

Tianshi Chen

List of Publications by Year in descending order

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76
papers

2,331
citations

394421

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214800

47
g-index

81
all docs

81
docs citations

81
times ranked

1052
citing authors

#	ARTICLE	IF	CITATIONS
1	Kernel methods in system identification, machine learning and function estimation: A survey. Automatica, 2014, 50, 657-682.	5.0	714
2	On the estimation of transfer functions, regularizations and Gaussian processes—Revisited. Automatica, 2012, 48, 1525-1535.	5.0	405
3	System Identification Via Sparse Multiple Kernel-Based Regularization Using Sequential Convex Optimization Techniques. IEEE Transactions on Automatic Control, 2014, 59, 2933-2945.	5.7	127
4	Implementation of algorithms for tuning parameters in regularized least squares problems in system identification. Automatica, 2013, 49, 2213-2220.	5.0	101
5	On kernel design for regularized LTI system identification. Automatica, 2018, 90, 109-122.	5.0	80
6	A shift in paradigm for system identification. International Journal of Control, 2020, 93, 173-180.	1.9	70
7	On asymptotic properties of hyperparameter estimators for kernel-based regularization methods. Automatica, 2018, 94, 381-395.	5.0	55
8	Regularized linear system identification using atomic, nuclear and kernel-based norms: The role of the stability constraint. Automatica, 2016, 69, 137-149.	5.0	50
9	Maximum entropy properties of discrete-time first-order stable spline kernel. Automatica, 2016, 66, 34-38.	5.0	38
10	Maximum Entropy Kernels for System Identification. IEEE Transactions on Automatic Control, 2017, 62, 1471-1477.	5.7	37
11	Transfer function and transient estimation by Gaussian process regression in the frequency domain. Automatica, 2016, 72, 217-229.	5.0	36
12	A small gain approach to global stabilization of nonlinear feedforward systems with input unmodeled dynamics. Automatica, 2010, 46, 1028-1034.	5.0	34
13	Decentralized Particle Filter With Arbitrary State Decomposition. IEEE Transactions on Signal Processing, 2011, 59, 465-478.	5.3	32
14	Kernel selection in linear system identification part II: A classical perspective. , 2011, , .		29
15	Global Robust Output Regulation by State Feedback for Strict Feedforward Systems. IEEE Transactions on Automatic Control, 2009, 54, 2157-2163.	5.7	26
16	Regularized system identification using orthonormal basis functions. , 2015, , .		26
17	Comments on “State estimation for linear systems with state equality constraints” [Automatica 43 (2007) 1363–1368]. Automatica, 2010, 46, 1929-1932.	5.0	24
18	On input design for regularized LTI system identification: Power-constrained input. Automatica, 2018, 97, 327-338.	5.0	24

#	ARTICLE	IF	CITATIONS
19	On the stability of reproducing kernel Hilbert spaces of discrete-time impulse responses. <i>Automatica</i> , 2018, 95, 529-533.	5.0	22
20	Linear Multiple Low-Rank Kernel Based Stationary Gaussian Processes Regression for Time Series. <i>IEEE Transactions on Signal Processing</i> , 2020, 68, 5260-5275.	5.3	22
21	Asymptotic Properties of Generalized Cross Validation Estimators for Regularized System Identification. <i>IFAC-PapersOnLine</i> , 2018, 51, 203-208.	0.9	20
22	Continuous-Time DC Kernel—A Stable Generalized First-Order Spline Kernel. <i>IEEE Transactions on Automatic Control</i> , 2018, 63, 4442-4447.	5.7	20
23	Disturbance Attenuation of Feedforward Systems With Dynamic Uncertainty. <i>IEEE Transactions on Automatic Control</i> , 2008, 53, 1711-1717.	5.7	19
24	Impulse response estimation with binary measurements: a regularized FIR model approach. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012, 45, 113-118.	0.4	19
25	Distributed Gaussian Processes Hyperparameter Optimization for Big Data Using Proximal ADMM. <i>IEEE Signal Processing Letters</i> , 2019, 26, 1197-1201.	3.6	19
26	Bus arrival time prediction and reliability analysis: An experimental comparison of functional data analysis and Bayesian support vector regression. <i>Applied Soft Computing Journal</i> , 2021, 111, 107663.	7.2	16
27	Convexity issues in system identification. , 2013, , .		15
28	Kalman filtering under unknown inputs and norm constraints. <i>Automatica</i> , 2021, 133, 109871.	5.0	15
29	Regularization Features in the System Identification Toolbox. <i>IFAC-PapersOnLine</i> , 2015, 48, 745-750.	0.9	14
30	Cram�r-Rao Bounds for Filtering Based on Gaussian Process State-Space Models. <i>IEEE Transactions on Signal Processing</i> , 2019, 67, 5936-5951.	5.3	14
31	Model Error Modeling and Stochastic Embedding. <i>IFAC-PapersOnLine</i> , 2015, 48, 75-79.	0.9	11
32	Constructive state space model induced kernels for regularized system identification. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014, 47, 1047-1052.	0.4	10
33	Regularized LTI system identification in the presence of outliers: A variational EM approach. <i>Automatica</i> , 2020, 121, 109152.	5.0	10
34	On the estimation of hyperparameters for Bayesian system identification with exponentially decaying kernels. , 2012, , .		9
35	On kernel structures for regularized system identification (II): a system theory perspective—This work has been supported by a research grant for junior researchers No. 621-2014-5894 and the Linnaeus Center CADICS, both funded by the Swedish Research Council, and the ERC advanced grant LEARN, No. 267381, funded by the European Research Council. http://www.hamecmopsys.ens2m.fr.. <i>IFAC-PapersOnLine</i> , 2015, 48, 1041-1046.	0.9	9
36	Tuning of Hyperparameters for FIR models — an Asymptotic Theory. <i>IFAC-PapersOnLine</i> , 2017, 50, 2818-2823.	0.9	9

#	ARTICLE	IF	CITATIONS
37	Asymptotic Properties of Hyperparameter Estimators by Using Cross-Validations for Regularized System Identification. , 2018, , .		9
38	Smoothing Splines and Rank Structured Matrices: Revisiting the Spline Kernel. SIAM Journal on Matrix Analysis and Applications, 2020, 41, 389-412.	1.4	9
39	Sparse multiple kernels for impulse response estimation with majorization minimization algorithms. , 2012, , .		8
40	Kernel-based model order selection for identification and prediction of linear dynamic systems. , 2013, , .		8
41	On the input design for kernel-based regularized LTI system identification: Power-constrained inputs. , 2017, , .		8
42	Sparse Structure Enabled Grid Spectral Mixture Kernel for Temporal Gaussian Process Regression. , 2018, , .		8
43	Scalable anomaly detection in large homogeneous populations. Automatica, 2014, 50, 1459-1465.	5.0	7
44	On kernel structures for regularized system identification (I): a machine learning perspective**This work has been supported by a research grant for junior researchers No. 621-2014-5894 and the Linnaeus Center CADICS, both funded by the Swedish Research Council, and the ERC advanced grant LEARN, No. 267381, funded by the European Research Council. http://www.hamecmopsys.ens2m.fr.. IFAC-PapersOnLine, 2015, 48, 1035-1040.	0.9	7
45	Regularized LTI System Identification with Multiple Regularization Matrix. IFAC-PapersOnLine, 2018, 51, 180-185.	0.9	7
46	On semiseparable kernels and efficient implementation for regularized system identification and function estimation. Automatica, 2021, 132, 109682.	5.0	7
47	Rank-1 kernels for regularized system identification. , 2013, , .		6
48	Multiple Kernel Based Regularized System Identification with SURE Hyper-parameter Estimator. IFAC-PapersOnLine, 2018, 51, 13-18.	0.9	6
49	Parameter estimation of discrete-time sinusoidal signals: A nonlinear control approach. Automatica, 2019, 109, 108510.	5.0	6
50	On the Estimation of Transfer Functions, Regularizations and Gaussian Processes “ Revisited. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2303-2308.	0.4	5
51	On the Influence of Ill-conditioned Regression Matrix on Hyper-parameter Estimators for Kernel-based Regularization Methods. , 2020, , .		5
52	The noise covariances of linear Gaussian systems with unknown inputs are not uniquely identifiable using autocovariance least-squares. Systems and Control Letters, 2022, 162, 105172.	2.3	5
53	Global robust output regulation of nonlinear strict feedforward systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 12135-12140.	0.4	4
54	Spectral analysis of the DC kernel for regularized system identification. , 2015, , .		4

#	ARTICLE	IF	CITATIONS
55	Recursive Implementation of Gaussian Process Regression for Spatial-Temporal Data Modeling. , 2019, , .		4
56	A NOTE ON ROBUST NONLINEAR CONTROL OF FEEDFORWARD SYSTEMS WITH UNMODELED DYNAMICS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 1094-1099.	0.4	3
57	Global robust stabilization of nonlinear strict feedforward systems with input unmodeled dynamics. , 2008, , .		3
58	Maximum entropy property of discrete-time stable spline kernel. , 2015, , .		3
59	Continuous-time DC kernel " A stable generalized first order spline kernel. , 2016, , .		3
60	Persistence of excitation for identifying switched linear systems. Automatica, 2022, 137, 110142.	5.0	3
61	Global robust stabilization of a class of uncertain feedforward systems. , 2007, , .		2
62	On Asymptotic Distribution of Generalized Cross Validation Hyper-parameter Estimator for Regularized System Identification. , 2021, , .		2
63	CONSTRAINED INPUT-TO-STATE STABILITY OF NONLINEAR SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 318-323.	0.4	1
64	Global robust stabilization of feedforward systems with uncertainties. Journal of Control Theory and Applications, 2010, 8, 262-270.	0.8	1
65	Decentralization of particle filters using arbitrary state decomposition. , 2010, , .		1
66	Distributed Change Detection*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 77-82.	0.4	1
67	Kernel-based model order selection for linear system identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 257-262.	0.4	1
68	Anomaly detection in homogenous populations: A sparse multiple kernel-based regularization method. , 2014, , .		1
69	Kernel-based Regularized Iterative Learning Control of Repetitive Linear Time-varying Systems. IFAC-PapersOnLine, 2021, 54, 738-743.	0.9	1
70	On Semiseparable Kernels and Efficient Computation of Regularized System Identification and Function Estimation. IFAC-PapersOnLine, 2020, 53, 462-467.	0.9	1
71	An approach to integral input-to-state stabilization via satisficing strategy. , 0, , .		0
72	Inverse optimal constrained input-to-state stabilization of nonlinear systems. , 0, , .		0

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73	Backstepping control of uncertain strict-feedback system based on time-scale separation. , 2011, , .		0
74	Efficient Recursive Implementation of Spatial-Temporal Gaussian Process Regression. , 2020, , .		0
75	A Simulation-induced Regularization Method for System Identification. IFAC-PapersOnLine, 2021, 54, 726-731.	0.9	0
76	Robust Gaussian process regression with G-confluent likelihood. IFAC-PapersOnLine, 2020, 53, 394-399.	0.9	0