Hassan K Khalil

List of Publications by Year
in descending order

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126	6,879	126907	118850
papers	citations	33 h-index	62 g-index

129	129	129	3091
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Speed Control of Permanent Magnet Synchronous Motor With Uncertain Parameters and Unknown Disturbance. IEEE Transactions on Control Systems Technology, 2021, 29, 2639-2646.	5.2	15
2	Practical Synchronization in Networks of Nonlinear Heterogeneous Agents With Application to Power Systems. IEEE Transactions on Automatic Control, 2021, 66, 184-198.	5.7	25
3	Inversion-Free Hysteresis Compensation via Adaptive Conditional Servomechanism With Application to Nanopositioning Control. IEEE Transactions on Control Systems Technology, 2021, 29, 1922-1935.	5.2	13
4	Inversion-Based Hysteresis Compensation Using Adaptive Conditional Servocompensator for Nanopositioning Systems. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2021, 143, .	1.6	2
5	Stabilization of energy level sets of underactuated mechanical systems exploiting impulsive braking. Nonlinear Dynamics, 2021, 106, 279-293.	5.2	5
6	Performance Recovery of Dynamic Feedback-Linearization Methods for Multivariable Nonlinear Systems. IEEE Transactions on Automatic Control, 2020, 65, 1365-1380.	5.7	56
7	Practical Frequency Synchronization in Power Systems Using Extended High-Gain Observer Under Unknown Time-Varying Power Demand. , 2020, , .		1
8	Robust tracking of an unknown trajectory with a multi-rotor UAV: A high-gain observer approach. , 2020, , .		6
9	Scalable Coherence in Large Scale Second-Order Networks Using High-Gain Observer. , 2020, , .		1
10	Scalable Consensus in Networks of Multiagent Systems Using High-Gain Observers. IEEE Transactions on Control of Network Systems, 2020, 7, 1237-1247.	3.7	8
11	High-gain Observer-based Output Feedback Control with Sensor Dynamic Governed by Parabolic PDE. IFAC-PapersOnLine, 2020, 53, 5034-5038.	0.9	1
12	Output feedback stabilization using superâ€twisting control and highâ€gain observer. International Journal of Robust and Nonlinear Control, 2019, 29, 601-617.	3.7	22
13	Estimation of the Region of Attraction of Underactuated Systems and Its Enlargement Using Impulsive Inputs. IEEE Transactions on Robotics, 2019, 35, 618-632.	10.3	24
14	Funnel control for nonlinear systems with arbitrary relative degree using high-gain observers. Automatica, 2019, 105, 107-116.	5.0	42
15	Inversion-free Control of Hysteresis Nonlinearity Using An Adaptive Conditional Servomechanism. , 2019, , .		2
16	Stabilization of Homoclinic Orbits of Two Degree-of-Freedom Underactuated Systems. , 2019, , .		7
17	Sensorless Speed Control of PMSM Using Extended High-Gain Observers. , 2019, , .		1
18	Synchronization in Networks of Identical Linear Systems with Reduced Information. , 2018, , .		15

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19	Regulation of Non-Minimum-Phase Nonlinear Systems Using Slow Integrators. , 2018, , .		2
20	Fast Consensus in Multi-Agent Systems With Star Topology Using High Gain Observers. , 2017, 1, 188-193.		20
21	Cascade high-gain observers in output feedback control. Automatica, 2017, 80, 110-118.	5.0	85
22	Funnel control of higher relative degree systems. , 2017, , .		7
23	Enlarging the Region of Attraction of equilibria of underactuated systems using Sum of Squares and Impulse Manifold Method. , 2017, , .		4
24	An algorithm for enlarging the region of attraction using trajectory reversing. , 2017, , .		11
25	High-gain observers in the presence of sensor nonlinearities. , 2017, , .		2
26	Semi-Global Output Feedback Stabilization of Non-Minimum Phase Nonlinear Systems. IEEE Transactions on Automatic Control, 2017, 62, 4005-4010.	5.7	18
27	An adaptive conditional servocompensator design for nanopositioning control. , 2017, , .		6
28	Extended High-Gain Observers as Disturbance Estimators. SICE Journal of Control Measurement and System Integration, 2017, 10, 125-134.	0.7	45
29	Analysis of the Use of Low-Pass Filters with High-Gain Observers. IFAC-PapersOnLine, 2016, 49, 488-492.	0.9	28
30	Robustness of high-gain-observer-based controllers to time delays. , 2016, , .		4
31	Speed control of Permanent Magnet Synchronous Motor using extended high-gain observer. , 2016, , .		15
32	Tracking performance of a highâ€gain observer in the presence of measurement noise. International Journal of Adaptive Control and Signal Processing, 2016, 30, 1228-1243.	4.1	13
33	Enlarging the Region of Attraction of Equilibria of Underactuated Systems Using Impulsive Inputs. IEEE Transactions on Control Systems Technology, 2016, 24, 334-340.	5.2	30
34	Feedback Linearization for Nonlinear Systems With Time-Varying Input and Output Delays by Using High-Gain Predictors. IEEE Transactions on Automatic Control, 2016, 61, 2262-2268.	5.7	56
35	Design and Analysis of Sliding Mode Controller Under Approximate Hysteresis Compensation. IEEE Transactions on Control Systems Technology, 2015, 23, 598-608.	5.2	50
36	Output feedback stabilization of inverted pendulum on a cart in the presence of uncertainties. Automatica, 2015, 54, 146-157.	5.0	93

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37	High-gain-predictor-based output feedback control for time-delay nonlinear systems. , 2015, , .		1
38	Tracking Error Analysis for Feedback Systems With Hysteresis Inversion and Fast Linear Dynamics1. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2014, 136, .	1.6	6
39	Highâ€gain observers in nonlinear feedback control. International Journal of Robust and Nonlinear Control, 2014, 24, 993-1015.	3.7	468
40	Inversion-free stabilization and regulation of systems with hysteresis via integral action. Automatica, 2014, 50, 1017-1025.	5.0	25
41	Self-Excited Limit Cycles in an Integral-Controlled System With Backlash. IEEE Transactions on Automatic Control, 2014, 59, 1020-1025.	5.7	12
42	Highâ€gain observers in nonlinear feedback control. International Journal of Robust and Nonlinear Control, 2014, 24, 991-992.	3.7	109
43	On the steadyâ€state error of a nonlinear regulator. International Journal of Robust and Nonlinear Control, 2013, 23, 1869-1879.	3.7	2
44	Nonlinear observers comprising high-gain observers and extended Kalman filters. Automatica, 2013, 49, 3583-3590.	5.0	37
45	Semi-global output feedback stabilization of a class of non-minimum phase nonlinear systems. , 2013, , .		2
46	Control of Systems With Hysteresis Via Servocompensation and Its Application to Nanopositioning. IEEE Transactions on Control Systems Technology, 2013, 21, 725-738.	5.2	94
47	A Nonlinear High-Gain Observer for Systems With Measurement Noise in a Feedback Control Framework. IEEE Transactions on Automatic Control, 2013, 58, 569-580.	5.7	170
48	Design and analysis of a sliding mode controller for systems with hysteresis. , 2013, , .		2
49	Closed-loop analysis for systems with fast linear dynamics preceded by hysteresis. , 2013, , .		4
50	Self-excited limit cycles in an integral-controlled system with backlash. , 2013, , .		1
51	Application of dynamic inversion with extended high-gain observers to inverted pendulum on a cart. , 2013, , .		5
52	Control of flexible joint manipulators using only motor position feedback: A separation principle approach. , 2013, , .		6
53	Performance recovery under output feedback for input nonaffine nonlinear systems. , 2012, , .		5
54	Conditional integrator for non-minimum phase nonlinear systems. , 2012, , .		7

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55	Sliding-mode tracking control of piezo-actuated nanopositioners. , 2012, , .		22
56	Nonlinear output regulation with adaptive conditional servocompensator. Automatica, 2012, 48, 2550-2559.	5.0	25
57	Tracking error analysis for singularly perturbed systems preceded by piecewise linear hysteresis. , 2012, , .		2
58	Application of the extended high gain observer to underactuated mechanical systems. , 2012, , .		8
59	Passivity-based controller design for stablization of underwater gliders. , 2012, , .		6
60	Full-order Extended High Gain Observers for a class of nonlinear systems. , 2012, , .		5
61	Robust Stabilization of Non-Minimum Phase Nonlinear Systems Using Extended High-Gain Observers. IEEE Transactions on Automatic Control, 2011, 56, 802-813.	5.7	87
62	Model-based spatiotemporal analysis and control of a network of spiking Basal Ganglia neurons. , 2011, , .		6
63	Analysis of a nonlinear high-gain observer in the presence of measurement noise. , 2011, , .		13
64	Regulation under disturbances with multiple harmonics of unknown frequency. , 2011, , .		5
65	Tracking an unknown two-frequency reference using a frequency estimator-based servocompensator. , 2011, , .		0
66	Feedback control of the spatiotemporal firing patterns of neural microcircuits. , 2010, , .		8
67	Control of systems with hysteresis via servocompensation and its application to nanopositioning. , 2010, , .		19
68	On the steady-state error of a nonlinear regulator. , 2010, , .		3
69	A robust adaptive servocompensator for nanopositioning control. , 2010, , .		8
70	On the Transient Response of a Nonlinear Output Regulator. IEEE Transactions on Automatic Control, 2010, 55, 1455-1460.	5.7	7
71	High-gain observers in the presence of measurement noise: A switched-gain approach. Automatica, 2009, 45, 936-943.	5.0	318
72	Multirate Sampled-Data Output Feedback Control With Application to Smart Material Actuated Systems. IEEE Transactions on Automatic Control, 2009, 54, 2518-2529.	5.7	97

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73	Speed Observer and Reduced Nonlinear Model for Sensorless Control of Induction Motors. IEEE Transactions on Control Systems Technology, 2009, 17, 327-339.	5.2	63
74	Performance analysis of output regulation for a class of nonlinear systems. , 2009, , .		2
75	Full-order high-gain observers for minimum phase nonlinear systems. , 2009, , .		7
76	Output regulation of non-minimum phase nonlinear systems using an extended high-gain observer. , 2009, , .		5
77	High-gain observers in nonlinear feedback control. , 2009, , .		11
78	Two-time-scale averaging of systems involving operators and its application to adaptive control of hysteretic systems. , 2009, , .		25
79	High-gain-observer tracking performance in the presence of measurement noise. , 2009, , .		7
80	Error bounds in differentiation of noisy signals by high-gain observers. Systems and Control Letters, 2008, 57, 856-862.	2.3	141
81	Lyapunov redesign approach to output regulation of nonlinear systems using conditional servocompensators. , 2008, , .		6
82	Robust stabilization of non-minimum phase nonlinear systems using extended high gain observers. , 2008, , .		8
83	Output regulation of linear systems subject to input constraints. , 2008, , .		4
84	A novel nonlinear output feedback control applied to the TORA benchmark system. , 2008, , .		17
85	Performance Recovery of Feedback-Linearization-Based Designs. IEEE Transactions on Automatic Control, 2008, 53, 2324-2334.	5.7	387
86	High-gain observers in the presence of measurement noise: A nonlinear gain approach. , 2008, , .		31
87	High-gain observers in nonlinear feedback control. , 2008, , .		93
88	Closed-loop analysis of slow adaptation in the control of unknown dynamic hysteretic systems. , 2007, , .		1
89	Multirate Sampled-Data Output Feedback Control of Smart Material Actuated Systems. Proceedings of the American Control Conference, 2007, , .	0.0	6
90	Control of Unknown Dynamic Hysteretic Systems Using Slow Adaptation: Preliminary Results. Proceedings of the American Control Conference, 2007, , .	0.0	17

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91	Closed-Loop Behavior of a Class of Nonlinear Systems Under EKF-Based Control. IEEE Transactions on Automatic Control, 2007, 52, 536-540.	5.7	23
92	Lyapunov-based switching control of nonlinear systems using high-gain observers. Automatica, 2007, 43, 150-157.	5.0	48
93	Differentiation with High-Gain Observers the Presence of Measurement Noise. , 2006, , .		49
94	Multirate Sampled-Data Output Feedback Using High-Gain Observers. , 2006, , .		9
95	Robust output feedback regulation of minimum-phase nonlinear systems using conditional integrators. Automatica, 2005, 41, 43-54.	5.0	122
96	A note on the robustness of high-gain-observer-based controllers to unmodeled actuator and sensor dynamics. Automatica, 2005, 41, 1821-1824.	5.0	29
97	Robust output regulation of minimum phase nonlinear systems using conditional servocompensators. International Journal of Robust and Nonlinear Control, 2005, 15, 83-102.	3.7	43
98	Regulation of nonlinear systems using conditional integrators. International Journal of Robust and Nonlinear Control, 2005, 15, 339-362.	3.7	32
99	Universal integral controllers with non-linear integral gains. International Journal of Control, 2004, 77, 1521-1531.	1.9	3
100	Robustness of high-gain observer-based nonlinear controllers to unmodeled actuators and sensors. Automatica, 2002, 38, 361-369.	5.0	43
101	Robust speed control of induction motors: application to a benchmark example. International Journal of Adaptive Control and Signal Processing, 2000, 14, 157-170.	4.1	7
102	On the design of robust servomechanisms for minimum phase nonlinear systems. International Journal of Robust and Nonlinear Control, 2000, 10, 339-361.	3.7	81
103	Discrete-time implementation of high-gain observers for numerical differentiation. International Journal of Control, 1999, 72, 1523-1537.	1.9	129
104	Robust adaptive output feedback control of nonlinear systems without persistence of excitation. Automatica, 1997, 33, 2025-2032.	5.0	65
105	Nonlinear Output-Feedback Tracking Using High-gain Observer and Variable Structure Control""An earlier version of this paper was presented at the 1995 IFAC Nonlinear Control Systems Design Symposium, held in Lake Tahoe, U.S.A. in June 1995.,11A globally bounded output-feedback variable structure controller with a high-gain observer is designed for a feedback-linearizable minimum-phase nonlinear system in the presence of unknown disturbance. Automatica, 1997, 33, 1845-1856.	5.0	130
106	NONLINEAR CONTROL: ADAPTATION AND LEARNING. World Scientific Series in Robotics and Intelligent Systems, 1997, , 95-119.	0.1	1
107	Effect of unmodeled actuator dynamics on output feedback stabilization of nonlinear systems. Automatica, 1996, 32, 1323-1327.	5.0	24
108	Output feedback stabilization using variable structure control. International Journal of Control, 1995, 62, 831-848.	1.9	64

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109	Robust servomechanism output feedback controllers for feedback linearizable systems. Automatica, 1994, 30, 1587-1599.	5.0	276
110	Asymptotic Regulation of Minimum Phase Nonlinear Systems Using Output Feedback. , 1993, , .		1
111	Output feedback stabilization of fully linearizable systems. International Journal of Control, 1992, 56, 1007-1037.	1.9	695
112	Adaptive control of nonlinear systems using neural networks. International Journal of Control, 1992, 55, 1299-1317.	1.9	326
113	Hâˆž control of two-time-scale systems. , 1992, , .		0
114	Adaptive Control of Nonlinear Systems Using Neural Networks - A Dead-Zone Approach. , 1991, , .		39
115	Feedback Control of Nonstandard Singularly Perturbed Systems. , 1989, , .		3
116	Feedback control of nonstandard singularly perturbed systems. IEEE Transactions on Automatic Control, 1989, 34, 1052-1060.	5.7	69
117	A Real Schur Form Method for Modeling Singularly Perturbed Systems. , 1988, , .		0
118	Stability analysis of nonlinear multiparameter singularly perturbed systems. IEEE Transactions on Automatic Control, 1987, 32, 260-263.	5.7	39
119	Adaptive stabilization of a class of nonlinear systems using high-gain feedback. , 1986, , .		1
120	Infinite-time regulators for singularly perturbed difference equationsâ€. International Journal of Control, 1984, 39, 587-598.	1.9	70
121	Decentralized stabilization of a class of non-linear interconnected systemsâ€. International Journal of Control, 1982, 36, 803-818.	1.9	22
122	Reduced-order modeling of nonlinear singularly perturbed systems driven by wide-band noise. , 1982, , .		1
123	Near-optimum regulators for stochastic linear singularly perturbed systems. , 1982, , .		2
124	Quadratic-type Lyapunov functions for singularly perturbed systems. , 1981, , .		2
125	Approximation of Nash strategies. , 1979, , .		5
126	Closed-loop stackelberg strategies for singularly perturbed linear quadratic problems. , 1978, , .		0