

# HÃ¥kan Hjalmarsson

## List of Publications by Year in descending order

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110  
papers

4,614  
citations

257101

24  
h-index

106150

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. <i>Automatica</i> , 1995, 31, 1691-1724.	3.0	1,730
2	From experiment design to closed-loop control. <i>Automatica</i> , 2005, 41, 393-438.	3.0	410
3	Iterative feedback tuning?an overview. <i>International Journal of Adaptive Control and Signal Processing</i> , 2002, 16, 373-395.	2.3	363
4	Nonlinear black-box models in system identification: Mathematical foundations. <i>Automatica</i> , 1995, 31, 1725-1750.	3.0	329
5	For model-based control design, closed-loop identification gives better performance. <i>Automatica</i> , 1996, 32, 1659-1673.	3.0	205
6	System Identification of Complex and Structured Systems. <i>European Journal of Control</i> , 2009, 15, 275-310.	1.6	132
7	Efficient tuning of linear multivariable controllers using iterative feedback tuning. <i>International Journal of Adaptive Control and Signal Processing</i> , 1999, 13, 553-572.	2.3	88
8	Model-free Tuning of a Robust Regulator for a Flexible Transmission System. <i>European Journal of Control</i> , 1995, 1, 148-156.	1.6	64
9	Four Encounters with System Identification. <i>European Journal of Control</i> , 2011, 17, 449-471.	1.6	54
10	Iterative Data-Driven H Norm Estimation of Multivariable Systems With Application to Robust Active Vibration Isolation. <i>IEEE Transactions on Control Systems Technology</i> , 2014, 22, 2247-2260.	3.2	53
11	Identification of ARX systems with non-stationary inputs " asymptotic analysis with application to adaptive input design. <i>Automatica</i> , 2009, 45, 623-633.	3.0	52
12	Identification for control of multivariable systems: Controller validation and experiment design via LMIs. <i>Automatica</i> , 2008, 44, 3070-3078.	3.0	49
13	Non-parametric methods for $\  \cdot \ _H$ norm estimation of multivariable systems with application to robust active vibration isolation using iterative experiments. <i>Automatica</i> , 2010, 46, 1376-1381.	3.0	48
14	Closed loop experiment design for linear time invariant dynamical systems via LMIs. <i>Automatica</i> , 2008, 44, 623-636.	3.0	44
15	Optimal Input Design for Identification of Non-linear Systems: Learning From the Linear Case. <i>Proceedings of the American Control Conference</i> , 2007, , .	0.0	39
16	Application-Oriented Input Design in System Identification: Optimal Input Design for Control [Applications of Control]. <i>IEEE Control Systems</i> , 2017, 37, 31-56.	1.0	39
17	Experimental evaluation of model predictive control with excitation (MPC-X) on an industrial depopanizer. <i>Journal of Process Control</i> , 2015, 31, 1-16.	1.7	35
18	A nonparametric kernel-based approach to Hammerstein system identification. <i>Automatica</i> , 2017, 85, 234-247.	3.0	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.	2.3	31
20	An empirical Bayes approach to identification of modules in dynamic networks. Automatica, 2018, 91, 144-151.	3.0	30
21	Analyzing iterations in identification with application to nonparametric $\hat{z}$ -norm estimation. Automatica, 2012, 48, 2776-2790.	3.0	29
22	Variance results for identification of cascade systems. Automatica, 2009, 45, 1443-1448.	3.0	28
23	Identification and control: Joint input design and state feedback with ellipsoidal parametric uncertainty via LMIs. Automatica, 2008, 44, 543-551.	3.0	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.	3.0	24
27	A Geometric Approach to Variance Analysis in System Identification. IEEE Transactions on Automatic Control, 2011, 56, 983-997.	3.6	24
28	Least-squares estimation of a class of frequency functions: A finite sample variance expression. Automatica, 2006, 42, 589-600.	3.0	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.	3.0	20
31	An application-oriented approach to dual control with excitation for closed-loop identification. European Journal of Control, 2016, 29, 1-16.	1.6	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.	3.6	18
34	A graph theoretical approach to input design for identification of nonlinear dynamical models. Automatica, 2015, 51, 233-242.	3.0	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.	3.0	17

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37	Bayesian nonparametric identification of Wiener systems. <i>Automatica</i> , 2019, 108, 108480.	3.0	17
38	How to Make Bias and Variance Errors Insensitive to System and Model Complexity in Identification. <i>IEEE Transactions on Automatic Control</i> , 2011, 56, 100-112.	3.6	15
39	OPTIMAL EXPERIMENT DESIGN IN CLOSED LOOP. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2005, 38, 488-493.	0.4	14
40	ON SOME ROBUSTNESS ISSUES IN INPUT DESIGN. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2006, 39, 511-516.	0.4	14
41	Conditions when minimum variance control is the optimal experiment for identifying a minimum variance controller. <i>Automatica</i> , 2011, 47, 578-583.	3.0	13
42	An adaptive method for consistent estimation of real-valued non-minimum phase zeros in stable LTI systems. <i>Automatica</i> , 2011, 47, 1388-1398.	3.0	13
43	From experiments to closed loop control. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2003, 36, 1-14.	0.4	12
44	MPC oriented experiment design. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011, 44, 9966-9971.	0.4	12
45	On the accuracy in errors-in-variables identification compared to prediction-error identification. <i>Automatica</i> , 2011, 47, 2704-2712.	3.0	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. <i>IEEE Transactions on Automatic Control</i> , 2012, 57, 766-771.	3.6	12
49	Input design as a tool to improve the convergence of PEM. <i>Automatica</i> , 2013, 49, 3282-3291.	3.0	12
50	Data-Driven Methods for L2-Gain Estimation. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2009, 42, 1597-1602.	0.4	11
51	Linear prediction error methods for stochastic nonlinear models. <i>Automatica</i> , 2019, 105, 49-63.	3.0	11
52	Order and structural dependence selection of LPV-ARX models revisited. , 2012, , .		10
53	Iterative Feedback Tuning. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1998, 31, 101-108.	0.4	9
54	ON METHODS FOR GRADIENT ESTIMATION IN IFT FOR MIMO SYSTEMS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002, 35, 379-384.	0.4	9

#	ARTICLE	IF	CITATIONS
55	Training sequence design for MIMO channels: an application-oriented approach. <i>Eurasip Journal on Wireless Communications and Networking</i> , 2013, 2013, .	1.5	9
56	A GENERAL FRAMEWORK FOR ITERATIVE LEARNING CONTROL. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002, 35, 387-392.	0.4	8
57	On Direct Identification of Physical Parameters in Non-Linear Models. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 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. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2003, 36, 45-50.	0.4	7
61	GAIN ESTIMATION FOR HAMMERSTEIN SYSTEMS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2006, 39, 784-789.	0.4	7
62	The Cost of Complexity in Identification of FIR Systems. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 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. <i>Plasma Physics and Controlled Fusion</i> , 2011, 53, 084003.	0.9	7
64	Application-Oriented Finite Sample Experiment Design: A Semidefinite Relaxation Approach*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012, 45, 1635-1640.	0.4	7
65	Modeling and identification of uncertain-input systems. <i>Automatica</i> , 2019, 105, 130-141.	3.0	7
66	Identification of stochastic nonlinear models using optimal estimating functions. <i>Automatica</i> , 2020, 119, 109055.	3.0	7
67	Frequency Domain Expressions of the Accuracy of a Model-Free Control Design Scheme. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1997, 30, 149-154.	0.4	6
68	RANDOMIZED ITERATIVE FEEDBACK TUNING. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002, 35, 361-366.	0.4	6
69	IDENTIFICATION OF PERFORMANCE LIMITATIONS IN CONTROL USING ARX-MODELS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002, 35, 283-288.	0.4	6
70	The cost of complexity in system identification: The Output Error case. <i>Automatica</i> , 2011, 47, 1938-1948.	3.0	6
71	A Multi-Time-Scale Generalization of Recursive Identification Algorithm for ARMAX Systems. <i>IEEE Transactions on Automatic Control</i> , 2015, 60, 2242-2247.	3.6	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.	0.5	4
78	MIXED H2 AND H <sub>∞</sub> 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 Multiple-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.	3.6	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.	0.5	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.	0.6	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.	0.5	2
93	On the variance analysis of identified linear MIMO models. , 2015, , .		2
94	Generation of signals with specified second-order properties for constrained systems. International Journal of Adaptive Control and Signal Processing, 2016, 30, 456-472.	2.3	2
95	Covariance analysis in SISO linear systems identification. Automatica, 2017, 77, 82-92.	3.0	2
96	System Identification for Automotive Systems: Opportunities and Challenges. Lecture Notes in Control and Information Sciences, 2012, , 1-10.	0.6	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 $\infty$ -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	Willems's fundamental lemma based on second-order moments. , 2021, , .		1
104	Input design for asymptotic robust $H_2$ -filtering. , 2009, , .		0
105	Analyzing Iterations in Identification with Application to Nonparametric $H^\infty$ -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.	0.5	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