, 654-658.	1.7	15
45	Parametric convergence and control of chaotic system using adaptive feedback linearization. Chaos, Solitons and Fractals, 2009, 40, 1475-1483.	2.5	14
46	Robust control of nonholonomic wheeled mobile robot with past information: Theory and experiment. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2017, 231, 178-188.	0.7	14
47	Eigenvalue sensitivity analysis based optimized control of wind energy conversion systems. , 2016, , .		13
48	Robust Dynamic Event-triggered Control for Linear Uncertain System. IFAC-PapersOnLine, 2016, 49, 207-212.	0.5	13
49	An artificial delay based robust guidance strategy for an interceptor with input saturation. ISA Transactions, 2021, 109, 34-48.	3.1	13
50	An event-triggered based robust control of robot manipulator. , 2014, , .		12
51	Small signal stability improvement of a grid connected DFIG through Quadratic Regulator. , 2016, , .		12
52	Adaptive Discrete-Time Higher Order Sliding Mode. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 612-616.	2.2	12
53	Re-entry trajectory tracking of reusable launch vehicle using artificial delay based robust guidance law. Advances in Space Research, 2021, 67, 557-570.	1.2	11
54	Estimating Compressor Discharge Pressure of Gas Turbine Power Plant Using Type-2 Fuzzy Logic Systems. , 2006, , .		10

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55	Artificial Neural Networks for Prediction of Efficiency and NOx Emission of a Spark Ignition Engine. , 0, , .		10
56	Adaptive control of wing rock system in uncertain environment using contraction theory. , 2008, , .		10
57	Contraction Theory Approach to Disturbance Observer Based Filtered Backstepping Design. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2019, 141, .	0.9	10
58	Sliding mode control of uncertain fractional order systems with delay. International Journal of Control, 2020, 93, 934-943.	1.2	10
59	High Gain Observer-Based Saturated Controller for Feedback Linearizable System. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 122-126.	2.2	10
60	Maneuvering control of planar snake robot: An adaptive robust approach with artificial time delay. International Journal of Robust and Nonlinear Control, 2021, 31, 3982-3999.	2.1	10
61	Analysis of Multidimensional Time Delay Systems Using Lambert W Function. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2017, 139, .	0.9	10
62	Adaptive Control Of Robot Manipulators Using CNN Under Actuator Constraints. , 0, , .		9
63	Experience inclusion in iterative learning controllers: Fuzzy model based approaches. Engineering Applications of Artificial Intelligence, 2008, 21, 578-590.	4.3	9
64	Time-Scale Redesign-Based Saturated Controller Synthesis for a Class of MIMO Nonlinear Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 4681-4692.	5.9	9
65	Chaotic Synchronization and Secure Communication Using Contraction Theory. Lecture Notes in Computer Science, 2009, , 549-554.	1.0	9
66	Design of Model-Based Optimizing Control Scheme for an Air-Conditioning System. HVAC and R Research, 2010, 16, 565-597.	0.9	8
67	Multi sensor data fusion based approach for the calibration of airdata systems. Aeronautical Journal, 2011, 115, 113-122.	1.1	8
68	Distributed control of a class of interconnected systems in a string. IET Control Theory and Applications, 2011, 5, 963-975.	1.2	8
69	Disturbance observer based tracking controller for an autonomous underwater vehicle. , 2015, , .		8
70	Adaptive sliding mode control for head-angle and velocity tracking of planar snake robot. , 2017, , .		8
71	Adaptive-Robust Control with Limited Knowledge on Systems Dynamics. Studies in Systems, Decision and Control, 2020, , .	0.8	8
72	Quadratic stabilization of a collection of linear systems. International Journal of Systems Science, 2002, 33, 153-160.	3.7	7

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73	Constrained optimal control of bilinear systems using neural network based HJB solution. , 2008, , .		7
74	Contraction based stabilization of approximate feedback linearizable systems. , 2015, , .		7
75	Synchronization of ring coupled four oscillators. , 2017, , .		7
76	Robust Gradient-Based Adaptive Control of Nonlinearly Parametrized Plants. , 2017, 1, 352-357.		7
77	A UGES Switched MRAC Architecture Using Initial Excitation * *This work was supported in part by the Department of Science and Technology, India under grant SB/FTP/ETA-171/2013. IFAC-PapersOnLine, 2017, 50, 7044-7051.	0.5	7
78	Suboptimal robust stabilization of discrete-time mismatched nonlinear system. IEEE/CAA Journal of Automatica Sinica, 2018, 5, 352-359.	8.5	7
79	Finite-Time Consensus Tracking of Multi-Agent Systems Using Time-Fuel Optimal Pursuit Evasion. , 2022, 6, 962-967.		7
80	Bearings-only tracking of non-maneuvering target with missing bearings data. , 2015, , .		6
81	Formation of multiple groups of mobile robots: multi-timescale convergence perspective. Nonlinear Dynamics, 2016, 85, 2611-2627.	2.7	6
82	Stabilization and tracking controller for a class of nonlinear discrete-time systems. Chaos, Solitons and Fractals, 2011, 44, 902-913.	2.5	5
83	Formation control of multiple groups of robots. , 2013, , .		5
84	Modified Control of DFIG-WT for the Smooth Generator Speed Response under Turbulent Wind. , 2017, , .		5
85	A singular perturbation approach to saturated controller design with application to bounded stabilization of wing rock phenomenon. Nonlinear Dynamics, 2018, 93, 2263-2272.	2.7	5
86	Three-stage computed-torque controller for trajectory tracking in non-holonomic wheeled mobile robot. , 2018, , .		5
87	Robust Stabilization of a Class of Nonlinear Systems via Aperiodic Sensing and Actuation. IEEE Access, 2020, 8, 157403-157417.	2.6	5
88	Synchronization of Master-Slave Oscillators: Analysis and Experimental Results. IFAC-PapersOnLine, 2020, 53, 226-231.	0.5	5
89	Wavelet series based iterative learning controller design for industrial robot manipulators. International Journal of Computer Applications in Technology, 2009, 35, 61.	0.3	4
90	Robust control of nonlinear systems using neural network based HJB solution. International Journal of Automation and Control, 2009, 3, 135.	0.3	4

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91	Identification of Aerodynamic Derivatives of a Flexible Aircraft Using Output Error Method. Applied Mechanics and Materials, 0, 110-116, 5328-5335.	0.2	4
92	Delay-distribution-dependent Robust Stability Analysis of Uncertain Lurie Systems with Time-varying Delay. Zidonghua Xuebao/Acta Automatica Sinica, 2012, 38, 1100-1106.	1.5	4
93	Kinematic control of Wheeled Mobile Robot: An error based differentially flat system approach. , 2015, , .		4
94	Artificial Time Delay based Adaptive Robust Fault Tolerant Control for RLV During Re-entry Phase. , 2020, , .		4
95	Output feedback for contraction of nonlinear singularly perturbed systems. International Journal of Control, 2022, 95, 2199-2210.	1.2	4
96	Quadratic stabilization of a class of linear systems and its application to robot control. International Journal of Systems Science, 1998, 29, 267-274.	3.7	3
97	Wavelet series based learning controller design for kinematic path-tracking control of mobile robot. , 2009, , .		3
98	Two-dimensional (2-D) system theory based learning controller design. , 2010, , .		3
99	Three time scale behaviour analysis of the Leader Follower formation of multiple groups of nonholonomic robots. , 2015, , .		3
100	Adaptive gravity compensation and region tracking control of an AUV without velocity measurement. International Journal of Modelling, Identification and Control, 2016, 25, 154.	0.2	3
101	Efficient Nonlinear Model Predictive Control for Discrete System with Disturbances. , 2018, , .		3
102	Computation of Time-fuel Optimal Control for a Class of LTI System. , 2019, , .		3
103	Centralized Kalman Filter for Fusion of Multiple On-Board Auxiliary Sensors with INS for Underwater Navigation. , 2019, , .		3
104	Ocean Waves: A Disturbance Observer approach for an Autonomous Underwater Vehicle. , 2019, , .		3
105	Design and convergence analysis of stochastic frequency estimator using contraction theory. IET Signal Processing, 2013, 7, 389-399.	0.9	3
106	Delay-distribution-dependent Robust Stability Analysis of Uncertain Lurie Systems with Time-varying Delay. Zidonghua Xuebao/Acta Automatica Sinica, 2012, 38, 1100.	0.3	3
107	Soft Computation of Turbine Inlet Temperature of Gas Turbine Power Plant Using Type-2 Fuzzy Logic Systems. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	2
108	Constrained controller design for a class of nonlinear discrete-time uncertain systems. , 2009, , .		2

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109	Fault Diagnosis of an Air-Conditioning System Using LS-SVM. Lecture Notes in Computer Science, 2009, , 555-560.	1.0	2
110	Stability of interval time-varying delay systems with nonlinear perturbations: An improved result. , 2012, , .		2
111	Delay-distribution based stability analysis of time-delayed port-Hamiltonian systems. , 2012, , .		2
112	New synchronization criteria for fuzzy complex dynamical network with time-varying delay. , 2013, , .		2
113	A direct method for stabilization of time delay systems. , 2015, , .		2
114	Formation of multiple groups of mobile robots using sliding mode control. , 2015, , .		2
115	Stochastic contraction-based observer and controller design algorithm with application to a flight vehicle. International Journal of Control, 2015, 88, 2291-2304.	1.2	2
116	Stochastic contraction based online estimation of second order wiener system. ISA Transactions, 2017, 69, 131-139.	3.1	2
117	Modal analysis of grid connected DFIG with detailed structural modeling of wind turbine. , 2017, , .		2
118	Robust Control of Uncertain Euler-Lagrange Systems with Time-Varying Input Delay. , 2017, , .		2
119	Time-Fuel Efficient Intermittent Feedback Control of LTI Systems. , 2022, 6, 1513-1518.		2
120	Tracking Control of a Single Link Flexible Manipulator. , 2021, , .		2
121	Switching Control for Euler-Lagrange Dynamics: An Incremental Stability Approach. IFAC-PapersOnLine, 2022, 55, 555-560.	0.5	2
122	Computationally Efficient Nonlinear MPC for Discrete System with Disturbances. International Journal of Control, Automation and Systems, 2022, 20, 1951-1960.	1.6	2
123	A controller design algorithm for a finite number of linear systems. International Journal of Systems Science, 1996, 27, 887-893.	3.7	1
124	Experience Inclusion in Fourier Series Based Iterative learning Control for Manipulators. , 0, , .		1
125	Stability criteria for 2-D discrete-time state-delayed systems subject to overflow and quantization nonlinearities. , 2011, , .		1
126	Formation Control of Multiple Groups of Nonholonomic Wheeled Mobile Robots. , 2013, , .		1

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127	Absolute stability analysis of neutral type Lurie system with unbounded distributed delay and interval time-varying probabilistic delay. International Journal of Modelling, Identification and Control, 2014, 21, 72.	0.2	1
128	On the Topologies Conforming Singular Perturbation in Formation Control of Nonholonomic Robots. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 781-786.	0.4	1
129	A model based robust control law for linear event-triggered system. , 2014, , .		1
130	Finite-time robust control of robot manipulator. , 2015, , .		1
131	Conceptual analysis and representation of event-triggering mechanism in power system. , 2016, , .		1
132	Convergence analysis of high gain disturbance observer based backstepping control: A contraction theory approach. , 2017, , .		1
133	Identification and tuning of dominant controller parameters of DFIG with damping control. , 2017, , .		1
134	Investigation of grid-structure interaction of wind turbine driven DFIG using FAST and Simulink. , 2017, , .		1
135	Multimode vibration control for a flexible building structure using H-infinity based robust control. , 2001, , .		0
136	AFDM Approach for Experience Inclusion in Learning Controllers. , 2007, , .		0
137	Optimal Control Approach to Robust Control of Nonlinear Systems Using Neural Network Based HJB solution. , 2009, , .		0
138	Eigenvalue analysis based control scheme for interconnected autonomous systems. , 2011, , .		0
139	A new robust stability criteria for discrete-time state-delayed uncertain system subject to quantization and overflow nonlinearities. , 2011, , .		0
140	Wirtinger inequality based absolute stability of Lurie singular system with time-delay. , 2013, , .		0
141	Region tracking control of an autonomous underwater vehicle without velocity measurement. , 2014, , .		0
142	Recursive Structure from Motion. Lecture Notes in Computer Science, 2017, , 109-119.	1.0	0
143	Output feedback optimal control of fractional order delayed systems. , 2017, , .		0
144	A Robust Sliding Mode Control Approach for Uncertain Delay Systems Using Lambert W Function. , 2018, , .		0

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145	Adaptive Robust Time-Delayed Control for Planar Snake Robots. Studies in Systems, Decision and Control, 2021, , 73-92.	0.8	0
146	Synchronization of coupled benchmark oscillators: analysis and experiments. International Journal of Dynamics and Control, 2022, 10, 577-597.	1.5	0
147	A Hysteresis Quantizer Based Artificial Time Delayed Control Strategy for Re-entry Phase of Reusable Launch Vehicle. , 2021, , .		0
148	Development of an Adaptive Fuzzy Logic Based Control Law for a Mobile Robot with an Uncalibrated Camera System. Lecture Notes in Computer Science, 2005, , 325-331.	1.0	0
149	Constrained Control of Weakly Coupled Nonlinear Systems Using Neural Network. Lecture Notes in Computer Science, 2009, , 567-572.	1.0	0
150	Modelling of Continuous Contact-Based Skating Technique. , 2018, , .		0
151	Acceleration Command based Visual Servoing with Artificial Induced Time-Delay. , 2019, , .		0
152	The Lyapunov-Krasovskii Based Stability Analysis of Time-Delayed Control. Studies in Systems, Decision and Control, 2020, , 97-115.	0.8	0
153	Time-Delayed Control (TDC): Design Issues and Solutions. Studies in Systems, Decision and Control, 2020, , 23-39.	0.8	0
154	Adaptive-Robust Control for Systems with State-Dependent Upper Bound in Uncertainty. Studies in Systems, Decision and Control, 2020, , 117-142.	0.8	0
155	Adaptiveâ€"Robust Approach for Time-Delayed Control of a Class of Uncertain EL Systems. Studies in Systems, Decision and Control, 2020, , 41-68.	0.8	0
156	Time-Delayed Control for a Class of EL Systems with Only Position Feedback. Studies in Systems, Decision and Control, 2020, , 69-96.	0.8	0
157	Robust Stabilization of a Class of Networked Nonlinear Systems via Parsimonious Communication and Actuation. , 2020, , .		0