Tao Liu

List of Publications by Year
in descending order

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145	2,681	172457	214800
papers	citations	29 h-index	47 g-index

150	150	150	1325
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A tutorial review on process identification from step or relay feedback test. Journal of Process Control, 2013, 23, 1597-1623.	3.3	173
2	Analytical design of two-degree-of-freedom control scheme for open-loop unstable processes with time delay. Journal of Process Control, 2005, 15, 559-572.	3.3	154
3	New modified Smith predictor scheme for integrating and unstable processes with time delay. IET Control Theory and Applications, 2005, 152, 238-246.	1.7	110
4	IMC-based iterative learning control for batch processes with uncertain time delay. Journal of Process Control, 2010, 20, 173-180.	3.3	109
5	Robust two-dimensional iterative learning control for batch processes with state delay and time-varying uncertainties. Chemical Engineering Science, 2010, 65, 6134-6144.	3.8	107
6	Analytical decoupling control strategy using a unity feedback control structure for MIMO processes with time delays. Journal of Process Control, 2007, 17, 173-186.	3.3	78
7	Robust PID based indirect-type iterative learning control for batch processes with time-varying uncertainties. Journal of Process Control, 2014, 24, 95-106.	3.3	78
8	New insight into internal model control filter design for load disturbance rejection. IET Control Theory and Applications, 2010, 4, 448-460.	2.1	73
9	Enhanced IMC design of load disturbance rejection for integrating and unstable processes with slow dynamics. ISA Transactions, 2011, 50, 239-248.	5.7	69
10	A synthetic approach for robust constrained iterative learning control of piecewise affine batch processes. Automatica, 2012, 48, 2762-2775.	5.0	69
11	Industrial Process Identification and Control Design. Advances in Industrial Control, 2012, , .	0.5	63
12	In-situ crystal morphology identification using imaging analysis with application to the L-glutamic acid crystallization. Chemical Engineering Science, 2016, 148, 126-139.	3.8	54
13	A frequency domain step response identification method for continuous-time processes with time delay. Journal of Process Control, 2010, 20, 800-809.	3.3	53
14	Robust iterative learning control for batch processes with input delay subject to timeâ€varying uncertainties. IET Control Theory and Applications, 2016, 10, 1904-1915.	2.1	49
15	Advanced PI control with simple learning set-point design: Application on batch processes and robust stability analysis. Chemical Engineering Science, 2012, 71, 153-165.	3.8	48
16	Analytical Design of Decoupling Internal Model Control (IMC) Scheme for Two-Inputâ"Two-Output (TITO) Processes with Time Delays. Industrial & Engineering Chemistry Research, 2006, 45, 3149-3160.	3.7	43
17	New Predictor and 2DOF Control Scheme for Industrial Processes With Long Time Delay. IEEE Transactions on Industrial Electronics, 2018, 65, 4247-4256.	7.9	43
18	Decoupling two-degree-of-freedom control strategy for cascade control systems. Journal of Process Control, 2005, 15, 159-167.	3.3	42

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19	Alternative Identification Algorithms for Obtaining a First-Order Stable/Unstable Process Model from a Single Relay Feedback Test. Industrial & Engineering Chemistry Research, 2008, 47, 1140-1149.	3.7	42
20	Predictor-Based Disturbance Rejection Control for Sampled Systems With Input Delay. IEEE Transactions on Control Systems Technology, 2019, 27, 772-780.	5.2	42
21	A generalized relay identification method for time delay and non-minimum phase processes. Automatica, 2009, 45, 1072-1079.	5.0	41
22	Analytical Multiloop PI/PID Controller Design for Two-by-Two Processes with Time Delays. Industrial & Engineering Chemistry Research, 2005, 44, 1832-1841.	3.7	40
23	Identification and Autotuning of Temperature-Control System With Application to Injection Molding. IEEE Transactions on Control Systems Technology, 2009, 17, 1282-1294.	5.2	39
24	A systematic approach for onâ€line identification of secondâ€order process model from relay feedback test. AICHE Journal, 2008, 54, 1560-1578.	3.6	38
25	Identification of integrating and unstable processes from relay feedback. Computers and Chemical Engineering, 2008, 32, 3038-3056.	3.8	38
26	IMC-Based Control Strategy for Open-Loop Unstable Cascade Processes. Industrial & Engineering Chemistry Research, 2005, 44, 900-909.	3.7	33
27	U-model based predictive control for nonlinear processes with input delay. Journal of Process Control, 2019, 75, 156-170.	3.3	32
28	Extended state observer based indirect-type ILC for single-input single-output batch processes with time- and batch-varying uncertainties. Automatica, 2020, 112, 108673.	5.0	32
29	Synthesis of ILCâ€“MPC Controller With Data-Driven Approach for Constrained Batch Processes. IEEE Transactions on Industrial Electronics, 2020, 67, 3116-3125.	7.9	30
30	Quality prediction for multi-grade processes by just-in-time latent variable modeling with integration of common and special features. Chemical Engineering Science, 2018, 191, 31-41.	3.8	29
31	Sequential local-based Gaussian mixture model for monitoring multiphase batch processes. Chemical Engineering Science, 2018, 181, 101-113.	3.8	28
32	PI based indirect-type iterative learning control for batch processes with time-varying uncertainties: A 2D FM model based approach. Journal of Process Control, 2019, 78, 57-67.	3.3	28
33	Robust Step-Like Identification of Low-Order Process Model Under Nonzero Initial Conditions and Disturbance. IEEE Transactions on Automatic Control, 2008, 53, 2690-2695.	5.7	27
34	Identification of discrete-time output error model for industrial processes with time delay subject to load disturbance. Journal of Process Control, 2017, 50, 40-55.	3.3	27
35	Comparative study on ATR-FTIR calibration models for monitoring solution concentration in cooling crystallization. Journal of Crystal Growth, 2017, 459, 50-55.	1.5	27
36	Closed-loop step response identification of integrating and unstable processes. Chemical Engineering Science, 2010, 65, 2884-2895.	3.8	26

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37	Controller parameterization for SISO and MIMO plants with time delay. Systems and Control Letters, 2006, 55, 794-802.	2.3	22
38	EM-based identification of continuous-time ARMA Models from irregularly sampled data. Automatica, 2017, 77, 293-301.	5.0	22
39	Online Detection of Particle Agglomeration during Solution Crystallization by Microscopic Double-View Image Analysis. Industrial & Engineering Chemistry Research, 2017, 56, 11257-11269.	3.7	22
40	Identification of Hammerstein systems with time delay under load disturbance. IET Control Theory and Applications, 2018, 12, 942-952.	2.1	22
41	Window-Based Stepwise Sequential Phase Partition for Nonlinear Batch Process Monitoring. Industrial & Engineering Chemistry Research, 2016, 55, 9229-9243.	3.7	20
42	Analytical Two-Degrees-of-Freedom (2-DOF) Decoupling Control Scheme for Multiple-Inputâ^'Multiple-Output (MIMO) Processes with Time Delays. Industrial & Engineering Chemistry Research, 2007, 46, 6546-6557.	3.7	19
43	Bias-eliminated subspace model identification under time-varying deterministic type load disturbance. Journal of Process Control, 2015, 25, 41-49.	3.3	19
44	Recursive subspace identification subject to relatively slow time-varying load disturbance. International Journal of Control, 2018, 91, 622-638.	1.9	19
45	Output feedback anti-disturbance control of input-delayed systems with time-varying uncertainties. Automatica, 2019, 104, 8-16.	5.0	19
46	Discrete-time domain two-degree-of-freedom control design for integrating and unstable processes with time delay. ISA Transactions, 2016, 63, 121-132.	5.7	18
47	Identification of dualâ€rate sampled systems with time delay subject to load disturbance. IET Control Theory and Applications, 2017, 11, 1404-1413.	2.1	18
48	Investigation of the operating conditions to morphology evolution of Î²-l-glutamic acid during seeded cooling crystallization. Journal of Crystal Growth, 2017, 469, 136-143.	1.5	18
49	Step Response Identification under Inherent-Type Load Disturbance with Application to Injection Molding. Industrial & Engineering Chemistry Research, 2010, 49, 11572-11581.	3.7	17
50	Seed Recipe Design for Batch Cooling Crystallization with Application to <scp>l</scp>-Glutamic Acid. Industrial & Engineering Chemistry Research, 2019, 58, 3175-3187.	3.7	17
51	Generalized predictor based active disturbance rejection control for non-minimum phase systems. ISA Transactions, 2019, 87, 34-45.	5.7	17
52	Robust time-domain output error method for identifying continuous-time systems with time delay. Systems and Control Letters, 2017, 102, 81-92.	2.3	16
53	Predictorâ€based output feedback control design for sampled systems with input delay subject to disturbance. IET Control Theory and Applications, 2017, 11, 3329-3340.	2.1	16
54	Calibration Model Building for Online Monitoring of the Granule Moisture Content during Fluidized Bed Drying by NIR Spectroscopy. Industrial & Engineering Chemistry Research, 2019, 58, 6476-6485.	3.7	15

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55	Image based Measurement of Population Growth Rate for L-Glutamic Acid Crystallization. , 2019, , .		15
56	In Situ Measurement of 3D Crystal Size Distribution by Double-View Image Analysis with Case Study on <scp>l</scp>-Glutamic Acid Crystallization. Industrial & Engineering Chemistry Research, 2020, 59, 4646-4658.	3.7	15
57	Subspace identification of Hammerstein-type nonlinear systems subject to unknown periodic disturbance. International Journal of Control, 2021, 94, 849-859.	1.9	14
58	Analytical design of a generalised predictorâ€based control scheme for lowâ€order integrating and unstable systems with long time delay. IET Control Theory and Applications, 2016, 10, 884-893.	2.1	13
59	Subspace Hammerstein Model Identification under Periodic Disturbance. IFAC-PapersOnLine, 2018, 51, 335-340.	0.9	13
60	Sparsity-based image monitoring of crystal size distribution during crystallization. Journal of Crystal Growth, 2017, 469, 160-167.	1.5	11
61	Novel common and special features extraction for monitoring multi-grade processes. Journal of Process Control, 2018, 66, 98-107.	3.3	11
62	Orthogonal projection based subspace identification against colored noise. Control Theory and Technology, 2017, 15, 69-77.	1.6	9
63	Identification of Discrete-Time Model With Integer Delay and Control Design for Cooling Processes With Application to Jacketed Crystallizers. IEEE Transactions on Control Systems Technology, 2017, 25, 1775-1789.	5.2	9
64	Enhanced Active Disturbance Rejection Control for Time-Delay Systems. IFAC-PapersOnLine, 2017, 50, 7541-7546.	0.9	9
65	Antiâ€windup design of active disturbance rejection control for sampled systems with input delay. International Journal of Robust and Nonlinear Control, 2020, 30, 1311-1327.	3.7	9
66	Data-driven modeling of product crystal size distribution and optimal input design for batch cooling crystallization processes. Journal of Process Control, 2020, 96, 1-14.	3.3	9
67	Wavelet based calibration model building of NIR spectroscopy for in-situ measurement of granule moisture content during fluidized bed drying. Chemical Engineering Science, 2020, 226, 115867.	3.8	9
68	Semi-Supervised Learning-Based Calibration Model Building of NIR Spectroscopy for In Situ Measurement of Biochemical Processes Under Insufficiently and Inaccurately Labeled Samples. IEEE Transactions on Instrumentation and Measurement, 2021, 70, 1-12.	4.7	9
69	Recursive State-space Model Identification of Non-uniformly Sampled Systems Using Singular Value Decomposition. Chinese Journal of Chemical Engineering, 2014, 22, 1268-1273.	3.5	8
70	Heating-up control with delay-free output prediction for industrial jacketed reactors based on step response identification. ISA Transactions, 2018, 83, 227-238.	5.7	8
71	Subspace model identification under load disturbance with unknown transient and periodic dynamics. Journal of Process Control, 2020, 85, 100-111.	3.3	8
72	An Extended Closed-loop Subspace Identification Method for Error-in-variables Systems. Chinese Journal of Chemical Engineering, 2012, 20, 1136-1141.	3.5	7

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73	Identification of Discrete-Time Output Error Model Using Filtered Input Excitation for Integrating Processes With Time Delay. IEEE Transactions on Automatic Control, 2017, 62, 2524-2530.	5.7	7
74	Chiral symmetry breaking due to impeller size in cooling crystallization of sodium chlorate. CrystEngComm, 2018, 20, 6894-6899.	2.6	7
75	Refined instrumental variable parameter estimation of continuousâ€time Boxâ€“Jenkins models from irregularly sampled data. IET Control Theory and Applications, 2017, 11, 291-300.	2.1	6
76	Image analysis for in-situ detection of agglomeration for needle-like crystals. , 2017, , .		6
77	Reinforced adaptive parameter estimation with prescribed transient convergence performance. Systems and Control Letters, 2021, 149, 104880.	2.3	6
78	Disturbance rejection in process control. , 2014, , .		5
79	Output Error Model Identification Against Unexpected Load Disturbance. IFAC-PapersOnLine, 2016, 49, 863-868.	0.9	5
80	Seeded Cooling Crystallization Process Optimization of Î² Form <scp>l</scp>-Glutamic Acid Based on Variable Moving Horizon State Estimation. Industrial & Engineering Chemistry Research, 2022, 61, 2854-2866.	3.7	5
81	New analytical design of the Smith predictor controller for high-order systems. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2005, 219, 271-281.	1.0	4
82	Gradient-based step response identification of overdamped processes with time delay. Systems Science and Control Engineering, 2015, 3, 504-513.	3.1	4
83	Design of online off-gas analysis system for anaerobic ABE fermentation and the strategy for improving biobutanol production. Process Biochemistry, 2016, 51, 555-560.	3.7	4
84	Phase partition for nonlinear batch process monitoring. IFAC-PapersOnLine, 2016, 49, 1181-1186.	0.9	4
85	Iterative identification of discrete-time output-error model with time delay. Journal of Central South University, 2017, 24, 647-654.	3.0	4
86	Integrated Modeling and Adaptive Parameter Estimation for Hammerstein Systems With Asymmetric Dead-Zone. IEEE Transactions on Industrial Electronics, 2023, 70, 4942-4951.	7.9	4
87	Relay-Based Autotuning of PID Controller for Improved Load Disturbance Rejection. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 10933-10938.	0.4	3
88	Enhanced IMC-based Load Disturbance Rejection Design for Integrating Processes with Slow Dynamics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 67-72.	0.4	3
89	Robust output feedback based iterative learning control for batch processes with input delay subject to time-varying uncertainties. , 2016, , .		3
90	Indirect iterative learning control design based on 2DOF IMC for batch processes with input delay. , 2017, , .		3

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91	110th Anniversary: Real-Time End Point Detection of Fluidized Bed Drying Process Based on a Switching Model of Near-Infrared Spectroscopy. Industrial & Engineering Chemistry Research, 2019, 58, 16777-16786.	3.7	3
92	Robust static output feedback based iterative learning control design with a finiteâ€frequencyâ€range twoâ€dimensional specification for batch processes subject to nonrepetitive disturbances. International Journal of Robust and Nonlinear Control, 2021, 31, 5745-5761.	3.7	3
93	Extended sectional quadrature method of moments for crystal growth and nucleation with application to seeded cooling crystallization. Chemical Engineering Science, 2022, 254, 117625.	3.8	3
94	Identification of low-order process model with time delay from closed-loop step test. , 2009, , .		2
95	A Bias-Eliminated Subspace Identification Method for Errors-in-Variables Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 166-171.	0.4	2
96	Robust PI based set-point learning control for batch processes subject to time-varying uncertainties and load disturbance. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1272-1277.	0.4	2
97	Robust output feedback stabilization for discrete-time systems with time-varying input delay. Systems Science and Control Engineering, 2015, 3, 300-306.	3.1	2
98	Discrete-time domain two-degree-of-freedom control design for industrial stable processes with input time delay. , 2015, , .		2
99	Iterative identification of output error model for industrial processes with time delay subject to colored noise. Chinese Journal of Chemical Engineering, 2015, 23, 2005-2012.	3.5	2
100	Discrete-time domain IMC-based PID control design for industrial processes with time delay. , 2016, , .		2
101	LQ decomposition based subspace identification under deterministic type disturbance. Systems Science and Control Engineering, 2017, 5, 243-251.	3.1	2
102	Recursive subspace identification of Hammerstein-type nonlinear systems under slow time-varying load disturbance. , 2018, , .		2
103	Novel common and special feature extraction method for modeling multi-grade processes. IFAC-PapersOnLine, 2018, 51, 494-499.	0.9	2
104	Anti-windup design for discrete-time systems with time delay via predictor-based extended state observer. , 2019, , .		2
105	Image Analysis of Crystal Size Distribution and Agglomeration for Î² form L-Glutamic Acid Crystallization based on YOLOv4 Deep Learning. , 2021, , .		2
106	Improved independent component regression modeling. , 2009, , .		1
107	Identification of low-order unstable process model from closed-loop step test. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 447-451.	0.4	1
108	Flexible Closed-Loop Iterative Learning Control for Industrial Batch Processes With State Delay and Time-Varying Uncertainties. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 225-230.	0.4	1

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109	Closed-loop step identification of low-order continuous-time process model with time delay for enhanced controller autotuning. International Journal of Systems, Control and Communications, 2012, 4, 225.	0.3	1
110	Decoupling Control of Multivariable Processes. Advances in Industrial Control, 2012, , 369-431.	0.5	1
111	Iterative Identification of Output Error Model with Time Delay. IFAC-PapersOnLine, 2015, 48, 888-893.	0.9	1
112	Development of a stereo imaging system for three-dimensional shape measurement of crystals. , 2015, , .		1
113	Gradient-based step response identification of low-order model for time delay systems. , 2016, , .		1
114	Parameter Estimation for Batch Crystallization Processes Using Automatic Differentiation. , 2018, , .		1
115	Multi-innovation based Identification of Output Error Model with Time Delay under Load Disturbance. IFAC-PapersOnLine, 2018, 51, 224-228.	0.9	1
116	Improved PI Based Indirect-Type ILC for Batch Processes with Time-Varying Uncertainties: A New Perspective. , 2018, , .		1
117	Particle size measurement based on quality assessment of crystal images. , 2019, , .		1
118	Kinetic parameter estimation for cooling crystallization process based on cell average technique and automatic differentiation. Chinese Journal of Chemical Engineering, 2020, 28, 1637-1651.	3.5	1
119	PIO Based Data-Driven Iterative Learning Control for Nonlinear Batch Processes with Nonrepetitive Disturbances Subject to Input Constraints. IFAC-PapersOnLine, 2021, 54, 25-30.	0.9	1
120	A generalized control scheme for system uncertainty estimation and cancellation. Transactions of the Institute of Measurement and Control, 2021, 43, 2921-2933.	1.7	1
121	U-net based Deep-Learning Image monitoring of Crystal Size Distribution during L-Glutamic Acid Crystallization. , 2021, , .		1
122	Optimization of Î²-L-glutamic Acid Crystallization Processes via Moving Horizon Estimation. , 2021, , .		1
123	Step Response Identification of Stable Processes. Advances in Industrial Control, 2012, , 13-84.	0.5	1
124	Anti-windup Disturbance Rejection Control Design for Sampled Systems with Output Delay and Asymmetric Actuator Saturation Constraint. IFAC-PapersOnLine, 2020, 53, 1349-1354.	0.9	1
125	Predictor-based disturbance rejection control design for low-order stable and integrating processes with time delay. , 2020, , .		1
126	Two-dimensional Iterative Learning Control for Batch Processes With State Delay and Time-varying Uncertainties. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 12255-12260.	0.4	0

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127	Extended robust iterative learning control design for industrial batch processes with uncertain perturbations. , 2012, , .		0
128	Multiloop Control of Multivariable Processes. Advances in Industrial Control, 2012, , 349-368.	0.5	0
129	Recursive Closed-loop PARSIM-E Subspace Identification. IFAC-PapersOnLine, 2015, 48, 880-885.	0.9	0
130	Predictor based two-degree-of-freedom control design for industrial stable processes with long input delay. , 2016, , .		0
131	LabVIEW based temperature control platform design for a 4L jacketed reactor. , 2016, , .		0
132	Predictor based 2DOF control design for inverse response processes with time delay. , 2018, , .		0
133	Augmented Quadrature Method of Moments for Solving Population Balance Equations of Industrial Crystallization Processes. , 2019, , .		0
134	High-Order Internal Model Based Indirect-Type Iterative Learning Control Design for Batch Processes with Batch-Varying Factors. , 2019, , .		0
135	Attenuation on non-repetitive disturbances in robust iterative learning control schemes designed over repetitive setting. , 2019, , .		0
136	Parametric identification of output error model for sampled systems with integerâ€type time delay subject to load disturbance with unknown dynamics. IET Control Theory and Applications, 2021, 15, 1942-1955.	2.1	0
137	Discrete-time 2DOF control design with a generalized predictor for stable and integrating processes with time delay. , 2021, , .		0
138	Two-Degrees-of-Freedom (2DOF) Control of SISO Processes. Advances in Industrial Control, 2012, , 279-319.	0.5	0
139	Relay Feedback Identification of Unstable Processes. Advances in Industrial Control, 2012, , 217-240.	0.5	0
140	Step Response Identification of Integrating and Unstable Processes. Advances in Industrial Control, 2012, , 85-117.	0.5	0
141	Relay Feedback Identification of Integrating Processes. Advances in Industrial Control, 2012, , 197-216.	0.5	0
142	Bias-eliminated subspace identification by LQ decomposition against unexpected disturbance with deterministic dynamics. , 2017, , .		0
143	Identification of Output Error Model for Linear Time Delay Systems Subject to Load Disturbance with Unknown Dynamics. , 2019, , .		0
144	Output Feedback Based Iterative Learning Control with Finite Frequency Range Specifications via a Heuristic Approach for Batch Processes with Polytopic Uncertainties. IFAC-PapersOnLine, 2020, 53, 1397-1402.	0.9	0

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145	Robust static output feedback based ILC design with finite frequency specifications for batch processes with time-varying uncertainties. , 2020, , .		0