HÃ¥kan Hjalmarsson

List of Publications by Year
in descending order

110 papers	4,614 citations	257450 24 h-index	106344 65 g-index
111 all docs	111 docs citations	111 times ranked	2051 citing authors

#	Article	IF	Citations
1	Nonlinear black-box modeling in system identification: a unified overview. Automatica, 1995, 31, 1691-1724.	5.0	1,730
2	From experiment design to closed-loop control. Automatica, 2005, 41, 393-438.	5.0	410
3	Iterative feedback tuning?an overview. International Journal of Adaptive Control and Signal Processing, 2002, 16, 373-395.	4.1	363
4	Nonlinear black-box models in system identification: Mathematical foundations. Automatica, 1995, 31, 1725-1750.	5.0	329
5	For model-based control design, closed-loop identification gives better performance. Automatica, 1996, 32, 1659-1673.	5.0	205
6	System Identification of Complex and Structured Systems. European Journal of Control, 2009, 15, 275-310.	2.6	132
7	Efficient tuning of linear multivariable controllers using iterative feedback tuning. International Journal of Adaptive Control and Signal Processing, 1999, 13, 553-572.	4.1	88
8	Model-free Tuning of a Robust Regulator for a Flexible Transmission System. European Journal of Control, 1995, 1, 148-156.	2.6	64
9	Four Encounters with System Identification. European Journal of Control, 2011, 17, 449-471.	2.6	54
10	Iterative Data-Driven H Norm Estimation of Multivariable Systems With Application to Robust Active Vibration Isolation. IEEE Transactions on Control Systems Technology, 2014, 22, 2247-2260.	5.2	53
11	Identification of ARX systems with non-stationary inputs â€" asymptotic analysis with application to adaptive input design. Automatica, 2009, 45, 623-633.	5.0	52
12	Identification for control of multivariable systems: Controller validation and experiment design via LMIs. Automatica, 2008, 44, 3070-3078.	5.0	49
13	Non-parametric methods for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si3.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi mathvariant="script">L</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></mml:msub></mml:math>-gain estimation using iterative experiments. Automatica, 2010, 46, 1376-1381.	5.0	48
14	Closed loop experiment design for linear time invariant dynamical systems via LMIs. Automatica, 2008, 44, 623-636.	5.0	44
15	Optimal Input Design for Identification of Non-linear Systems: Learning From the Linear Case. Proceedings of the American Control Conference, 2007, , .	0.0	39
16	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
17	Experimental evaluation of model predictive control with excitation (MPC-X) on an industrial depropanizer. Journal of Process Control, 2015, 31, 1-16.	3.3	35
18	A nonparametric kernel-based approach to Hammerstein system identification. Automatica, 2017, 85, 234-247.	5.0	33

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19	Gradient approximations in iterative feedback tuning for multivariable processes. International Journal of Adaptive Control and Signal Processing, 2004, 18, 665-681.	4.1	31
20	An empirical Bayes approach to identification of modules in dynamic networks. Automatica, 2018, 91, 144-151.	5.0	30
21	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>â^ž</mml:mi></mml:mrow></mml:msub></mml:math>-norm estimation. Automatica, 2012, 48, 2776-2790.	5.0	29
22	Variance results for identification of cascade systems. Automatica, 2009, 45, 1443-1448.	5.0	28
23	Identification and control: Joint input design and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi mathvariant="script">H</mml:mi></mml:mrow><mml:mrow><mml:mo>â^ž</mml:mo></mml:mrow></mml:msub></mml:math>state feedback with ellipsoidal parametric uncertainty via LMIs. Automatica, 2008, 44, 543-551.	5.0	27
24	Model predictive control with integrated experiment design for output error systems. , 2013, , .		26
25	Optimal Input Design Using Linear Matrix Inequalities. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 1085-1090.	0.4	25
26	On the frequency domain accuracy of closed-loop estimates. Automatica, 2005, 41, 1109-1122.	5.0	24
27	A Geometric Approach to Variance Analysis in System Identification. IEEE Transactions on Automatic Control, 2011, 56, 983-997.	5.7	24
28	Least-squares estimation of a class of frequency functions: A finite sample variance expression. Automatica, 2006, 42, 589-600.	5.0	22
29	On optimal input design in system identification for control. , 2010, , .		20
30	A design algorithm using external perturbation to improve Iterative Feedback Tuning convergence. Automatica, 2011, 47, 2665-2670.	5.0	20
31	An application-oriented approach to dual control with excitation for closed-loop identification. European Journal of Control, 2016, 29, 1-16.	2.6	20
32	Learning Robust LQ-Controllers Using Application Oriented Exploration. , 2020, 4, 19-24.		19
33	The Cost of Complexity in System Identification: Frequency Function Estimation of Finite Impulse Response Systems. IEEE Transactions on Automatic Control, 2010, 55, 2298-2309.	5.7	18
34	A graph theoretical approach to input design for identification of nonlinear dynamical models. Automatica, 2015, 51, 233-242.	5.0	18
35	ROBUST INPUT DESIGN USING SUM OF SQUARES CONSTRAINTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1352-1357.	0.4	17
36	Variance-error quantification for identified poles and zeros. Automatica, 2009, 45, 2512-2525.	5.0	17

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37	Bayesian nonparametric identification of Wiener systems. Automatica, 2019, 108, 108480.	5.0	17
38	How to Make Bias and Variance Errors Insensitive to System and Model Complexity in Identification. IEEE Transactions on Automatic Control, 2011, 56, 100-112.	5.7	15
39	OPTIMAL EXPERIMENT DESIGN IN CLOSED LOOP. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 488-493.	0.4	14
40	ON SOME ROBUSTNESS ISSUES IN INPUT DESIGN. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 511-516.	0.4	14
41	Conditions when minimum variance control is the optimal experiment for identifying a minimum variance controller. Automatica, 2011, 47, 578-583.	5.0	13
42	An adaptive method for consistent estimation of real-valued non-minimum phase zeros in stable LTI systems. Automatica, 2011, 47, 1388-1398.	5.0	13
43	From experiments to closed loop control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 1-14.	0.4	12
44	MPC oriented experiment design. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9966-9971.	0.4	12
45	On the accuracy in errors-in-variables identification compared to prediction-error identification. Automatica, 2011, 47, 2704-2712.	5.0	12
46	Chance constrained input design. , 2011, , .		12
47	On optimal input design in system identification for model predictive control. , 2011, , .		12
48	On the Performance of Optimal Input Signals for Frequency Response Estimation. IEEE Transactions on Automatic Control, 2012, 57, 766-771.	5.7	12
49	Input design as a tool to improve the convergence of PEM. Automatica, 2013, 49, 3282-3291.	5.0	12
50	Data-Driven Methods for L2-Gain Estimation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1597-1602.	0.4	11
51	Linear prediction error methods for stochastic nonlinear models. Automatica, 2019, 105, 49-63.	5.0	11
52	Order and structural dependence selection of LPV-ARX models revisited. , 2012, , .		10
53	Iterative Feedback Tuning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 101-108.	0.4	9
54	ON METHODS FOR GRADIENT ESTIMATION IN IFT FOR MIMO SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 379-384.	0.4	9

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55	Training sequence design for MIMO channels: an application-oriented approach. Eurasip Journal on Wireless Communications and Networking, 2013, 2013, .	2.4	9
56	A GENERAL FRAMEWORK FOR ITERATIVE LEARNING CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 387-392.	0.4	8
57	On Direct Identification of Physical Parameters in Non-Linear Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 375-380.	0.4	8
58	A geometric approach to variance analysis of cascaded systems. , 2013, , .		8
59	Application set approximation in optimal input design for model predictive control. , 2014, , .		8
60	Using a sufficient condition to analyze the interplay between identification and control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 45-50.	0.4	7
61	GAIN ESTIMATION FOR HAMMERSTEIN SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 784-789.	0.4	7
62	The Cost of Complexity in Identification of FIR Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 11451-11456.	0.4	7
63	Predictor-based multivariable closed-loop system identification of the EXTRAP T2R reversed field pinch external plasma response. Plasma Physics and Controlled Fusion, 2011, 53, 084003.	2.1	7
64	Application-Oriented Finite Sample Experiment Design: A Semidefinite Relaxation Approach*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1635-1640.	0.4	7
65	Modeling and identification of uncertain-input systems. Automatica, 2019, 105, 130-141.	5.0	7
66	Identification of stochastic nonlinear models using optimal estimating functions. Automatica, 2020, 119, 109055.	5.0	7
67	Frequency Domain Expressions of the Accuracy of a Model-Free Control Design Scheme. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 149-154.	0.4	6
68	RANDOMIZED ITERATIVE FEEDBACK TUNING. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 361-366.	0.4	6
69	IDENTIFICATION OF PERFORMANCE LIMITATIONS IN CONTROL USING ARX-MODELS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 283-288.	0.4	6
70	The cost of complexity in system identification: The Output Error case. Automatica, 2011, 47, 1938-1948.	5.0	6
71	A Multi-Time-Scale Generalization of Recursive Identification Algorithm for ARMAX Systems. IEEE Transactions on Automatic Control, 2015, 60, 2242-2247.	5.7	6
72	Identification of modules in dynamic networks: An empirical Bayes approach. , 2016, , .		6

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73	ON OPTIMAL INPUT DESIGN IN SYSTEM IDENTIFICATION1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 499-504.	0.4	5
74	A System, Signals and Identification Toolbox in Mathematica with Symbolic Capabilities. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 747-751.	0.4	5
75	Identification of nonlinear systems using misspecified predictors. , 2010, , .		5
76	Robust and adaptive excitation signal generation for input and output constrained systems. , 2013, , .		4
77	Application of a Linear PEM Estimator to a Stochastic Wiener-Hammerstein Benchmark Problem. IFAC-PapersOnLine, 2018, 51, 784-789.	0.9	4
78	MIXED H2 AND Hâˆž INPUT DESIGN FOR MULTIVARIABLE SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1335-1340.	0.4	3
79	Adaptive input design for ARX systems. , 2007, , .		3
80	Improving convergence of Iterative Feedback Tuning using optimal external perturbations. , 2008, , .		3
81	Robust Experiment Design for System Identification via Semi-Infinite Programming Techniques*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 680-685.	0.4	3
82	Input Signal Generation for Constrained Multiple-Input Multple-Output Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1410-1415.	0.4	3
83	Adaptive Input Design for LTI Systems. IEEE Transactions on Automatic Control, 2017, 62, 2390-2405.	5.7	3
84	Variational Bayes identification of acyclic dynamic networks * *This work was supported by the Swedish Research Council under contracts 2015-05285 and 2016-06079, and by the European Research Council under the advanced grants LEARN, contract 267381, and SYSIDNET, contract 694504. IFAC-PapersOnLine, 2017, 50, 10556-10561.	0.9	3
85	Optimal Input Design Through Infinity Norm Minimization Using Proximal Mapping. , 2021, , .		3
86	Spectral Based Parameter Estimation in Nonlinear Stochastic Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 911-916.	0.4	2
87	Consistent estimation of real NMP zeros in stable LTI systems of arbitrary complexity. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 922-927.	0.4	2
88	Input design using cylindrical algebraic decomposition. , 2011, , .		2
89	A Tutorial on Applications-Oriented Optimal Experiment Design. Lecture Notes in Control and Information Sciences, 2012, , 149-164.	1.0	2
90	Mean-squared error experiment design for linear regression models*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1629-1634.	0.4	2

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91	A Chernoff convexification for chance constrained MIMO training sequence design. , 2012, , .		2
92	Uncertainty in system identification: learning from the theory of risk**This work was supported by the Swedish Research Council under contracts 621-2011-5890 and 621-2009-4017, and by the European Research Council under the advanced grant LEARN, contract 267381.. IFAC-PapersOnLine, 2015, 48, 1053-1058.	0.9	2
93	On the variance analysis of identified linear MIMO models. , 2015, , .		2
94	Generation of signals with specified secondâ€order properties for constrained systems. International Journal of Adaptive Control and Signal Processing, 2016, 30, 456-472.	4.1	2
95	Covariance analysis in SISO linear systems identification. Automatica, 2017, 77, 82-92.	5.0	2
96	System Identification for Automotive Systems: Opportunities and Challenges. Lecture Notes in Control and Information Sciences, 2012, , 1-10.	1.0	2
97	Identification of performance limitations in control. , 2001, , .		1
98	MIMO experiment design based on asymptotic model order theory. , 2009, , .		1
99	Adaptive experiment design for ARMAX systems?. , 2012, , .		1
100	A Chernoff relaxation on the problem of application-oriented finite sample experiment design. , 2012, , .		1
101	Iteratively learning the ℌ<inf>∞</inf>-norm of multivariable systems applied to model-error-modeling of a vibration isolation system. , 2013, , .		1
102	Applications oriented input design for closed-loop system identification: a graph-theory approach. , 2014, , .		1
103	Willemsâ€™ fundamental lemma based on second-order moments. , 2021, , .		1
104	Input design for asymptotic robust H<inf>2</inf>-filtering. , 2009, , .		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	Least squares end performance experiment design in multicarrier systems: The sparse preamble case. , 2014, , .		0
107	Bayes Control of Hammerstein Systems. IFAC-PapersOnLine, 2021, 54, 755-760.	0.9	0
108	Experiment Design and Identification for Control. , 2021, , 735-744.		0

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109	Experiment Design and Identification for Control. , 2014, , 1-13.		0
110	Experiment Design and Identification for Control. , 2019, , 1-10.		0