

Hyungbo Shim

List of Publications by Year in descending order

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157
papers

4,358
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157
docs citations

157
times ranked

2613
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamic Controller That Operates Over Homomorphically Encrypted Data for Infinite Time Horizon. IEEE Transactions on Automatic Control, 2023, 68, 660-672.	3.6	16
2	Design of Heterogeneous Multi-agent System for Distributed Computation. Lecture Notes in Control and Information Sciences, 2022, , 83-108.	0.6	3
3	Zero-Dynamics Attack, Variations, and Countermeasures. Lecture Notes in Control and Information Sciences, 2022, , 31-61.	0.6	4
4	Blended dynamics approach to distributed optimization: Sum convexity and convergence rate. Automatica, 2022, 141, 110290.	3.0	2
5	Synchronization with prescribed transient behavior: Heterogeneous multi-agent systems under funnel coupling. Automatica, 2022, 141, 110276.	3.0	11
6	Disturbance Observers. , 2021, , 622-629.		0
7	Distributed Dynamic Quantile Solver With Plug-and-Play Operation. IEEE Access, 2021, 9, 165517-165525.	2.6	1
8	A Distributed Algorithm That Finds Almost Best Possible Estimate Under Non-Vanishing and Time-Varying Measurement Noise. , 2020, 4, 229-234.		5
9	Disturbance observer approach for fuel-efficient heavy-duty vehicle platooning. Vehicle System Dynamics, 2020, 58, 748-767.	2.2	15
10	Neutralizing zero dynamics attack on sampled-data systems via generalized holds. Automatica, 2020, 113, 108778.	3.0	16
11	Completely Decentralized Design of Distributed Observer for Linear Systems. IEEE Transactions on Automatic Control, 2020, 65, 4664-4678.	3.6	55
12	Robust feedback stabilization using high-gain observer via event triggering. International Journal of Robust and Nonlinear Control, 2020, 30, 2097-2112.	2.1	12
13	Fully Distributed Resilient State Estimation Based on Distributed Median Solver. IEEE Transactions on Automatic Control, 2020, 65, 3935-3942.	3.6	35
14	A tool for analysis and synthesis of heterogeneous multi-agent systems under rank-deficient coupling. Automatica, 2020, 117, 108952.	3.0	28
15	Simultaneous distributed localization, mapping and formation control of mobile robots based on local relative measurements. IFAC-PapersOnLine, 2020, 53, 9614-9620.	0.5	2
16	Disturbance Observers. , 2020, , 1-8.		1
17	Detection of Sensor Attack and Resilient State Estimation for Uniformly Observable Nonlinear Systems having Redundant Sensors. IEEE Transactions on Automatic Control, 2019, 64, 1162-1169.	3.6	51
18	On Redundant Observability: From Security Index to Attack Detection and Resilient State Estimation. IEEE Transactions on Automatic Control, 2019, 64, 775-782.	3.6	42

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19	Initialization-free privacy-guaranteed distributed algorithm for economic dispatch problem. Automatica, 2019, 102, 86-93.	3.0	38
20	Distributed Algorithm for Economic Dispatch Problem With Separable Losses. , 2019, 3, 685-690.		5
21	Stealthy Adversaries Against Uncertain Cyber-Physical Systems: Threat of Robust Zero-Dynamics Attack. IEEE Transactions on Automatic Control, 2019, 64, 4907-4919.	3.6	65
22	Output feedback based event-triggered sliding mode control for delta operator systems. Automatica, 2019, 103, 1-10.	3.0	34
23	Asymptotic stabilization of a class of nonlinear systems with long input delay in the presence of disturbance. ISA Transactions, 2019, 91, 125-134.	3.1	5
24	On Improving the Robustness of Reinforcement Learning-based Controllers using Disturbance Observer. , 2019, , .		8
25	Masking attack for sampled-data systems via input redundancy. IET Control Theory and Applications, 2019, 13, 2300-2308.	1.2	3
26	Encrypted State Estimation in Networked Control Systems. , 2019, , .		8
27	Study on Realizable Generalized Hold Functions as a Countermeasure against Zero Dynamics Attack. , 2019, , .		2
28	State Estimation and Tracking Control for Hybrid Systems by Gluing the Domains. IEEE Transactions on Automatic Control, 2019, 64, 3026-3033.	3.6	4
29	Robust Control of an Equipment-Added Multirotor Using Disturbance Observer. IEEE Transactions on Control Systems Technology, 2018, 26, 1524-1531.	3.2	63
30	Recovering Nominal Tracking Performance in an Asymptotic Sense for Uncertain Linear Systems. SIAM Journal on Control and Optimization, 2018, 56, 700-722.	1.1	0
31	Toward a Secure Drone System: Flying With Real-Time Homomorphic Authenticated Encryption. IEEE Access, 2018, 6, 24325-24339.	2.6	88
32	Practical Synchronization of Heterogeneous Multi-agent System Using Adaptive Law for Coupling Gains. , 2018, , .		3
33	Local Identification of Sensor Attack and Distributed Resilient State Estimation for Linear Systems. , 2018, , .		10
34	Distributed Algorithm for the Network Size Estimation: Blended Dynamics Approach. , 2018, , .		8
35	DO-DAT: A MATLAB toolbox for design & analysis of disturbance observer. IFAC-PapersOnLine, 2018, 51, 340-345.	0.5	4
36	A Posteriori Detection of Moment of Attack on Cyber-physical Systems: A Back-and-forth Observer Approach. IFAC-PapersOnLine, 2018, 51, 188-193.	0.5	1

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37	Need for Controllers Having Integer Coefficients in Homomorphically Encrypted Dynamic System. , 2018, , .		32
38	Adaptable iISS Small-Gain Formulation and its Application to Observer-Based Output Feedback Design. , 2018, , .		1
39	Guaranteeing almost fault-free tracking performance from transient to steady-state: a disturbance observer approach. Science China Information Sciences, 2018, 61, 1.	2.7	3
40	A Modularized Design for Output Synchronization of LTI Dynamical Networks with Communication Delays. SICE Journal of Control Measurement and System Integration, 2018, 11, 495-501.	0.4	1
41	Robust estimation algorithm for both switching signal and state of switched linear systems. International Journal of Control, Automation and Systems, 2017, 15, 95-103.	1.6	7
42	Noise Reduction Disturbance Observer for Disturbance Attenuation and Noise Suppression. IEEE Transactions on Industrial Electronics, 2017, 64, 1381-1391.	5.2	41
43	Enhancement of security against zero dynamics attack via generalized hold. , 2017, , .		12
44	Singular Perturbation for Sampled-Data Systems With Fast Subsystems. * *This work was partially supported by Korea Electric Power Corporation through Korea Electrical Engineering & Science Research Institute [grant number:R15XA03-47], Global Research Laboratory Program through the NRF funded by the MSIP (2013K1A1A2A02078326), DGIST Research and Development Program (CPS Global) Tj ETQqO 0 0 rgBT /Overlock 10		

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55	Yet another tutorial of disturbance observer: robust stabilization and recovery of nominal performance. <i>Control Theory and Technology</i> , 2016, 14, 237-249.	1.0	72
56	Model-based adaptive control system for autonomous underwater vehicles. <i>Ocean Engineering</i> , 2016, 127, 58-69.	1.9	35
57	State-space analysis of discrete-time disturbance observer for sampled-data control systems. , 2016, , .		3
58	Design of stable parallel feedforward compensator and its application to synchronization problem. <i>Automatica</i> , 2016, 64, 208-216.	3.0	22
59	Embedding Internal Model in Disturbance Observer With Robust Stability. <i>IEEE Transactions on Automatic Control</i> , 2016, 61, 3128-3133.	3.6	46
60	Robustness of Synchronization of Heterogeneous Agents by Strong Coupling and a Large Number of Agents. <i>IEEE Transactions on Automatic Control</i> , 2016, 61, 3096-3102.	3.6	50
61	Nonlinear Observers Robust to Measurement Disturbances in an ISS Sense. <i>IEEE Transactions on Automatic Control</i> , 2016, 61, 48-61.	3.6	40
62	Biomimetic Gyroscope Integrated with Actuation Parts of a Robot Inspired by Insect Halteres. <i>Journal of Institute of Control, Robotics and Systems</i> , 2016, 22, 705-709.	0.1	0
63	On robust stability of disturbance observer for sampled-data systems under fast sampling: An almost necessary and sufficient condition. , 2015, , .		5
64	A generalized framework for robust stability analysis of discrete-time disturbance observer for sampled-data systems: A fast sampling approach. , 2015, , .		3
65	A preliminary result on synchronization of heterogeneous agents via funnel control. , 2015, , .		9
66	A preliminary result on frequency-shaped model predictive control. , 2015, , .		0
67	Auto-generating fuzzy system modelling of physical systems. , 2015, , .		3
68	Consensus of output-coupled high-order linear multi-agent systems under deterministic and Markovian switching networks. <i>International Journal of Systems Science</i> , 2015, 46, 1790-1799.	3.7	24
69	Comments on "Observability of Switched Linear Systems: Characterization and Observer Design". <i>IEEE Transactions on Automatic Control</i> , 2015, 60, 3396-3400.	3.6	8
70	Linear systems with hyperbolic zero dynamics admit output regulator rejecting unknown number of unknown sinusoids. <i>IET Control Theory and Applications</i> , 2015, 9, 1472-1480.	1.2	7
71	An Asymptotic Ratio Characterization of Input-to-State Stability. <i>IEEE Transactions on Automatic Control</i> , 2015, 60, 3401-3404.	3.6	10
72	Secure and robust state estimation under sensor attacks, measurement noises, and process disturbances: Observer-based combinatorial approach. , 2015, , .		34

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73	Observer Design for Switched Linear Systems with State Jumps. Lecture Notes in Control and Information Sciences, 2015, , 179-203.	0.6	6
74	Enhanced Performance of Disturbance Observer by Embedding a Filter and Its Application to Hard Disk Drive. Journal of Institute of Control, Robotics and Systems, 2015, 21, 811-817.	0.1	1
75	State estimation strategy without jump detection for hybrid systems using gluing function. , 2014, , .		6
76	Reduced-order implementation of disturbance observers for robust tracking of nonlinear systems. IET Control Theory and Applications, 2014, 8, 1940-1948.	1.2	22
77	Asymptotic rejection of sinusoidal disturbances with recovered nominal transient performance for uncertain linear systems. , 2014, , .		6
78	Consensus under time-delayed information on states and network. , 2014, , .		0
79	Robust Cascade Control of Electric Motor Drives using Dual Reduced-Order PI Observer. IEEE Transactions on Industrial Electronics, 2014, , 1-1.	5.2	72
80	Hybrid-type observer design based on a sufficient condition for observability in switched nonlinear systems. International Journal of Robust and Nonlinear Control, 2014, 24, 1064-1089.	2.1	24
81	A study of disturbance observers with unknown relative degree of the plant. Automatica, 2014, 50, 1730-1734.	3.0	23
82	Adaptive Add-On Output Regulator for Rejection of Sinusoidal Disturbances and Application to Optical Disc Drives. IEEE Transactions on Industrial Electronics, 2014, 61, 5490-5499.	5.2	17
83	Robust Stabilization of Uncertain LTI Systems via Observer Model Selection. Journal of Institute of Control, Robotics and Systems, 2014, 20, 822-827.	0.1	0
84	Consensus of output-coupled linear multi-agent systems under fast switching network: Averaging approach. Automatica, 2013, 49, 267-272.	3.0	96
85	Observability for Switched Linear Systems: Characterization and Observer Design. IEEE Transactions on Automatic Control, 2013, 58, 891-904.	3.6	154
86	On-line switching signal estimation of switched linear systems with measurement noise. , 2013, , .		8
87	Robust stabilization via disturbance observer with noise reduction. , 2013, , .		1
88	On the Stability of Critical Point for Positive Systems and Its Applications to Biological Systems. Journal of Electrical Engineering and Technology, 2013, 8, 1530-1541.	1.2	0
89	Rejection of polynomial-in-time disturbances via disturbance observer with guaranteed robust stability. , 2012, , .		6
90	Back-and-forth operation of state observers and norm estimation of estimation error. , 2012, , .		9

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91	Output feedback consensus for high-order linear systems having uniform ranks under switching topology. IET Control Theory and Applications, 2012, 6, 1118-1124.	1.2	58
92	Disc margins of the discrete-time LQR and its application to consensus problem. International Journal of Systems Science, 2012, 43, 1891-1900.	3.7	29
93	A note on disturbance observer with unknown relative degree of the plant. , 2012, , .		2
94	Formation Control Algorithm for Coupled Unicycle-Type Mobile Robots Through Switching Interconnection Topology. Journal of Institute of Control, Robotics and Systems, 2012, 18, 439-444.	0.1	7
95	Synchronization of Linear Time-Varying Multi-Agent Systems with Heterogeneous Time-Varying Disturbances Using Integral Controller. Journal of Institute of Control, Robotics and Systems, 2012, 18, 622-626.	0.1	1
96	Graph Connectivity-free Consensus Algorithm for State-coupled Linear Multi-agent Systems: Adaptive Approach. Journal of Institute of Control, Robotics and Systems, 2012, 18, 617-621.	0.1	0
97	Observability implies observer design for switched linear systems. , 2011, , .		29
98	Output Consensus of Heterogeneous Uncertain Linear Multi-Agent Systems. IEEE Transactions on Automatic Control, 2011, 56, 200-206.	3.6	600
99	A constrained consensus problem using MPC. International Journal of Control, Automation and Systems, 2011, 9, 952-957.	1.6	29
100	A control theoretic approach to malaria immunotherapy with state jumps. Automatica, 2011, 47, 1271-1277.	3.0	11
101	Robust tracking by reduced-order disturbance observer: Linear case. , 2011, , .		4
102	Stabilizability of a group of single integrators and its application to decentralized formation problem. , 2011, , .		6
103	Finite-time stabilizing dynamic control of uncertain multi-input linear systems. IMA Journal of Mathematical Control and Information, 2011, 28, 525-537.	1.1	4
104	On a sufficient condition for observability of nonlinear switched systems and observer design strategy. , 2011, , .		1
105	Design of Nonlinear Disturbance Observer Guaranteeing Global Stability and Robust Stability Condition. Journal of Institute of Control, Robotics and Systems, 2011, 17, 1188-1193.	0.1	4
106	Consensus of Multi-Agent Systems Under Periodic Time-Varying Network *. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 155-160.	0.4	6
107	Reduced-order Dynamic Observer Error Linearization. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 915-920.	0.4	7
108	Disturbance observer for non-minimum phase linear systems. International Journal of Control, Automation and Systems, 2010, 8, 994-1002.	1.6	52

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109	Reduced-order consensus controllers for output-coupled SISO linear systems. International Journal of Control, Automation and Systems, 2010, 8, 1356-1363.	1.6	13
110	A note on the differential regulator equation for non-minimum phase linear systems with time-varying exosystems. Automatica, 2010, 46, 605-609.	3.0	8
111	Consensus of output-coupled linear multi-agent systems under frequently connected network. , 2010, , .		17
112	Robust Tracking and Vibration Suppression for a Two-Inertia System by Combining Backstepping Approach With Disturbance Observer. IEEE Transactions on Industrial Electronics, 2010, 57, 3197-3206.	5.2	106
113	Order Reduction Paradigm for Consensus of Neutrally Stable Multi-Agent Systems. Journal of Institute of Control, Robotics and Systems, 2010, 16, 222-226.	0.1	4
114	Quasi-ISS reduced-order observers and quantized output feedback. , 2009, , .		6
115	A system theoretic study on a treatment of AIDS patient by achieving long-term non-progressor. Automatica, 2009, 45, 611-622.	3.0	23
116	An almost necessary and sufficient condition for robust stability of closed-loop systems with disturbance observer. Automatica, 2009, 45, 296-299.	3.0	186
117	Consensus of high-order linear systems using dynamic output feedback compensator: Low gain approach. Automatica, 2009, 45, 2659-2664.	3.0	543
118	An Inner-Loop Controller Guaranteeing Robust Transient Performance for Uncertain MIMO Nonlinear Systems. IEEE Transactions on Automatic Control, 2009, 54, 1601-1607.	3.6	68
119	Low-Pass Filter Property of an Input-Dimensional Output Feedback Passification Controller for Rotary Inverted Pendulum. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2009, E92-A, 2133-2136.	0.2	0
120	Adding robustness to nominal output-feedback controllers for uncertain nonlinear systems: A nonlinear version of disturbance observer. Automatica, 2008, 44, 2528-2537.	3.0	207
121	Determination of Stability With Respect to Positive Orthant for a Class of Positive Nonlinear Systems. IEEE Transactions on Automatic Control, 2008, 53, 1329-1334.	3.6	11
122	Switching adaptive output feedback model predictive control for a class of input-constrained linear plants. IET Control Theory and Applications, 2008, 2, 573-582.	1.2	20
123	Locally optimal and globally inverse optimal controller for multi-input nonlinear systems. , 2008, , .		2
124	An LMI approach to exponential stabilization of uncertain time-delay systems. , 2008, , .		1
125	Global finite-time stabilization of a nonlinear system using dynamic exponent scaling. , 2008, , .		3
126	A new disturbance observer for non-minimum phase linear systems. , 2008, , .		20

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127	An Inner-loop Controller Guaranteeing Robust Transient Performance for Uncertain MIMO Linear Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 3793-3798.	0.4	0
128	ANALYSIS AND SYNTHESIS OF DISTURBANCE OBSERVER AS A TOOL FOR NONLINEAR ROBUST CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 387-394.	0.4	3
129	State space analysis of disturbance observer and a robust stability condition. , 2007, , .		31
130	Design of disturbance observer for non-minimum phase systems using PID controllers. , 2007, , .		7
131	Locally optimal and robust backstepping design for C^1 vector fields. , 2007, , .		2
132	Nonsmooth feedback stabilizer for strict-feedback nonlinear systems that may not be linearizable at the origin. Systems and Control Letters, 2007, 56, 742-752.	1.3	33
133	Discussion on: "An Adaptive Gradient Law with Projection for Non-smooth Convex Boundaries" European Journal of Control, 2006, 12, 620-621.	1.6	0
134	Output Regulation Problem and Solution for LTV Minimum Phase Systems with Time-varying Exosystem. , 2006, , .		9
135	Low-Pass Filter Property of Dynamic Output Feedback Passivation Controller. , 2006, , .		8
136	Improving LaSalle's Invariance Principle using Geometric Clues. , 2006, , .		1
137	A new approach to design of a dynamic output feedback stabilizing control law for LTI systems. Journal of Mechanical Science and Technology, 2005, 19, 618-624.	0.7	0
138	Feedback passivity approach to output feedback disturbance attenuation for uncertain nonlinear systems. International Journal of Systems Science, 2004, 35, 467-477.	3.7	9
139	A dynamic output feedback control law for elastic joint robots via feedback-passivity approach. Journal of the Franklin Institute, 2004, 341, 477-490.	1.9	4
140	Further Results on Robustness of (Possibly Discontinuous) Sample and Hold Feedback. IEEE Transactions on Automatic Control, 2004, 49, 1081-1089.	3.6	33
141	An adaptive algorithm applied to a design of robust observer. Journal of Mechanical Science and Technology, 2003, 17, 1443-1449.	0.4	3
142	Asymptotic controllability and observability imply semiglobal practical asymptotic stabilizability by sampled-data output feedback. Automatica, 2003, 39, 441-454.	3.0	64
143	Nonlinear observer design via passivation of error dynamics. Automatica, 2003, 39, 885-892.	3.0	68
144	Recursive nonlinear observer design: beyond the uniform observability. IEEE Transactions on Automatic Control, 2003, 48, 294-298.	3.6	22

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145	Robustness of discontinuous feedback via sample and hold control. , 2002, , .		7
146	Semi-global observer for multi-output nonlinear systems. Systems and Control Letters, 2001, 42, 233-244.	1.3	150
147	Output feedback passification for nonlinear systems. , 2000, , .		7
148	Passivity framework for nonlinear state observer. , 2000, , .		4
149	Non-linear output feedback stabilization on a bounded region of attraction. International Journal of Control, 2000, 73, 416-426.	1.2	29
150	Comments on "Observers for nonlinear systems in steady state". IEEE Transactions on Automatic Control, 1999, 44, 587.	3.6	1
151	Saturation technique for constructing observer of multi-output nonlinear systems. , 1999, , .		3
152	Robust stabilization of nonminimum phase nonlinear systems. , 1998, , .		2
153	Passification of nonlinear systems via dynamic output feedback. , 0, , .		5
154	Recursive observer design beyond the uniform observability. , 0, , .		3
155	Point-to-point control of elastic joint robots-dynamic output feedback passification approach. , 0, , .		0
156	Remarks on equivalence between full order and reduced order nonlinear observers. , 0, , .		3
157	Switching Adaptive Output Feedback MPC for Input-constrained Neutrally Stable Linear Plants. , 0, , .		0