# Tianshi Chen

List of Publications by Year
in descending order



| | | | |
|---|---|---|---|
| 76 papers | 2,331 citations | 394421 19 h-index | 214800 47 g-index |
| 81 all docs | 81 docs citations | 81 times ranked | 1052 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Persistence of excitation for identifying switched linear systems. Automatica, 2022, 137, 110142. | 5.0 | 3 |
| 2 | 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 |
| 3 | Kernel-based Regularized Iterative Learning Control of Repetitive Linear Time-varying Systems. IFAC-PapersOnLine, 2021, 54, 738-743. | 0.9 | 1 |
| 4 | On semiseparable kernels and efficient implementation for regularized system identification and function estimation. Automatica, 2021, 132, 109682. | 5.0 | 7 |
| 5 | Bus arrival time prediction and reliability analysis: An experimental comparison of functional data analysis and Bayesian support vector regression. Applied Soft Computing Journal, 2021, 111, 107663. | 7.2 | 16 |
| 6 | Kalman filtering under unknown inputs and norm constraints. Automatica, 2021, 133, 109871. | 5.0 | 15 |
| 7 | A Simulation-induced Regularization Method for System Identification. IFAC-PapersOnLine, 2021, 54, 726-731. | 0.9 | 0 |
| 8 | On Asymptotic Distribution of Generalized Cross Validation Hyper-parameter Estimator for Regularized System Identification. , 2021, , . | | 2 |
| 9 | A shift in paradigm for system identification. International Journal of Control, 2020, 93, 173-180. | 1.9 | 70 |
| 10 | Regularized LTI system identification in the presence of outliers: A variational EM approach. Automatica, 2020, 121, 109152. | 5.0 | 10 |
| 11 | Linear Multiple Low-Rank Kernel Based Stationary Gaussian Processes Regression for Time Series. IEEE Transactions on Signal Processing, 2020, 68, 5260-5275. | 5.3 | 22 |
| 12 | Efficient Recursive Implementation of Spatial-Temporal Gaussian Process Regression. , 2020, , . | | 0 |
| 13 | Smoothing Splines and Rank Structured Matrices: Revisiting the Spline Kernel. SIAM Journal on Matrix Analysis and Applications, 2020, 41, 389-412. | 1.4 | 9 |
| 14 | Robust Gaussian process regression with G-confluent likelihood. IFAC-PapersOnLine, 2020, 53, 394-399. | 0.9 | 0 |
| 15 | On the Influence of Ill-conditioned Regression Matrix on Hyper-parameter Estimators for Kernel-based Regularization Methods. , 2020, , . | | 5 |
| 16 | On Semiseparable Kernels and Efficient Computation of Regularized System Identification and Function Estimation. IFAC-PapersOnLine, 2020, 53, 462-467. | 0.9 | 1 |
| 17 | Distributed Gaussian Processes Hyperparameter Optimization for Big Data Using Proximal ADMM. IEEE Signal Processing Letters, 2019, 26, 1197-1201. | 3.6 | 19 |
| 18 | CramÃ©râ€“Rao Bounds for Filtering Based on Gaussian Process State-Space Models. IEEE Transactions on Signal Processing, 2019, 67, 5936-5951. | 5.3 | 14 |

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|---|---|---|---|
| 19 | Parameter estimation of discrete-time sinusoidal signals: A nonlinear control approach. Automatica, 2019, 109, 108510. | 5.0 | 6 |
| 20 | Recursive Implementation of Gaussian Process Regression for Spatial-Temporal Data Modeling. , 2019, , . | | 4 |
| 21 | On kernel design for regularized LTI system identification. Automatica, 2018, 90, 109-122. | 5.0 | 80 |
| 22 | Asymptotic Properties of Hyperparameter Estimators by Using Cross-Validations for Regularized System Identification. , 2018, , . | | 9 |
| 23 | Multiple Kernel Based Regularized System Identification with SURE Hyper-parameter Estimator. IFAC-PapersOnLine, 2018, 51, 13-18. | 0.9 | 6 |
| 24 | Regularized LTI System Identification with Multiple Regularization Matrix. IFAC-PapersOnLine, 2018, 51, 180-185. | 0.9 | 7 |
| 25 | Asymptotic Properties of Generalized Cross Validation Estimators for Regularized System Identification. IFAC-PapersOnLine, 2018, 51, 203-208. | 0.9 | 20 |
| 26 | Sparse Structure Enabled Grid Spectral Mixture Kernel for Temporal Gaussian Process Regression. , 2018, , . | | 8 |
| 27 | On input design for regularized LTI system identification: Power-constrained input. Automatica, 2018, 97, 327-338. | 5.0 | 24 |
| 28 | On asymptotic properties of hyperparameter estimators for kernel-based regularization methods. Automatica, 2018, 94, 381-395. | 5.0 | 55 |
| 29 | On the stability of reproducing kernel Hilbert spaces of discrete-time impulse responses. Automatica, 2018, 95, 529-533. | 5.0 | 22 |
| 30 | Continuous-Time DC Kernelâ€"A Stable Generalized First-Order Spline Kernel. IEEE Transactions on Automatic Control, 2018, 63, 4442-4447. | 5.7 | 20 |
| 31 | Maximum Entropy Kernels for System Identification. IEEE Transactions on Automatic Control, 2017, 62, 1471-1477. | 5.7 | 37 |
| 32 | Tuning of Hyperparameters for FIR models â€“ an Asymptotic Theory. IFAC-PapersOnLine, 2017, 50, 2818-2823. | 0.9 | 9 |
| 33 | On the input design for kernel-based regularized LTI system identification: Power-constrained inputs. , 2017, , . | | 8 |
| 34 | Continuous-time DC kernel â€" A stable generalized first order spline kernel. , 2016, , . | | 3 |
| 35 | Maximum entropy properties of discrete-time first-order stable spline kernel. Automatica, 2016, 66, 34-38. | 5.0 | 38 |
| 36 | Transfer function and transient estimation by Gaussian process regression in the frequency domain. Automatica, 2016, 72, 217-229. | 5.0 | 36 |

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|---|---|---|---|
| 37 | 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 |
| 38 | Regularization Features in the System Identification Toolbox. IFAC-PapersOnLine, 2015, 48, 745-750. | 0.9 | 14 |
| 39 | Model Error Modeling and Stochastic Embedding. IFAC-PapersOnLine, 2015, 48, 75-79. | 0.9 | 11 |
| 40 | Regularized system identification using orthonormal basis functions. , 2015, , . | | 26 |
| 41 | Maximum entropy property of discrete-time stable spline kernel. , 2015, , . | | 3 |
| 42 | Spectral analysis of the DC kernel for regularized system identification. , 2015, , . | | 4 |
| 43 | 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.. | 0.9 | 7 |
| 44 | 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.. IFAC-PapersOnLine, 2015, 48, 1041-1046. | 0.9 | 9 |
| 45 | Anomaly detection in homogenous populations: A sparse multiple kernel-based regularization method. , 2014, , . | | 1 |
| 46 | Kernel methods in system identification, machine learning and function estimation: A survey. Automatica, 2014, 50, 657-682. | 5.0 | 714 |
| 47 | Scalable anomaly detection in large homogeneous populations. Automatica, 2014, 50, 1459-1465. | 5.0 | 7 |
| 48 | 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 |
| 49 | Constructive state space model induced kernels for regularized system identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1047-1052. | 0.4 | 10 |
| 50 | Implementation of algorithms for tuning parameters in regularized least squares problems in system identification. Automatica, 2013, 49, 2213-2220. | 5.0 | 101 |
| 51 | Kernel-based model order selection for identification and prediction of linear dynamic systems. , 2013, , . | | 8 |
| 52 | Rank-1 kernels for regularized system identification. , 2013, , . | | 6 |
| 53 | Convexity issues in system identification. , 2013, , . | | 15 |
| 54 | 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 |

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| 55 | On the estimation of hyperparameters for Bayesian system identification with exponentially decaying kernels. , 2012, , . | | 9 |
| 56 | Distributed Change Detection*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 77-82. | 0.4 | 1 |
| 57 | Impulse response estimation with binary measurements: a regularized FIR model approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 113-118. | 0.4 | 19 |
| 58 | Sparse multiple kernels for impulse response estimation with majorization minimization algorithms. , 2012, , . | | 8 |
| 59 | On the estimation of transfer functions, regularizations and Gaussian processesâ€"Revisited. Automatica, 2012, 48, 1525-1535. | 5.0 | 405 |
| 60 | Decentralized Particle Filter With Arbitrary State Decomposition. IEEE Transactions on Signal Processing, 2011, 59, 465-478. | 5.3 | 32 |
| 61 | Backstepping control of uncertain strict-feedback system based on time-scale separation. , 2011, , . | | 0 |
| 62 | On the Estimation of Transfer Functions, Regularizations and Gaussian Processes â€“ Revisited. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 2303-2308. | 0.4 | 5 |
| 63 | Kernel selection in linear system identification part II: A classical perspective. , 2011, , . | | 29 |
| 64 | Global robust stabilization of feedforward systems with uncertainties. Journal of Control Theory and Applications, 2010, 8, 262-270. | 0.8 | 1 |
| 65 | A small gain approach to global stabilization of nonlinear feedforward systems with input unmodeled dynamics. Automatica, 2010, 46, 1028-1034. | 5.0 | 34 |
| 66 | Comments on â€œState estimation for linear systems with state equality constraintsâ€•[Automatica 43 (2007) 1363â€“1368]. Automatica, 2010, 46, 1929-1932. | 5.0 | 24 |
| 67 | Decentralization of particle filters using arbitrary state decomposition. , 2010, , . | | 1 |
| 68 | Global Robust Output Regulation by State Feedback for Strict Feedforward Systems. IEEE Transactions on Automatic Control, 2009, 54, 2157-2163. | 5.7 | 26 |
| 69 | Disturbance Attenuation of Feedforward Systems With Dynamic Uncertainty. IEEE Transactions on Automatic Control, 2008, 53, 1711-1717. | 5.7 | 19 |
| 70 | Global robust stabilization of nonlinear strict feedforward systems with input unmodeled dynamics. , 2008, , . | | 3 |
| 71 | 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 |
| 72 | 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 |

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| 73 | Global robust stabilization of a class of uncertain feedforward systems. , 2007, , . | | 2 |
| 74 | CONSTRAINED INPUT-TO-STATE STABILITY OF NONLINEAR SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 318-323. | 0.4 | 1 |
| 75 | An approach to integral input-to-state stabilization via satisficing strategy. , 0, , . | | 0 |
| 76 | Inverse optimal constrained input-to-state stabilization of nonlinear systems. , 0, , . | | 0 |