Fl Lewis

List of Publications by Year
in descending order

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159	10,864	81434	93651
papers	citations	41 h-index	72 g-index

161	161	161	4345
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Optimal Tracking Control of Uncertain Systems. , 2016, , 165-186.		6
2	Stochastic Optimal Design for Unknown Linear Discreteâ€Time System Zeroâ€Sum Games in Inputâ€Output form Under Communication Constraints. Asian Journal of Control, 2014, 16, 1263-1276.	1.9	12
3	A novel actorâ€“criticâ€“identifier architecture for approximate optimal control of uncertain nonlinear systems. Automatica, 2013, 49, 82-92.	3.0	439
4	Online solution of nonlinear twoâ€player zeroâ€sum games using synchronous policy iteration. International Journal of Robust and Nonlinear Control, 2012, 22, 1460-1483.	2.1	161
5	Stochastic optimal control of unknown linear networked control system in the presence of random delays and packet losses. Automatica, 2012, 48, 1017-1030.	3.0	192
6	Online solution of nonlinear two-player zero-sum games using synchronous policy iteration. , 2010, , .		25
7	Optimal adaptive control for unknown systems using output feedback by reinforcement learning methods. , 2010, , .		18
8	Disturbance and Friction Compensations in Hard Disk Drives Using Neural Networks. IEEE Transactions on Industrial Electronics, 2010, 57, 784-792.	5.2	59
9	Adaptive optimal control for continuous-time linear systems based on policy iteration. Automatica, 2009, 45, 477-484.	3.0	681
10	Discrete adaptive neural network disturbance feedforward compensation for non-linear disturbances in servo-control applications. International Journal of Control, 2009, 82, 721-740.	1.2	11
11	Feedforward control based on neural networks for disturbance rejection in hard disk drives. IET Control Theory and Applications, 2009, 3, 411-418.	1.2	15
12	Discrete-Time Nonlinear HJB Solution Using Approximate Dynamic Programming: Convergence Proof. IEEE Transactions on Systems, Man, and Cybernetics, 2008, 38, 943-949.	5.5	865
13	Adaptive optimal control algorithm for continuous-time nonlinear systems based on policy iteration. , 2008, , .		40
14	Neurodynamic Programming and Zero-Sum Games for Constrained Control Systems. IEEE Transactions on Neural Networks, 2008, 19, 1243-1252.	4.8	169
15	Matrix-based scheduling and control of a mobile sensor network. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 10415-10420.	0.4	1
16	Policy iteration for continuous-time systems with unknown internal dynamics. , 2007, , .		13
17	Matrix-based discrete event control of automated material handling systems. , 2006, , .		1
18	Controller for swing-up and balance of single inverted pendulum using SDRE-based solution. , 2005, , .		9

#	ARTICLE	IF	CITATIONS
19	Control of a MEMS optical switch. , 2004, , .		38
20	Hamilton-Jacobi-Isaacs formulation for constrained input nonlinear systems. , 2004, , .		15
21	Platoon-stable adaptive controller design. , 2004, , .		6
22	Neural network frequency control for thermal power systems. , 2004, , .		3
23	Two-time scale fuzzy logic controller of flexible link robot arm. Fuzzy Sets and Systems, 2003, 139, 125-149.	1.6	57
24	Neural-network predictive control for nonlinear dynamic systems with time-delay. IEEE Transactions on Neural Networks, 2003, 14, 377-389.	4.8	223
25	Design and implementation of industrial neural network controller using backstepping. IEEE Transactions on Industrial Electronics, 2003, 50, 193-201.	5.2	68
26	A Hamilton-Jacobi setup for constrained neural network control. , 2003, , .		9
27	Neural-network approximation of piecewise continuous functions: application to friction compensation. IEEE Transactions on Neural Networks, 2002, 13, 745-751.	4.8	140
28	An implementation of the matrix-based supervisory controller of flexible manufacturing systems. IEEE Transactions on Control Systems Technology, 2002, 10, 709-716.	3.2	21
29	Internet-based educational control systems lab using NetMeeting. IEEE Transactions on Education, 2002, 45, 145-151.	2.0	70
30	Fuzzy controller for flexible-link robot arm by reduced-order techniques. IET Control Theory and Applications, 2002, 149, 177-187.	1.7	28
31	Intelligent material handling: development and implementation of a matrix-based discrete-event controller. IEEE Transactions on Industrial Electronics, 2001, 48, 1087-1097.	5.2	55
32	Robust Adaptive Control of Robots Using Neural Network: Global Stability. Asian Journal of Control, 2001, 3, 111-121.	1.9	15
33	Adaptive fuzzy logic control of discrete-time dynamical systems. Automatica, 2000, 36, 229-241.	3.0	68
34	Computational complexity of determining resource loops in re-entrant flow lines. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2000, 30, 222-229.	3.4	1
35	Robust backstepping control of nonlinear systems using neural networks. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2000, 30, 753-766.	3.4	385
36	Robust backstepping control of induction motors using neural networks. IEEE Transactions on Neural Networks, 2000, 11, 1178-1187.	4.8	151

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37	Active suspension control of ground vehicle based on a full-vehicle model. , 2000, , .		95
38	Optimal design of CMAC neural-network controller for robot manipulators. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2000, 30, 22-31.	3.3	185
39	Deadzone compensation in motion control systems using neural networks. IEEE Transactions on Automatic Control, 2000, 45, 602-613.	3.6	317
40	Reinforcement adaptive learning neural-net-based friction compensation control for high speed and precision. IEEE Transactions on Control Systems Technology, 2000, 8, 118-126.	3.2	96
41	Matrix approach to deadlock-free dispatching in multi-class finite buffer flowlines. IEEE Transactions on Automatic Control, 2000, 45, 2086-2090.	3.6	35
42	Backstepping based fuzzy logic control of active vehicle suspension systems. , 2000, , .		18
43	Adaptive critic neural network for feedforward compensation. , 1999, , .		23
44	A note on Kalman filtering. IEEE Transactions on Education, 1999, 42, 225-227.	2.0	12
45	Neural network output feedback control of robot manipulators. IEEE Transactions on Automation Science and Engineering, 1999, 15, 301-309.	2.4	245
46	Deadzone compensation in motion control systems using adaptive fuzzy logic control. IEEE Transactions on Control Systems Technology, 1999, 7, 731-742.	3.2	175
47	Deadzone compensation in discrete time using adaptive fuzzy logic. IEEE Transactions on Fuzzy Systems, 1999, 7, 697-707.	6.5	46
48	New matrix formulation for supervisory controller design in practical flexible manufacturing system. , 1999, , .		4
49	Hybrid control for a class of underactuated mechanical systems. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 1999, 29, 649-654.	3.4	65
50	ROBUST NEURAL NETWORK CONTROL OF RIGID LINK FLEXIBLEâ€JOINT ROBOTS. Asian Journal of Control, 1999, 1, 188-197.	1.9	12
51	NONLINEAR NETWORK STRUCTURES FOR FEEDBACK CONTROL. Asian Journal of Control, 1999, 1, 205-228.	1.9	115
52	Feedback Linearization using CMAC Neural Networks. Automatica, 1998, 34, 547-557.	3.0	36
53	Control of a nonholonomic mobile robot using neural networks. IEEE Transactions on Neural Networks, 1998, 9, 589-600.	4.8	586
54	Implementation of a neural network tracking controller for a single flexible link: comparison with PD and PID controllers. IEEE Transactions on Industrial Electronics, 1998, 45, 307-318.	5.2	76

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55	Robust neural-network control of rigid-link electrically driven robots. IEEE Transactions on Neural Networks, 1998, 9, 581-588.	4.8	123
56	Implementation of a neural net tracking controller for a single flexible link: comparison with PD and PID controllers. , 1997, , .		0
57	Direct-reinforcement-adaptive-learning neural network control for nonlinear systems. , 1997, , .		7
58	Teaching Discrete Event Control of Manufacturing Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 261-266.	0.4	2
59	A new matrix model for discrete event systems: application to simulation. IEEE Control Systems, 1997, 17, 62-71.	1.0	89
60	A framework for hybrid control design. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 1997, 27, 765-773.	3.4	32
61	Neural Network Control of Robot Arms and Nonlinear Systems. , 1997, , 161-211.		60
62	CMAC neural networks for control of nonlinear dynamical systems: Structure, stability and passivity. Automatica, 1997, 33, 635-641.	3.0	86
63	Neural network control of robot manipulators. IEEE Intelligent Systems, 1996, 11, 64-75.	1.1	102
64	Discrete-time neural net controller for a class of nonlinear dynamical systems. IEEE Transactions on Automatic Control, 1996, 41, 1693-1699.	3.6	123
65	Multilayer neural-net robot controller with guaranteed tracking performance. IEEE Transactions on Neural Networks, 1996, 7, 388-399.	4.8	948
66	Multilayer discrete-time neural-net controller with guaranteed performance. IEEE Transactions on Neural Networks, 1996, 7, 107-130.	4.8	164
67	Approximation-Based Neural Network and Fuzzy Logic Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 5274-5279.	0.4	4
68	Towards a paradigm for fuzzy logic control. Automatica, 1996, 32, 167-181.	3.0	68
69	Robust implicit self-tuning regulator: Convergence and stability. Automatica, 1996, 32, 1629-1644.	3.0	20
70	Identification of nonlinear dynamical systems using multilayered neural networks. Automatica, 1996, 32, 1707-1712.	3.0	116
71	Techniques in 2-D Implicit Systems. Control and Dynamic Systems, 1995, 69, 89-131.	0.1	4
72	Feedback linearization using neural networks. Automatica, 1995, 31, 1659-1664.	3.0	371

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73	Flow-shop scheduling design in an FMS matrix framework. Control Engineering Practice, 1995, 3, 561-568.	3.2	11
74	Neural net robot controller with guaranteed tracking performance. IEEE Transactions on Neural Networks, 1995, 6, 703-715.	4.8	557
75	Hybrid Feedback Linearization/Fuzzy Logic Control of a Flexible Link Manipulator. Journal of Intelligent and Fuzzy Systems, 1994, 2, 325-336.	0.8	8
76	Transmission zero assignment using semistate descriptions. IEEE Transactions on Automatic Control, 1993, 38, 1115-1120.	3.6	20
77	Dynamic Equations of a Manipulator With Rigid and Flexible Links: Derivation and Symbolic Computation. , 1993, , .		9
78	Kalman decomposition for implicit linear systems. IEEE Transactions on Automatic Control, 1992, 37, 1509-1514.	3.6	16
79	State feedback design using reduced-order nonsquare descriptions. IEEE Transactions on Automatic Control, 1992, 37, 1431-1436.	3.6	3
80	An improved result on the stability analysis of nonlinear systems. IEEE Transactions on Automatic Control, 1992, 37, 1425-1431.	3.6	3
81	A review of 2-D implicit systems. Automatica, 1992, 28, 345-354.	3.0	78
82	A tutorial on the geometric analysis of linear time-invariant implicit systems. Automatica, 1992, 28, 119-137.	3.0	132
83	Robust eigenvalue assignment for generalized systems. Automatica, 1992, 28, 1223-1228.	3.0	23
84	Transmission Zero Assignment using Semistate Descriptions. , 1992, , .		0
85	A geometric theory for derivative feedback. IEEE Transactions on Automatic Control, 1991, 36, 1111-1116.	3.6	35
86	A geometric approach to proportional-plus-derivative feedback using quotient and partitioned subspaces. Automatica, 1991, 27, 349-369.	3.0	11
87	Geometric Structure and Output Feedback. , 1991, , .		1
88	Geometric design techniques for observers in singular systems. Automatica, 1990, 26, 411-415.	3.0	51
89	A geometric approach to 2-D implicit systems. , 1990, , .		6
90	State feedback design using nonsquare descriptions. , 1990, , .		1

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91	On the analysis of discrete linear time-invariant singular systems. IEEE Transactions on Automatic Control, 1990, 35, 506-511.	3.6	48
92	On the regularizability of singular systems. IEEE Transactions on Automatic Control, 1990, 35, 1156-1160.	3.6	50
93	Walsh function analysis of 2-D generalized continuous systems. IEEE Transactions on Automatic Control, 1990, 35, 1140-1144.	3.6	13
94	Chained aggregation of singular systems. IEEE Transactions on Automatic Control, 1989, 34, 1007-1012.	3.6	17
95	Geometric structure and feedback in singular systems. IEEE Transactions on Automatic Control, 1989, 34, 450-455.	3.6	46
96	Decentralized continuous robust controller for mobile robots. , 0, , .		80
97	A general compensator synthesis approach for generalized systems using (C;E,A;B)-pairs. , 0, , .		0
98	Neural net robot controller: structure and stability proofs. , 0, , .		21
99	Neural net robot controller with guaranteed tracking performance. , 0, , .		23
100	Discrete-time neural net controller with guaranteed performance. , 0, , .		17
101	A singular perturbation approach to stabilization of the internal dynamics of multilink flexible robots. , 0, , .		4
102	A neural network controller for flexible-link robots. , 0, , .		3
103	Robust control of a continuous stirred-tank reactor. , 0, , .		6
104	Computing LQG/H/sub â^ž/ bounded control with guaranteed convergence. , 0, , .		0
105	Robust adaptive control of robots using neural network: global tracking stability. , 0, , .		28
106	Robust neural network control of rigid-link electrically-driven robots. , 0, , .		0
107	Robust neural network control of flexible-joint robots. , 0, , .		7
108	A neural net controller for robots with Hebbian tuning and guaranteed tracking. , 0, , .		4

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109	Stabilization of a class of nonlinear systems with ill-defined relative degree. , 0, , .		4
110	Trajectory planning and robust stabilization for auto-drive cars. (Build a control center on your car) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50		0
111	Function approximation by fuzzy systems. , 0, , .		18
112	Discrete-time CMAC neural networks for control applications. , 0, , .		6
113	Adaptive fuzzy logic control of discrete-time dynamical systems. , 0, , .		21
114	Robust force/motion control of flexible-joint robots using neural networks. , 0, , .		1
115	Fuzzy logic approximation to unknown dynamic systems via input-output measurements. , 0, , .		1
116	Control of a nonholonomic mobile robot using neural networks. , 0, , .		5
117	Control of a nonholonomic mobile robot: backstepping kinematics into dynamics. , 0, , .		351
118	Motion planning and control for non-holonomic mobile robots. , 0, , .		6
119	Control of unknown nonlinear dynamical systems using CMAC neural networks: structure, stability, and passivity. , 0, , .		17
120	Nonlinear observer design using dynamic recurrent neural networks. , 0, , .		25
121	Practical point stabilization of a nonholonomic mobile robot using neural networks. , 0, , .		27
122	Adaptive-fuzzy logic control of robot manipulators. , 0, , .		20
123	Output feedback control of rigid robots using dynamic neural networks. , 0, , .		13
124	Design and stability analysis of adaptive-fuzzy controllers for a class of nonlinear systems. , 0, , .		6
125	Hamilton-Jacobi-Bellman optimal design of CMAC neural network controller for robot manipulators. , 0, , .		1
126	Matrix approach to deadlock avoidance of dispatching in multi-class finite buffer reentrant flow lines. , 0, , .		6

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127	Neural network approximation of piecewise continuous functions: application to friction compensation. , 0, , .		81
128	Direct-reinforcement-adaptive-learning fuzzy logic control for a class of nonlinear systems. , 0, , .		3
129	Deadzone compensation in motion control systems using adaptive fuzzy logic control. , 0, , .		3
130	Analysis of deadlocks and circular waits using a matrix model for discrete event systems. , 0, , .		8
131	A hybrid control approach for a class of underactuated mechanical systems. , 0, , .		0
132	Reinforcement adaptive learning neural network based friction compensation for high speed and precision. , 0, , .		12
133	Deadzone compensation in nonlinear systems using neural networks. , 0, , .		13
134	A fuzzy system compensator for backlash. , 0, , .		21
135	New developments in neurocontrol. , 0, , .		2
136	Deadzone compensation in motion control systems using neural networks. , 0, , .		136
137	Deadzone compensation in discrete time using adaptive fuzzy logic. , 0, , .		4
138	Timed matrix-based model of flexible manufacturing systems. , 0, , .		2
139	Backlash compensation in nonlinear systems using dynamic inversion by neural networks. , 0, , .		16
140	Active suspension control using a novel strut and active filtered feedback: design and implementation. , 0, , .		13
141	On adaptive critic architectures in feedback control. , 0, , .		6
142	Backlash compensation in discrete time nonlinear systems using dynamic inversion by neural networks. , 0, , .		13
143	Neural net backlash compensation with Hebbian tuning by dynamic inversion. , 0, , .		3
144	Backlash compensation with filtered prediction in discrete time nonlinear systems by dynamic inversion using neural networks. , 0, , .		10

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145	Design and implementation of industrial neural network controller using backstepping. , 0, , .		3
146	Multimodel neural networks identification and failure detection of nonlinear systems. , 0, , .		23
147	Nearly optimal HJB solution for constrained input systems using a neural network least-squares approach. , 0, , .		11
148	Routing algorithms in hierachical mesh networks with failure recovery. , 0, , .		0
149	Wireless sensor network for machine condition based maintenance. , 0, , .		18
150	Experimentally verified procedure for determining dynamical model of the ETM MEMS structures. , 0, , .		1
151	Behaviour-Based Vision-Guided Teleoperated Mems Probestation. , 0, , .		0
152	Neural Network H∞ State Feedback Control with Actuator Saturation: The Nonlinear Benchmark Problem. , 0, , .		6
153	Robotic Deployment for Environmental Sampling Applications. , 0, , .		7
154	Neural networks for feedback control of robots and dynamical systems. , 0, , .		0
155	Matrix Computational Framework for Discrete Event Control of Wireless Sensor Networks with Some Mobile Agents. , 0, , .		5
156	Robust Composite Saturation Compensation for a Single Flexible Link Using Neural Networks. , 0, , .		2
157	Open vs. Closed-Loop Control of the MEMS Electrostatic Comb Drive. , 0, , .		8
158	Deployment Algorithms and In-Door Experimental Vehicles for Studying Mobile Wireless Sensor Networks. , 0, , .		9
159	Data-Logging and Supervisory Control in Wireless Sensor Networks. , 0, , .		5