

# HÃ¥kan Hjalmarsson

## List of Publications by Year in descending order

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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	Bayes Control of Hammerstein Systems. IFAC-PapersOnLine, 2021, 54, 755-760.	0.9	0
2	Experiment Design and Identification for Control. , 2021, , 735-744.		0
3	Optimal Input Design Through Infinity Norm Minimization Using Proximal Mapping. , 2021, , .		3
4	Willemsâ€™ fundamental lemma based on second-order moments. , 2021, , .		1
5	Learning Robust LQ-Controllers Using Application Oriented Exploration. , 2020, 4, 19-24.		19
6	Identification of stochastic nonlinear models using optimal estimating functions. Automatica, 2020, 119, 109055.	5.0	7
7	Bayesian nonparametric identification of Wiener systems. Automatica, 2019, 108, 108480.	5.0	17
8	Modeling and identification of uncertain-input systems. Automatica, 2019, 105, 130-141.	5.0	7
9	Linear prediction error methods for stochastic nonlinear models. Automatica, 2019, 105, 49-63.	5.0	11
10	Experiment Design and Identification for Control. , 2019, , 1-10.		0
11	Application of a Linear PEM Estimator to a Stochastic Wiener-Hammerstein Benchmark Problem. IFAC-PapersOnLine, 2018, 51, 784-789.	0.9	4
12	An empirical Bayes approach to identification of modules in dynamic networks. Automatica, 2018, 91, 144-151.	5.0	30
13	Covariance analysis in SISO linear systems identification. Automatica, 2017, 77, 82-92.	5.0	2
14	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
15	A nonparametric kernel-based approach to Hammerstein system identification. Automatica, 2017, 85, 234-247.	5.0	33
16	Adaptive Input Design for LTI Systems. IEEE Transactions on Automatic Control, 2017, 62, 2390-2405.	5.7	3
17	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
18	Identification of modules in dynamic networks: An empirical Bayes approach. , 2016, , .		6

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19	An application-oriented approach to dual control with excitation for closed-loop identification. European Journal of Control, 2016, 29, 1-16.	2.6	20
20	Generation of signals with specified second-order properties for constrained systems. International Journal of Adaptive Control and Signal Processing, 2016, 30, 456-472.	4.1	2
21	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
22	On the variance analysis of identified linear MIMO models. , 2015, , .		2
23	A graph theoretical approach to input design for identification of nonlinear dynamical models. Automatica, 2015, 51, 233-242.	5.0	18
24	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
25	A Multi-Time-Scale Generalization of Recursive Identification Algorithm for ARMAX Systems. IEEE Transactions on Automatic Control, 2015, 60, 2242-2247.	5.7	6
26	Least squares end performance experiment design in multicarrier systems: The sparse preamble case. , 2014, , .		0
27	Application set approximation in optimal input design for model predictive control. , 2014, , .		8
28	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
29	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
30	Applications oriented input design for closed-loop system identification: a graph-theory approach. , 2014, , .		1
31	Experiment Design and Identification for Control. , 2014, , 1-13.		0
32	Input design as a tool to improve the convergence of PEM. Automatica, 2013, 49, 3282-3291.	5.0	12
33	Iteratively learning the $\infty$ -norm of multivariable systems applied to model-error-modeling of a vibration isolation system. , 2013, , .		1
34	A geometric approach to variance analysis of cascaded systems. , 2013, , .		8
35	Training sequence design for MIMO channels: an application-oriented approach. Eurasip Journal on Wireless Communications and Networking, 2013, 2013, .	2.4	9
36	Model predictive control with integrated experiment design for output error systems. , 2013, , .		26

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37	Robust and adaptive excitation signal generation for input and output constrained systems. , 2013, , .		4
38	Adaptive experiment design for ARMAX systems?. , 2012, , .		1
39	A Chernoff relaxation on the problem of application-oriented finite sample experiment design. , 2012, , .		1
40	On the Performance of Optimal Input Signals for Frequency Response Estimation. IEEE Transactions on Automatic Control, 2012, 57, 766-771.	5.7	12
41	Order and structural dependence selection of LPV-ARX models revisited. , 2012, , .		10
42	A Tutorial on Applications-Oriented Optimal Experiment Design. Lecture Notes in Control and Information Sciences, 2012, , 149-164.	1.0	2
43	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
44	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
45	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
46	Analyzing iterations in identification with application to nonparametric $H^{\infty}$ -norm estimation. Automatica, 2012, 48, 2776-2790.	5.0	29
47	A Chernoff convexification for chance constrained MIMO training sequence design. , 2012, , .		2
48	System Identification for Automotive Systems: Opportunities and Challenges. Lecture Notes in Control and Information Sciences, 2012, , 1-10.	1.0	2
49	Four Encounters with System Identification. European Journal of Control, 2011, 17, 449-471.	2.6	54
50	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
51	A Geometric Approach to Variance Analysis in System Identification. IEEE Transactions on Automatic Control, 2011, 56, 983-997.	5.7	24
52	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
53	MPC oriented experiment design. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 9966-9971.	0.4	12
54	A design algorithm using external perturbation to improve Iterative Feedback Tuning convergence. Automatica, 2011, 47, 2665-2670.	5.0	20

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55	The cost of complexity in system identification: The Output Error case. Automatica, 2011, 47, 1938-1948.	5.0	6
56	On the accuracy in errors-in-variables identification compared to prediction-error identification. Automatica, 2011, 47, 2704-2712.	5.0	12
57	Conditions when minimum variance control is the optimal experiment for identifying a minimum variance controller. Automatica, 2011, 47, 578-583.	5.0	13
58	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
59	Chance constrained input design. , 2011, , .		12
60	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
61	Input design using cylindrical algebraic decomposition. , 2011, , .		2
62	On optimal input design in system identification for model predictive control. , 2011, , .		12
63	Non-parametric methods for $L_2$ -gain estimation using iterative experiments. Automatica. 2010. 46. 1376-1381.	5.0	48
64	On optimal input design in system identification for control. , 2010, , .		20
65	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
66	Identification of nonlinear systems using misspecified predictors. , 2010, , .		5
67	Input design for asymptotic robust $H_\infty$ -filtering. , 2009, , .		0
68	MIMO experiment design based on asymptotic model order theory. , 2009, , .		1
69	Variance-error quantification for identified poles and zeros. Automatica, 2009, 45, 2512-2525.	5.0	17
70	Identification of ARX systems with non-stationary inputs – asymptotic analysis with application to adaptive input design. Automatica, 2009, 45, 623-633.	5.0	52
71	Variance results for identification of cascade systems. Automatica, 2009, 45, 1443-1448.	5.0	28
72	System Identification of Complex and Structured Systems. European Journal of Control, 2009, 15, 275-310.	2.6	132

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73	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
74	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
75	Data-Driven Methods for L2-Gain Estimation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1597-1602.	0.4	11
76	Identification and control: Joint input design and state feedback with ellipsoidal parametric uncertainty via LMIs. Automatica, 2008, 44, 543-551.	5.0	27
77	Identification for control of multivariable systems: Controller validation and experiment design via LMIs. Automatica, 2008, 44, 3070-3078.	5.0	49
78	Closed loop experiment design for linear time invariant dynamical systems via LMIs. Automatica, 2008, 44, 623-636.	5.0	44
79	Improving convergence of Iterative Feedback Tuning using optimal external perturbations. , 2008, , .		3
80	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
81	Optimal Input Design for Identification of Non-linear Systems: Learning From the Linear Case. Proceedings of the American Control Conference, 2007, , .	0.0	39
82	Adaptive input design for ARX systems. , 2007, , .		3
83	GAIN ESTIMATION FOR HAMMERSTEIN SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 784-789.	0.4	7
84	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
85	ON OPTIMAL INPUT DESIGN IN SYSTEM IDENTIFICATION1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 499-504.	0.4	5
86	ON SOME ROBUSTNESS ISSUES IN INPUT DESIGN. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 511-516.	0.4	14
87	ROBUST INPUT DESIGN USING SUM OF SQUARES CONSTRAINTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1352-1357.	0.4	17
88	Least-squares estimation of a class of frequency functions: A finite sample variance expression. Automatica, 2006, 42, 589-600.	5.0	22
89	OPTIMAL EXPERIMENT DESIGN IN CLOSED LOOP. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 488-493.	0.4	14
90	From experiment design to closed-loop control. Automatica, 2005, 41, 393-438.	5.0	410

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91	On the frequency domain accuracy of closed-loop estimates. <i>Automatica</i> , 2005, 41, 1109-1122.	5.0	24
92	Gradient approximations in iterative feedback tuning for multivariable processes. <i>International Journal of Adaptive Control and Signal Processing</i> , 2004, 18, 665-681.	4.1	31
93	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
94	From experiments to closed loop control. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2003, 36, 1-14.	0.4	12
95	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
96	RANDOMIZED ITERATIVE FEEDBACK TUNING. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2002, 35, 361-366.	0.4	6
97	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
98	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
99	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
100	Iterative feedback tuning?an overview. <i>International Journal of Adaptive Control and Signal Processing</i> , 2002, 16, 373-395.	4.1	363
101	Identification of performance limitations in control. , 2001, , .		1
102	Optimal Input Design Using Linear Matrix Inequalities. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2000, 33, 1085-1090.	0.4	25
103	Spectral Based Parameter Estimation in Nonlinear Stochastic Models. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2000, 33, 911-916.	0.4	2
104	Efficient tuning of linear multivariable controllers using iterative feedback tuning. <i>International Journal of Adaptive Control and Signal Processing</i> , 1999, 13, 553-572.	4.1	88
105	Iterative Feedback Tuning. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 1998, 31, 101-108.	0.4	9
106	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
107	For model-based control design, closed-loop identification gives better performance. <i>Automatica</i> , 1996, 32, 1659-1673.	5.0	205
108	Nonlinear black-box models in system identification: Mathematical foundations. <i>Automatica</i> , 1995, 31, 1725-1750.	5.0	329

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109	Nonlinear black-box modeling in system identification: a unified overview. <i>Automatica</i> , 1995, 31, 1691-1724.	5.0	1,730
110	Model-free Tuning of a Robust Regulator for a Flexible Transmission System. <i>European Journal of Control</i> , 1995, 1, 148-156.	2.6	64