

Costas Kravaris

List of Publications by Year in descending order

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59
papers

1,649
citations

393982

19
h-index

288905

40
g-index

59
all docs

59
docs citations

59
times ranked

939
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonlinear observer design using Lyapunov's auxiliary theorem. <i>Systems and Control Letters</i> , 1998, 34, 241-247.	1.3	353
2	From Continuous-Time Design to Sampled-Data Design of Observers. <i>IEEE Transactions on Automatic Control</i> , 2009, 54, 2169-2174.	3.6	183
3	Nonlinear control of a batch polymerization reactor: An experimental study. <i>AIChE Journal</i> , 1992, 38, 1429-1448.	1.8	151
4	Advances and selected recent developments in state and parameter estimation. <i>Computers and Chemical Engineering</i> , 2013, 51, 111-123.	2.0	135
5	Global stability results for systems under sampled-data control. <i>International Journal of Robust and Nonlinear Control</i> , 2009, 19, 1105-1128.	2.1	95
6	Discrete-time nonlinear controller synthesis by input/output linearization. <i>AIChE Journal</i> , 1992, 38, 1923-1945.	1.8	73
7	Multivariable nonlinear control of a continuous polymerization reactor: An experimental study. <i>AIChE Journal</i> , 1993, 39, 1920-1937.	1.8	56
8	Deep neural network-based hybrid modeling and experimental validation for an industry-scale fermentation process: Identification of time-varying dependencies among parameters. <i>Chemical Engineering Journal</i> , 2022, 441, 135643.	6.6	48
9	Nonlinear Observer Design for Process Monitoring. <i>Industrial & Engineering Chemistry Research</i> , 2000, 39, 408-419.	1.8	46
10	A Vector Lyapunov Function Characterization of Input-to-State Stability with Application to Robust Global Stabilization of the Chemostat. <i>European Journal of Control</i> , 2008, 14, 47-61.	1.6	40
11	On the Observer Problem for Discrete-Time Control Systems. <i>IEEE Transactions on Automatic Control</i> , 2007, 52, 12-25.	3.6	34
12	Robust global stabilisability by means of sampled-data control with positive sampling rate. <i>International Journal of Control</i> , 2009, 82, 755-772.	1.2	28
13	On-Line Identification and Nonlinear Control of pH Processes. <i>Industrial & Engineering Chemistry Research</i> , 1998, 37, 2446-2461.	1.8	25
14	Discrete-time nonlinear feedback control of multivariable processes. <i>AIChE Journal</i> , 1996, 42, 187-203.	1.8	23
15	A new model reduction method for nonlinear dynamical systems. <i>Nonlinear Dynamics</i> , 2010, 59, 183-194.	2.7	23
16	Plant-wide control structure selection methodology based on economics. <i>Computers and Chemical Engineering</i> , 2013, 52, 240-248.	2.0	23
17	Multirate Sampled-Data Observer Design Based on a Continuous-Time Design. <i>IEEE Transactions on Automatic Control</i> , 2019, 64, 5265-5272.	3.6	23
18	Relaxed Lyapunov criteria for robust global stabilisation of non-linear systems. <i>International Journal of Control</i> , 2009, 82, 2077-2094.	1.2	22

#	ARTICLE	IF	CITATIONS
19	Multiclass data classification using fault detection-based techniques. Computers and Chemical Engineering, 2020, 136, 106786.	2.0	21
20	Dynamic model reduction for two-stage anaerobic digestion processes. Chemical Engineering Journal, 2017, 327, 1102-1116.	6.6	19
21	Dynamic compensation of measurable disturbances in non-linear multivariable systems. International Journal of Control, 1993, 58, 1279-1301.	1.2	17
22	A Partially Decentralized State Observer and Its Parallel Computer Implementation. Industrial & Engineering Chemistry Research, 1998, 37, 2741-2760.	1.8	16
23	MPC formulation of GLC. AIChE Journal, 1996, 42, 2377-2381.	1.8	14
24	Model-based synthesis of nonlinear PI and PID controllers. AIChE Journal, 2001, 47, 1805-1818.	1.8	14
25	Multi-rate observer design for process monitoring using asynchronous inter-sample output predictions. AIChE Journal, 2017, 63, 3384-3394.	1.8	14
26	Functional Observers for Nonlinear Systems. IFAC-PapersOnLine, 2016, 49, 505-510.	0.5	11
27	Functional observers with linear error dynamics for nonlinear systems. Systems and Control Letters, 2021, 157, 105021.	1.3	11
28	Functional observers for nonlinear systems. , 2011, , .		9
29	Multi-rate sampled-data observers based on a continuous-time design. , 2017, , .		9
30	Robust stabilization of a two-stage continuous anaerobic bioreactor system. AIChE Journal, 2018, 64, 1295-1304.	1.8	9
31	Design of linear residual generators for fault detection and isolation in nonlinear systems. International Journal of Control, 2022, 95, 804-820.	1.2	9
32	Constant-yield control of continuous bioreactors. Chemical Engineering Journal, 2013, 228, 1234-1247.	6.6	8
33	Plantwide control structure selection methodology for the benchmark vinyl acetate monomer plant. Computers and Chemical Engineering, 2014, 62, 108-116.	2.0	8
34	Model reduction of aerobic bioprocess models for efficient simulation. Chemical Engineering Science, 2020, 217, 115512.	1.9	8
35	A quantitative approach for optimal alarm identification. Journal of Loss Prevention in the Process Industries, 2018, 55, 213-222.	1.7	7
36	Nonlinear observer design for two-time-scale systems. AIChE Journal, 2020, 66, e16956.	1.8	7

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37	<scp>Hidden Markov</scp> model based approach for diagnosing cause of alarm signals. AICHE Journal, 2021, 67, e17297.	1.8	7
38	Modeling and Observer-Based Monitoring of RAFT Homopolymerization Reactions. Processes, 2019, 7, 768.	1.3	6
39	A dead time compensation approach for multirate observer design with large measurement delays. AICHE Journal, 2019, 65, 562-570.	1.8	6
40	An approach to mechanistic event recognition applied on monitoring organic matter depletion in SBRs. AICHE Journal, 2014, 60, 3460-3472.	1.8	5
41	State Observer Design for Monitoring the Degree of Polymerization in a Series of Melt Polycondensation Reactors. Processes, 2016, 4, 4.	1.3	5
42	Nonlinear Multirate Model-Algorithmic Control. 1. Theory. Industrial & Engineering Chemistry Research, 2002, 41, 4054-4063.	1.8	3
43	Modular Design of Nonlinear Observers for State and Disturbance Estimation. , 2006, , .		3
44	Global stability results for systems under sampled-data control. , 2007, , .		3
45	Multi-rate observer design using asynchronous inter-sample output predictions. , 2017, , .		3
46	Design of functional observers for fault detection and isolation in nonlinear systems in the presence of noises. Journal of Process Control, 2021, 108, 68-85.	1.7	3
47	From continuous-time design to sampled-data design of nonlinear observers. , 2008, , .		2
48	Analysis of solid-phase axial heat conduction upon hot-spot formation in a one-dimensional microreactor. Chemical Engineering Journal, 2019, 377, 120501.	6.6	2
49	Safety-centered process control design based on dynamic safe set. Journal of Loss Prevention in the Process Industries, 2020, 65, 104126.	1.7	2
50	Functional observers with linear error dynamics for discrete-time nonlinear systems. Automatica, 2022, 143, 110420.	3.0	2
51	Robust stabilization of a two-stage anaerobic bioreactor system. , 2017, , .		1
52	Optimal heating profiles in tubular reactors with solid-phase axial wall conduction for isothermal operation. AICHE Journal, 2019, 65, e16742.	1.8	1
53	Identification of Optimal Catalyst Distributions in Heat-Exchanger Reactors. Industrial & Engineering Chemistry Research, 2020, 59, 5699-5711.	1.8	1
54	Reduced-order Nonlinear Observer Design for Two-time-scale Systems. IFAC-PapersOnLine, 2020, 53, 5922-5927.	0.5	1

#	ARTICLE	IF	CITATIONS
55	Hidden Markov model based fault diagnoser using binary alarm signals with an analysis on distinguishability. Computers and Chemical Engineering, 2022, 160, 107689.	2.0	1
56	Relaxed Lyapunov criteria for robust global stabilization of nonlinear systems. , 2009, , .		0
57	Higher-order corrections to the pi criterion for the periodic operation of chemical reactors. , 2009, , .		0
58	Tracking the singular arc of a continuous bioreactor using sliding mode control. , 2010, , .		0
59	Functional observers with linear error dynamics for discrete-time nonlinear systems. , 2021, , .		0