Bo G Wahlberg

List of Publications by Year
in descending order

109 papers	3,469 citations	236925 25 h-index	168389 53 g-index
110 all docs	110 docs citations	110 times ranked	1437 citing authors

#	Article	IF	Citations
1	System identification using Laguerre models. IEEE Transactions on Automatic Control, 1991, 36, 551-562.	5.7	637
2	System identification using Kautz models. IEEE Transactions on Automatic Control, 1994, 39, 1276-1282.	5.7	297
3	An adaptive array for mobile communication systems. IEEE Transactions on Vehicular Technology, 1991, 40, 230-236.	6.3	233
4	On approximation of stable linear dynamical systems using Laguerre and Kautz functions. Automatica, 1996, 32, 693-708.	5.0	206
5	Hard frequency-domain model error bounds from least-squares like identification techniques. IEEE Transactions on Automatic Control, 1992, 37, 900-912.	5.7	182
6	An ADMM Algorithm for a Class of Total Variation Regularized Estimation Problems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 83-88.	0.4	133
7	On Consistency of Subspace Methods for System Identification. Automatica, 1998, 34, 1507-1519.	5.0	113
8	Analysis of state space system identification methods based on instrumental variables and subspace fitting. Automatica, 1997, 33, 1603-1616.	5.0	106
9	A feedback control scheme for reversing a truck and trailer vehicle. IEEE Transactions on Automation Science and Engineering, 2001, 17, 915-922.	2.3	99
10	A linear regression approach to state-space subspace system identification. Signal Processing, 1996, 52, 103-129.	3.7	84
11	Stabilization of Induction Motor Drives With Poorly Damped Input Filters. IEEE Transactions on Industrial Electronics, 2007, 54, 2724-2734.	7.9	83
12	Asymptotic properties of the least-squares method for estimating transfer functions and disturbance spectra. Advances in Applied Probability, 1992, 24, 412-440.	0.7	71
13	Limit results for sampled systems. International Journal of Control, 1988, 48, 1267-1283.	1.9	67
14	Asymptotic properties of the least-squares method for estimating transfer functions and disturbance spectra. Advances in Applied Probability, 1992, 24, 412-440.	0.7	65
15	Model reductions of high-order estimated models: the asymptotic ML approach. International Journal of Control, 1989, 49, 169-192.	1.9	61
16	Non-parametric methods for $\mathcal{L}_2$ gain estimation using iterative experiments. Automatica, 2010, 46, 1376-1381.	5.0	48
17	Spatial Model Predictive Control for Smooth and Accurate Steering of an Autonomous Truck. IEEE Transactions on Intelligent Vehicles, 2017, 2, 238-250.	12.7	46
18	Clothoid-based model predictive control for autonomous driving. , 2015, , .		43

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19	Estimation of building occupancy levels through environmental signals deconvolution. , 2013, , .		42
20	Application-Oriented Input Design in System Identification: Optimal Input Design for Control [Applications of Control]. IEEE Control Systems, 2017, 37, 31-56.	0.8	39
21	Constrained predictive control using orthogonal expansions. AICHE Journal, 1993, 39, 1810-1826.	3.6	38
22	Blind equalization by direct examination of the input sequences. IEEE Transactions on Communications, 1995, 43, 2213-2222.	7.8	35
23	The effects of rapid sampling in system identification. Automatica, 1990, 26, 167-170.	5.0	33
24	Partially Observed Markov Decision Process Multiarmed Banditsâ€"Structural Results. Mathematics of Operations Research, 2009, 34, 287-302.	1.3	32
25	Experimental validation of model predictive control stability for autonomous driving. Control Engineering Practice, 2018, 81, 244-255.	5.5	32
26	Analyzing iterations in identification with application to nonparametric <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si10.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi mathvariant="script">H</mml:mi></mml:mrow><mml:mrow><mml:mi>âˆž</mml:mi></mml:mrow></mml:msub></mml:math>-norm estimation. Automatica, 2012, 48, 2776-2790.	5.0	29
27	Variance results for identification of cascade systems. Automatica, 2009, 45, 1443-1448.	5.0	28
28	A Class of Nonconvex Penalties Preserving Overall Convexity in Optimization-Based Mean Filtering. IEEE Transactions on Signal Processing, 2016, 64, 6650-6664.	5.3	27
29	Some asymptotic results in recursive identification using laguerre models. International Journal of Adaptive Control and Signal Processing, 1991, 5, 313-333.	4.1	24
30	ESTIMATION OF AUTOREGRESSIVE MOVINGâ€AVERAGE MODELS VIA HIGHâ€ORDER AUTOREGRESSIVE APPROXIMATIONS. Journal of Time Series Analysis, 1989, 10, 283-299.	1.2	21
31	Orthonormal Basis Functions in Time and Frequency Domain: Hambo Transform Theory. SIAM Journal on Control and Optimization, 2003, 42, 1347-1373.	2.1	21
32	On optimal input design in system identification for control. , 2010, , .		20
33	Selection of Best Orthonormal Rational Basis. SIAM Journal on Control and Optimization, 2000, 38, 995-1032.	2.1	17
34	Cooperative rendezvous of ground vehicle and aerial vehicle using model predictive control. , 2017, , .		17
35	On Model Reduction in System Identification. , 1986, , .		17
36	An ADMM algorithm for solving &#x2113;<inf>1</inf> regularized MPC. , 2012, , .		15

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37	Path Planning for Autonomous Bus Driving in Highly Constrained Environments. , 2019, , .		15
38	Model Predictive Control for Autonomous Ship Landing in a Search and Rescue Scenario. , 2019, , .		15
39	Inverse Filtering for Hidden Markov Models With Applications to Counter-Adversarial Autonomous Systems. IEEE Transactions on Signal Processing, 2020, 68, 4987-5002.	5.3	15
40	Optimization-Based On-Road Path Planning for Articulated Vehicles. IFAC-PapersOnLine, 2020, 53, 15572-15579.	0.9	15
41	Combining Lattice-Based Planning and Path Optimization in Autonomous Heavy Duty Vehicle Applications. , 2018, , .		14
42	Subspace Hammerstein Model Identification under Periodic Disturbance. IFAC-PapersOnLine, 2018, 51, 335-340.	0.9	13
43	On the Performance of Optimal Input Signals for Frequency Response Estimation. IEEE Transactions on Automatic Control, 2012, 57, 766-771.	5.7	12
44	Algorithms for time delay estimation using a low complexity exhaustive search. IEEE Transactions on Automatic Control, 1999, 44, 1031-1037.	5.7	11
45	Data-Driven Methods for L2-Gain Estimation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1597-1602.	0.4	11
46	ARMA spectral estimation of narrow-band processes via model reduction. IEEE Transactions on Acoustics, Speech, and Signal Processing, 1990, 38, 1144-1154.	2.0	10
47	A least squares approach to direct frequency response estimation. , 2011, , .		10
48	Estimating Private Beliefs of Bayesian Agents Based on Observed Decisions. , 2019, 3, 523-528.		10
49	Experiences from Subspace System Identification - Comments from Process Industry Users and Researchers. , 2007, , 315-327.		10
50	Inverse Filtering for Linear Gaussian State-Space Models. , 2018, , .		9
51	Input design using Markov chains for system identification. , 2009, , .		8
52	On Identification of Parallel Cascade Serial Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9978-9983.	0.4	8
53	Identification of Stochastic Wiener Systems using Indirect Inference. This work was partially supported by the Swedish Research Council and the Linnaeus Center ACCESS at KTH. The research leading to these results has received funding from The European Research Council under the European Community's Seventh Framework program (FP7 2007-2013) / ERC Grant Agreement N. 267381. IFAC-PapersOnLine, 2015, 48, 620-625.	0.9	8
54	How to monitor and mitigate stair-casing in L1 trend filtering. , 2015, , .		8

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55	Hidden Markov Models: Inverse Filtering, Belief Estimation and Privacy Protection. Journal of Systems Science and Complexity, 2021, 34, 1801-1820.	2.8	8
56	GAIN ESTIMATION FOR HAMMERSTEIN SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 784-789.	0.4	7
57	On The Relation Between Weighted Frequency-Domain Maximum-Likelihood Power Spectral Estimation and the Prefiltered Covariance Extension Approach. IEEE Transactions on Signal Processing, 2007, 55, 384-389.	5.3	7
58	Cascade structural model approximation of identified state space models. , 2008, , .		7
59	On optimal input signal design for identification of output error models. , 2011, , .		7
60	Accurate Changing Point Detection for l1 Mean Filtering. IEEE Signal Processing Letters, 2016, , 1-1.	3.6	7
61	Influence of Model Order on Change Detection in Noise-Free, Complex System. , 1990, , .		7
62	Design variables for bias distribution in transfer function estimation. , 1984, , .		6
63	On optimal input signal design for frequency response estimation. , 2010, , .		6
64	Model Predictive Control oriented experiment design for system identification: A graph theoretical approach. Journal of Process Control, 2017, 52, 75-84.	3.3	6
65	Verification of Cooperative Maneuvers in FlightGear using MPC and Backwards Reachable Sets. , 2018, , .		6
66	Learning the Step-size Policy for the Limited-Memory Broyden-Fletcher-Goldfarb-Shanno Algorithm. , 2021, , .		6
67	A Geometric Approach to On-road Motion Planning for Long and Multi-Body Heavy-Duty Vehicles. , 2020, , .		6
68	Orthogonal Rational Functions: A Transformation Analysis. SIAM Review, 2003, 45, 689-705.	9.5	5
69	VALIDATION OF STABILITY FOR AN INDUCTION MACHINE DRIVE USING POWER ITERATIONS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 892-897.	0.4	5
70	Modelling and Control of Series HEVs Including Resistive Losses and Varying Engine Efficiency. , 0, , .		5
71	Sparse Estimation Techniques for Basis Function Selection in Wideband System Identification*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 977-982.	0.4	5
72	Algorithms and Performance Analysis for Stochastic Wiener System Identification. , 2018, 2, 471-476.		5

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73	Autonomous Bus Driving: A Novel Motion-Planning Approach. IEEE Vehicular Technology Magazine, 2021, 16, 29-37.	3.4	5
74	Distributed Model Predictive Control for Cooperative Landing. IFAC-PapersOnLine, 2020, 53, 15180-15185.	0.9	5
75	Variance analysis for identification of cascade systems. , 2008, , .		4
76	On estimation of the gain of a dynamical system. , 2011, , .		4
77	Asymptotically Efficient Identification of Known-Sensor Hidden Markov Models. IEEE Signal Processing Letters, 2017, 24, 1813-1817.	3.6	4
78	Aperiodic Communication for MPC in Autonomous Cooperative Landing. IFAC-PapersOnLine, 2021, 54, 113-118.	0.9	4
79	Learning Models of Model Predictive Controllers using Gradient Data. IFAC-PapersOnLine, 2021, 54, 7-12.	0.9	4
80	Cooperative System Identification via Correctional Learning. IFAC-PapersOnLine, 2021, 54, 19-24.	0.9	4
81	WARA-PS: a research arena for public safety demonstrations and autonomous collaborative rescue robotics experimentation. Autonomous Intelligent Systems, 2021, 1, 1.	3.1	4
82	Factorizations that relax the positive real condition in continuousâ€time and fastâ€sampled ELS schemes. International Journal of Adaptive Control and Signal Processing, 1990, 4, 389-414.	4.1	3
83	On subspace identification of cascade structured systems. , 2010, , .		3
84	New Square-Root Factorization of Inverse Toeplitz Matrices. IEEE Signal Processing Letters, 2010, 17, 137-140.	3.6	3
85	Reweighted nuclear norm regularization: A SPARSEVA approach**This work was partially supported by the Swedish Research Council and the Linnaeus Center ACCESS at KTH.. IFAC-PapersOnLine, 2015, 48, 1172-1177.	0.9	3
86	On optimal input design for networked systems. Automatica, 2015, 53, 275-281.	5.0	3
87	How to Protect Your Privacy? A Framework for Counter-Adversarial Decision Making. , 2020, , .		3
88	Evaluation of Spectral Learning for the Identification of Hidden Markov Models. IFAC-PapersOnLine, 2015, 48, 897-902.	0.9	2
89	Computing monotone policies for Markov decision processes: a nearly-isotonic penalty approach **This work was partially supported by the Swedish Research Council under contract 2016-06079 and the Linnaeus Center ACCESS at KTH.. IFAC-PapersOnLine, 2017, 50, 8429-8434.	0.9	2
90	Variable Prediction Horizon Control for Cooperative Landing on Moving Target. , 2021, , .		2

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91	Identifiability and Solvability in Inverse Linear Quadratic Optimal Control Problems. Journal of Systems Science and Complexity, 2021, 34, 1840-1857.	2.8	2
92	A frequency response estimation method based on smoothing and thresholding. International Journal of Adaptive Control and Signal Processing, 1998, 12, 407-416.	4.1	1
93	Analysis of a low-complexity change detection scheme. International Journal of Adaptive Control and Signal Processing, 2000, 14, 481-503.	4.1	1
94	On Frequency Weighting in Autoregressive Spectral Estimation. , 0, , .		1
95	On l<inf>1</inf> mean and variance filtering. , 2011, , .		1
96	On optimal input design for feed-forward control. , 2013, , .		1
97	Approximative model reconstruction of cascade systems. Systems and Control Letters, 2014, 69, 90-97.	2.3	1
98	An analysis of the SPARSEVA estimate for the finite sample data case. Automatica, 2018, 96, 141-149.	5.0	1
99	What did your adversary believeÆ' Optimal Filtering and Smoothing in Counter-Adversarial Autonomous Systems. , 2020, , .		1
100	Model reductions of high-order estimated models: the asymptotic ML approach. International Journal of Control, 1989, 49, 169-192.	1.9	1
101	ARMA Spectral Estimation via Model Reduction. , 1986, , .		1
102	A Biologically Inspired Computational Model of Time Perception. IEEE Transactions on Cognitive and Developmental Systems, 2022, 14, 258-268.	3.8	1
103	Nonlinear Curvature Modeling for MPC of Autonomous Vehicles. , 2020, , .		1
104	On Estimation of Cascade Systems with Common Dynamics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1116-1120.	0.4	0
105	Analyzing Iterations in Identification with Application to Nonparametric Hâˆž-norm Estimation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9972-9977.	0.4	0
106	Modeling and Control of Dual Arm Robotic Manipulators using Decentralized Navigation Functions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 241-246.	0.4	0
107	On asymptotic frequency response variance expressions for estimated output error models. , 2012, , .		0
108	PC136 An Optimal Gender-Specific Treatment Policy for Abdominal Aortic Aneurysms Constructed Using a Markov Decision Process Model. Journal of Vascular Surgery, 2017, 65, 175S.	1.1	0

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109	The Gaussian Maximum-Likelihood Estimator Versus the Optimally Weighted Least-Squares Estimator [Lecture Notes]. IEEE Signal Processing Magazine, 2020, 37, 195-199.	5.6	0