Shunyi Zhao

List of Publications by Year
in descending order

77 papers	1,715 citations	236925 25 h-index	315739 38 g-index
77 all docs	77 docs citations	77 times ranked	884 citing authors

#	Article	IF	Citations
1	Bayesian Inference for State-Space Models With Student-t Mixture Distributions. IEEE Transactions on Cybernetics, 2023, 53, 4435-4445.	9.5	27
2	Frobenius Norm-Based Unbiased Finite Impulse Response Fusion Filtering for Wireless Sensor Networks. IEEE Transactions on Industrial Electronics, 2022, 69, 1867-1876.	7.9	12
3	Sensor Fault Estimation in a Probabilistic Framework for Industrial Processes and its Applications. IEEE Transactions on Industrial Informatics, 2022, 18, 387-396.	11.3	13
4	Robust q-LAG Unbiased FIR Smoother for LTV Systems and Recursive Forms. IEEE Signal Processing Letters, 2022, 29, 379-383.	3.6	0
5	A Fusion Kalman Filter and UFIR Estimator Using the Influence Function Method. IEEE/CAA Journal of Automatica Sinica, 2022, 9, 709-718.	13.1	6
6	Multitask Maximum Likelihood Identification for ARX Model With Multisensor. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-10.	4.7	4
7	Improved state estimator for linear-Gaussian systems subject to initialization errors. Chemometrics and Intelligent Laboratory Systems, 2022, , 104608.	3.5	0
8	Self-Tuning Unbiased Finite Impulse Response Filtering Algorithm for Processes With Unknown Measurement Noise Covariance. IEEE Transactions on Control Systems Technology, 2021, 29, 1372-1379.	5.2	37
9	Joint state estimation for nonlinear stateâ€space model with unknown timeâ€variant noise statistics. International Journal of Adaptive Control and Signal Processing, 2021, 35, 498-512.	4.1	2
10	Backward optimal FIR filtering and recursive forms for discrete LTV processes. Signal Processing, 2021, 180, 107857.	3.7	2
11	Multipass Optimal FIR Filtering for Processes With Unknown Initial States and Temporary Mismatches. IEEE Transactions on Industrial Informatics, 2021, 17, 5360-5368.	11.3	33
12	Online Probabilistic Estimation of Sensor Faulty Signal in Industrial Processes and Its Applications. IEEE Transactions on Industrial Electronics, 2021, 68, 8853-8862.	7.9	34
13	Optimal FIR Filter for Discrete-Time LTV Systems and Fast Iterative Algorithm. IEEE Transactions on Circuits and Systems II: Express Briefs, 2021, 68, 1527-1531.	3.0	11
14	Online state and inputs identification for stochastic systems using recursive expectation-maximization algorithm. Chemometrics and Intelligent Laboratory Systems, 2021, 217, 104403.	3.5	1
15	Intelligent State Estimation for Continuous Fermenters Using Variational Bayesian Learning. IEEE Transactions on Industrial Informatics, 2021, 17, 8429-8437.	11.3	9
16	State estimation for jump markov nonlinear systems of unknown measurement data covariance. Journal of the Franklin Institute, 2021, 358, 1673-1691.	3.4	7
17	Discrete Time q-Lag Maximum Likelihood FIR Smoothing and Iterative Recursive Algorithm. IEEE Transactions on Signal Processing, 2021, 69, 6342-6354.	5.3	32
18	Backward Iterations for OFIR Filtering in Discrete-Time State-Space. , 2021, , .		1

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19	Underwater Sludge Detection System Based on Multi-Data Fusion. , 2021, , .		0
20	Probabilistic Monitoring of Correlated Sensors for Nonlinear Processes in State Space. IEEE Transactions on Industrial Electronics, 2020, 67, 2294-2303.	7.9	34
21	An Improved Iterative FIR State Estimator and Its Applications. IEEE Transactions on Industrial Informatics, 2020, 16, 1003-1012.	11.3	40
22	Unbiased FIR Filtering for Time-Stamped Discretely Delayed and Missing Data. IEEE Transactions on Automatic Control, 2020, 65, 2155-2162.	5.7	27
23	Fusion Kalman and Weighted UFIR State Estimator With Improved Accuracy. IEEE Transactions on Industrial Electronics, 2020, 67, 10713-10722.	7.9	8
24	Kalman and UFIR state estimation with coloured measurement noise using backward Euler method. IET Signal Processing, 2020, 14, 64-71.	1.5	30
25	Trial-and-error or avoiding a guess? Initialization of the Kalman filter. Automatica, 2020, 121, 109184.	5.0	59
26	Distributed dataâ€driven observer for linear time invariant systems. International Journal of Adaptive Control and Signal Processing, 2020, 34, 503-519.	4.1	4
27	Online identification of timeâ€delay jump Markov autoregressive exogenous systems with recursive expectationâ€maximization algorithm. International Journal of Adaptive Control and Signal Processing, 2020, 34, 407-426.	4.1	14
28	Algorithms Design for Tracking Moving Objects with Colored Process Noise. , 2020, , .		1
29	Probabilistic Monitoring of Sensors in State-Space With Variational Bayesian Inference. IEEE Transactions on Industrial Electronics, 2019, 66, 2154-2163.	7.9	25
30	Multiple-Model State Estimation Based on Variational Bayesian Inference. IEEE Transactions on Automatic Control, 2019, 64, 1679-1685.	5.7	40
31	Sensor fault detection and diagnosis in the presence of outliers. Neurocomputing, 2019, 349, 156-163.	5.9	25
32	Bayesian State Estimation for Markovian Jump Systems: Employing Recursive Steps and Pseudocodes. IEEE Systems, Man, and Cybernetics Magazine, 2019, 5, 27-36.	1.4	24
33	Feature Extraction of Constrained Dynamic Latent Variables. IEEE Transactions on Industrial Informatics, 2019, 15, 5637-5645.	11.3	7
34	Optimal and Unbiased Filtering With Colored Process Noise Using State Differencing. IEEE Signal Processing Letters, 2019, 26, 548-551.	3.6	26
35	Robust filter design for asymmetric measurement noise using variational Bayesian inference. IET Control Theory and Applications, 2019, 13, 1656-1664.	2.1	9
36	Robust FIR State Estimation of Dynamic Processes Corrupted by Outliers. IEEE Transactions on Industrial Informatics, 2019, 15, 139-147.	11.3	18

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37	Minimum Weighted Frobenius Norm Discrete-Time FIR Filter With Embedded Unbiasedness. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 1284-1288.	3.0	13
38	Iterative Maximum Likelihood FIR Estimation of Dynamic Systems With Improved Robustness. IEEE/ASME Transactions on Mechatronics, 2018, 23, 1467-1476.	5.8	16
39	Distributed Student's t filtering algorithm for heavyâ€tailed noises. International Journal of Adaptive Control and Signal Processing, 2018, 32, 875-890.	4.1	12
40	A New Unbiased FIR Filter With Improved Robustness Based on Frobenius Norm With Exponential Weight. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 521-525.	3.0	21
41	Adaptive-Horizon Iterative UFIR Filtering Algorithm With Applications. IEEE Transactions on Industrial Electronics, 2018, 65, 6393-6402.	7.9	30
42	Further Results on Induced <inline-formula> <tex-math notation="LaTeX">l_infty </tex-math> </inline-formula> RH FIR Filtering. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 1124-1128.	3.0	1
43	Unbiased <inline-formula> <tex-math notation="LaTeX">l_2 </tex-math> </inline-formula>-<inline-formula> <tex-math notation="LaTeX">l_infty </tex-math> </inline-formula> and <inline-formula> <tex-math notation="LaTeX">H_infty </tex-math> </inline-formula> Performances of the Continuous-Time Deadbeat <inline-for. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 1798-1802.	3.0	8
44	Bias-Constrained Optimal Fusion Filtering for Decentralized WSN With Correlated Noise Sources. IEEE Transactions on Signal and Information Processing Over Networks, 2018, 4, 727-735.	2.8	15
45	Localization of Indoor Mobile Robot Using Minimum Variance Unbiased FIR Filter. IEEE Transactions on Automation Science and Engineering, 2018, 15, 410-419.	5.2	32
46	A Revisit to Strictly Passive FIR Filtering. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 516-520.	3.0	3
47	Comparing Robustness of the Kalman, <inline-formula> <tex-math notation="LaTeX">H_infty</tex-math> </inline-formula>, and UFIR Filters. IEEE Transactions on Signal Processing, 2018, 66, 3447-3458.	5.3	65
48	Hankel-Norm Approach to Robust FIR Estimation of Dynamic Systems Under External Disturbances. IEEE/ASME Transactions on Mechatronics, 2018, 23, 1973-1980.	5.8	2
49	Fast Kalman-like optimal FIR filter for time-variant systems with improved robustness. ISA Transactions, 2018, 80, 160-168.	5.7	10
50	Linear Optimal Unbiased Filter for Time-Variant Systems Without Apriori Information on Initial Conditions. IEEE Transactions on Automatic Control, 2017, 62, 882-887.	5.7	47
51	Iterative Residual Generator for Fault Detection With Linear Time-Invariant Stateâ€“Space Models. IEEE Transactions on Automatic Control, 2017, 62, 5422-5428.	5.7	22
52	Frequency-Efficient Receding Horizon $H_infty $ FIR Filtering in Discrete-Time State-Space. IEEE Transactions on Circuits and Systems I: Regular Papers, 2017, 64, 2945-2953.	5.4	16
53	On the Iterative Computation of Error Matrix in Unbiased FIR Filtering. IEEE Signal Processing Letters, 2017, 24, 555-558.	3.6	12
54	Fast biasâ€constrained optimal FIR filtering for timeâ€invariant state space models. International Journal of Adaptive Control and Signal Processing, 2017, 31, 1061-1076.	4.1	4

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55	Fusion Kalman/UFIR Filter for State Estimation With Uncertain Parameters and Noise Statistics. IEEE Transactions on Industrial Electronics, 2017, 64, 3075-3083.	7.9	83
56	Identification of timeâ€delay Markov jump autoregressive exogenous systems with expectationâ€maximization algorithm. International Journal of Adaptive Control and Signal Processing, 2017, 31, 1920-1933.	4.1	14
57	Bayesian state estimation on finite horizons: The case of linear stateâ€“space model. Automatica, 2017, 85, 91-99.	5.0	22
58	Distributed plant-wide process monitoring based on PCA with minimal redundancy maximal relevance. Chemometrics and Intelligent Laboratory Systems, 2017, 169, 53-63.	3.5	46
59	On initialization of the Kalman filter. , 2017, , .		7
60	General Unbiased FIR Filter With Applications to GPS-Based Steering of Oscillator Frequency. IEEE Transactions on Control Systems Technology, 2017, 25, 1141-1148.	5.2	26
61	Continuous-Time Deadbeat H_{2} FIR Filter. IEEE Transactions on Circuits and Systems II: Express Briefs, 2017, 64, 987-991.	3.0	16
62	Detection and Diagnosis of Multiple Faults With Uncertain Modeling Parameters. IEEE Transactions on Control Systems Technology, 2017, 25, 1873-1881.	5.2	21
63	Real-Time Optimal State Estimation of Multi-DOF Industrial Systems Using FIR Filtering. IEEE Transactions on Industrial Informatics, 2017, 13, 967-975.	11.3	28
64	Ultimate iterative UFIR filtering algorithm. Measurement: Journal of the International Measurement Confederation, 2016, 92, 236-242.	5.0	32
65	Unified Maximum Likelihood Form for Bias Constrained FIR Filters. IEEE Signal Processing Letters, 2016, 23, 1848-1852.	3.6	20
66	Unbiased, optimal, and inâ€between: the tradeâ€off in discrete finite impulse response filtering. IET Signal Processing, 2016, 10, 325-334.	1.5	14
67	Fast Kalman-Like Optimal Unbiased FIR Filtering With Applications. IEEE Transactions on Signal Processing, 2016, 64, 2284-2297.	5.3	124
68	Effect of embedded unbiasedness on discrete-time optimal FIR filtering estimates. Eurasip Journal on Advances in Signal Processing, 2015, 2015, .	1.7	7
69	Minimum variance unbiased FIR filter for discrete time-variant systems. Automatica, 2015, 53, 355-361.	5.0	75
70	Fault Detection and Diagnosis of Multiple-Model Systems With Mismodeled Transition Probabilities. IEEE Transactions on Industrial Electronics, 2015, 62, 5063-5071.	7.9	39
71	Fast Computation of Discrete Optimal FIR Estimates in White Gaussian Noise. IEEE Signal Processing Letters, 2015, 22, 718-722.	3.6	53
72	H_{â€‰âˆžâ€‰} filtering for discreteâ€time Markov jump systems with unknown transition probabilities. International Journal of Adaptive Control and Signal Processing, 2014, 28, 138-148.	4.1	23

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73	H_{âˆž}Control for Discrete-Time Markov Jump Systems With Uncertain Transition Probabilities. IEEE Transactions on Automatic Control, 2013, 58, 1566-1572.	5.7	104
74	Recursive Bayesian estimation for Markov jump linear systems with unknown modeâ€dependent state delays. IET Signal Processing, 2013, 7, 911-919.	1.5	3
75	Bayesian estimation for nonlinear stochastic hybrid systems with state dependent transitions. Journal of Systems Engineering and Electronics, 2012, 23, 242-249.	2.2	1
76	Riskâ€sensitive filtering for nonlinear Markov jump systems on the basis of particle approximation. International Journal of Adaptive Control and Signal Processing, 2012, 26, 158-170.	4.1	6
77	Iterative Maximum Likelihood FIR Filter for State-Space Models with Time-Stamped Delayed and Missing Data. Circuits, Systems, and Signal Processing, 0, , .	2.0	0