

# Torsten SÄnderstrÄm

## List of Publications by Year in descending order

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133  
papers

2,946  
citations

218381

26  
h-index

197535

49  
g-index

134  
all docs

134  
docs citations

134  
times ranked

966  
citing authors

#	ARTICLE	IF	CITATIONS
1	Errors-in-variables methods in system identification. <i>Automatica</i> , 2007, 43, 939-958.	3.0	357
2	Identification of stochastic linear systems in presence of input noise. <i>Automatica</i> , 1981, 17, 713-725.	3.0	221
3	Instrumental variable methods for system identification. <i>Circuits, Systems, and Signal Processing</i> , 2002, 21, 1-9.	1.2	170
4	Instrumental-variable methods for identification of Hammerstein systems. <i>International Journal of Control</i> , 1982, 35, 459-476.	1.2	145
5	Convergence properties of the generalised least squares identification method. <i>Automatica</i> , 1974, 10, 617-626.	3.0	106
6	Model-structure selection by cross-validation. <i>International Journal of Control</i> , 1986, 43, 1841-1878.	1.2	101
7	Bias correction in least-squares identification. <i>International Journal of Control</i> , 1982, 35, 449-457.	1.2	100
8	Perspectives on errors-in-variables estimation for dynamic systems. <i>Signal Processing</i> , 2002, 82, 1139-1154.	2.1	97
9	Identification of continuous-time AR processes from unevenly sampled data. <i>Automatica</i> , 2002, 38, 709-718.	3.0	69
10	A generalized instrumental variable estimation method for errors-in-variables identification problems. <i>Automatica</i> , 2011, 47, 1656-1666.	3.0	62
11	System identification for the errors-in-variables problem. <i>Transactions of the Institute of Measurement and Control</i> , 2012, 34, 780-792.	1.1	51
12	On instrumental variable and total least squares approaches for identification of noisy systems. <i>International Journal of Control</i> , 2002, 75, 381-389.	1.2	49
13	Accuracy analysis of time domain maximum likelihood method and sample maximum likelihood method for errors-in-variables and output error identification. <i>Automatica</i> , 2010, 46, 721-727.	3.0	49
14	An Overview of Important Practical Aspects of Continuous-Time ARMA System Identification. <i>Circuits, Systems, and Signal Processing</i> , 2006, 25, 17-46.	1.2	44
15	Errors-in-variables identification using maximum likelihood estimation in the frequency domain. <i>Automatica</i> , 2017, 79, 131-143.	3.0	44
16	A covariance matching approach for identifying errors-in-variables systems. <i>Automatica</i> , 2009, 45, 2018-2031.	3.0	40
17	Convergence properties of bias-eliminating algorithms for errors-in-variables identification. <i>International Journal of Adaptive Control and Signal Processing</i> , 2005, 19, 703-722.	2.3	37
18	Extending the Frisch scheme for errors-in-variables identification to correlated output noise. <i>International Journal of Adaptive Control and Signal Processing</i> , 2008, 22, 55-73.	2.3	37

#	ARTICLE	IF	CITATIONS
19	Computing stochastic continuous-time models from ARMA models. International Journal of Control, 1991, 53, 1311-1326.	1.2	32
20	Accuracy Analysis of the Frisch Scheme for Identifying Errors-in-Variables Systems. IEEE Transactions on Automatic Control, 2007, 52, 985-997.	3.6	31
21	On the parsimony principle. International Journal of Control, 1982, 36, 409-418.	1.2	30
22	Relations between Bias-Eliminating Least Squares, the Frisch scheme and Extended Compensated Least Squares methods for identifying errors-in-variables systems. Automatica, 2009, 45, 277-282.	3.0	30
23	On identification methods for direct data-driven controller tuning. International Journal of Adaptive Control and Signal Processing, 2011, 25, 448-465.	2.3	30
24	Identification of Continuous-Time ARX Models From Irregularly Sampled Data. IEEE Transactions on Automatic Control, 2007, 52, 417-427.	3.6	29
25	Accuracy analysis of bias-eliminating least squares estimates for errors-in-variables systems. Automatica, 2007, 43, 1590-1596.	3.0	29
26	The Cramér-Rao lower bound for noisy input-output systems. Signal Processing, 2000, 80, 2421-2447.	2.1	28
27	Accuracy analysis of a covariance matching approach for identifying errors-in-variables systems. Automatica, 2011, 47, 272-282.	3.0	28
28	Common factor detection and estimation. Automatica, 1997, 33, 985-989.	3.0	27
29	ON COMPUTING THE CRAMER-RAO BOUND AND COVARIANCE MATRICES FOR PEM ESTIMATES IN LINEAR STATE SPACE MODELS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 600-605.	0.4	26
30	A Simplified Form of the Bias-Eliminating Least Squares Method for Errors-in-Variables Identification. IEEE Transactions on Automatic Control, 2007, 52, 1754-1756.	3.6	26
31	A SEPARABLE NONLINEAR LEAST-SQUARES APPROACH FOR IDENTIFICATION OF LINEAR SYSTEMS WITH ERRORS IN VARIABLES. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 178-183.	0.4	25
32	Errors-in-variables system identification using structural equation modeling. Automatica, 2016, 66, 218-230.	3.0	25
33	Identification of dynamic errors-in-variables models: Approaches based on two-dimensional ARMA modeling of the data. Automatica, 2003, 39, 929-935.	3.0	24
34	Asymptotic behaviour of some bootstrap estimators. International Journal of Control, 1981, 33, 433-454.	1.2	23
35	On the asymptotic accuracy of pseudo-linear regression algorithms. International Journal of Control, 1984, 39, 115-126.	1.2	23
36	Improved estimation performance using known linear constraints. Automatica, 2004, 40, 1307-1318.	3.0	20

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37	Optimal instrumental-variable methods for identification of multivariable linear systems. <i>Automatica</i> , 1983, 19, 425-429.	3.0	19
38	An approximate maximum likelihood approach to ARMA spectral estimation. , 1985, , .		19
39	USING CONTINUOUS-TIME MODELING FOR ERRORS-IN-VARIABLES IDENTIFICATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 428-433.	0.4	19
40	Analysis of an output error identification algorithm. <i>Automatica</i> , 1981, 17, 861-863.	3.0	18
41	An efficient linear method for ARMA spectral estimation. <i>International Journal of Control</i> , 1994, 59, 337-356.	1.2	18
42	Comparing some classes of bias-compensating least squares methods. <i>Automatica</i> , 2013, 49, 840-845.	3.0	18
43	Approximate maximum likelihood frequency estimation. <i>Automatica</i> , 1994, 30, 131-145.	3.0	17
44	High-order Yule-Walker equations for estimating sinusoidal frequencies: The complete set of solutions. <i>Signal Processing</i> , 1990, 20, 257-263.	2.1	16
45	Can errors-in-variables systems be identified from closed-loop experiments?. <i>Automatica</i> , 2013, 49, 681-684.	3.0	16
46	Uniqueness of estimated k-step prediction models of ARMA processes. <i>Systems and Control Letters</i> , 1984, 4, 325-331.	1.3	15
47	Approximate maximum-likelihood approach to ARMA spectral estimation. <i>International Journal of Control</i> , 1987, 45, 1281-1310.	1.2	15
48	Uniqueness of prediction error estimates of multivariable moving average models. <i>Automatica</i> , 1982, 18, 617-620.	3.0	14
49	Investigation of the intersample variance in sampled-data control. <i>International Journal of Control</i> , 1989, 50, 1587-1602.	1.2	14
50	Optimal sensor locations for nonparametric identification of viscoelastic materials. <i>Automatica</i> , 2008, 44, 28-38.	3.0	14
51	On the convergence of pseudo-linear regression algorithms. <i>International Journal of Control</i> , 1985, 41, 1429-1444.	1.2	13
52	Least-squares, Yule-Walker, and overdetermined Yule-Walker estimation of AR parameters: a Monte Carlo analysis of finite-sample properties. <i>International Journal of Control</i> , 1986, 43, 13-27.	1.2	13
53	On spectral and root forms of sinusoidal frequency estimators. <i>Signal Processing</i> , 1991, 24, 93-103.	2.1	13
54	IDENTIFICATION OF DYNAMIC ERRORS-IN-VARIABLES SYSTEMS WITH PERIODIC DATA. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 809-814.	0.4	13

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55	A Mechanical Wave Diode: Using Feedforward Control for One-Way Transmission of Elastic Extensional Waves. IEEE Transactions on Control Systems Technology, 2007, 15, 715-724.	3.2	13
56	On the estimation of complex modulus and Poisson's ratio using longitudinal wave experiments. Mechanical Systems and Signal Processing, 2006, 20, 2080-2094.	4.4	12
57	On the accuracy in errors-in-variables identification compared to prediction-error identification. Automatica, 2011, 47, 2704-2712.	3.0	12
58	A user perspective on errors-in-variables methods in system identification. Control Engineering Practice, 2019, 89, 56-69.	3.2	12
59	Optimization with respect to covariance sequence parameters. Automatica, 1985, 21, 671-675.	3.0	11
60	Reduced order models for diffusion systems. International Journal of Control, 2001, 74, 1543-1557.	1.2	11
61	Reduced order models for diffusion systems using singular perturbations. Energy and Buildings, 2001, 33, 769-781.	3.1	11
62	A unified framework for EIV identification methods when the measurement noises are mutually correlated. Automatica, 2014, 50, 3216-3223.	3.0	11
63	Eigenvalue location of certain matrices arising in convergence analysis problems. Automatica, 1982, 18, 487-489.	3.0	10
64	Inter-sample behaviour as measured by continuous-time quadratic criteria. International Journal of Control, 1989, 49, 2077-2083.	1.2	10
65	On SVD-based and TLS-based high-order Yule-Walker methods of frequency estimation. Signal Processing, 1992, 29, 309-317.	2.1	10
66	Comparison of three Frisch methods for errors-in-variables identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 414-419.	0.4	10
67	Covariance Matching for Continuous-Time Errors-in-Variables Problems. IEEE Transactions on Automatic Control, 2011, 56, 1478-1483.	3.6	10
68	Identification Methods of Dynamic Systems in Presence of Input Noise. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 199-204.	0.4	9
69	Least Squares Harmonic Signal Analysis Using Periodic Orbits of ODEs. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 1543-1548.	0.4	9
70	ERRORS-IN-VARIABLES METHODS IN SYSTEM IDENTIFICATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1-19.	0.4	9
71	Bayesian approaches for identification of the complex modulus of viscoelastic materials. Automatica, 2007, 43, 1369-1376.	3.0	9
72	A generalised instrumental variable estimator for multivariable errors-in-variables identification problems. International Journal of Control, 2012, 85, 287-303.	1.2	9

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73	On the accuracy of a covariance matching method for continuous-time errors-in-variables identification. <i>Automatica</i> , 2013, 49, 2982-2993.	3.0	9
74	Frequency domain identification of FIR models in the presence of additive input-output noise. <i>Automatica</i> , 2020, 115, 108879.	3.0	9
75	System Identification Techniques for Estimating Material Functions from Wave Propagation Experiments. <i>Inverse Problems in Science and Engineering</i> , 2002, 10, 413-439.	0.5	8
76	Model validation and model structure determination. <i>Circuits, Systems, and Signal Processing</i> , 2002, 21, 83-90.	1.2	8
77	Frequency domain maximum likelihood identification of noisy input-output models. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014, 47, 4625-4630.	0.4	8
78	Frequency domain EIV identification combining the Frisch scheme and Yule-Walker equations. , 2015, , .		8
79	Estimation of Continuous-time Stochastic System Parameters. , 2008, , 31-66.		7
80	On model order determination for errors-in-variables estimation. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012, 45, 1347-1352.	0.4	7
81	Asymptotic statistical analysis of autoregressive frequency estimates. <i>Signal Processing</i> , 1994, 39, 277-292.	2.1	6
82	ACCURACY ANALYSIS OF BIAS-ELIMINATING LEAST SQUARES ESTIMATES FOR ERRORS-IN-VARIABLES IDENTIFICATION. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2006, 39, 190-195.	0.4	6
83	Statistical Analysis of a Third-Order Cumulants Based Algorithm for Discrete-Time Errors-in-Variables Identification. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2008, 41, 420-425.	0.4	6
84	Estimation of material functions using system identification techniques. <i>Control Engineering Practice</i> , 2012, 20, 972-990.	3.2	6
85	System identification in a networked environment using second order statistical properties. <i>Automatica</i> , 2013, 49, 652-659.	3.0	6
86	Extended accuracy analysis of a covariance matching approach for identifying errors-in-variables systems. <i>Automatica</i> , 2014, 50, 2597-2605.	3.0	6
87	Frequency domain EIV identification: a Frisch Scheme approach. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2014, 47, 4631-4636.	0.4	6
88	Why are errors-in-variables problems often tricky?. , 2003, , .		6
89	Instrumental Variable Methods for ARMA Models. <i>Control and Dynamic Systems</i> , 1987, 25, 79-150.	0.1	5
90	Optimally Weighted MUSIC for Frequency Estimation. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1995, 16, 811-827.	0.7	5

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91	Reduced Order Models for Diffusion Systems via Collocation Methods. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 977-982.	0.4	5
92	IDENTIFICATION OF DYNAMIC ERRORS-IN-VARIABLES MODEL USING A FREQUENCY DOMAIN FRISCH SCHEME. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 361-366.	0.4	5
93	Periodic signal analysis by maximum likelihood modeling of orbits of nonlinear ODEs. Automatica, 2005, 41, 793-805.	3.0	5
94	Optimal Excitation for Nonparametric Identification of Viscoelastic Materials. IEEE Transactions on Control Systems Technology, 2011, 19, 238-244.	3.2	5
95	Computationally efficient estimation of wave propagation functions from 1-D wave experiments on viscoelastic materials. Automatica, 2004, 40, 713-727.	3.0	4
96	Continuous-time errors-in-variables system identification through covariance matching without input signal modeling. , 2009, , .		4
97	Errors-in-variables identification using a Generalized Instrumental Variable Estimation method. , 2010, , .		4
98	2D-frequency domain identification of complex sinusoids in the presence of additive noise. IFAC-PapersOnLine, 2018, 51, 820-825.	0.5	4
99	A note on the estimation of real- and complex-valued parameters in frequency domain maximum likelihood identification. Automatica, 2019, 110, 108584.	3.0	4
100	Adaptive instrumental variable methods for frequency estimation. International Journal of Adaptive Control and Signal Processing, 1992, 6, 441-469.	2.3	3
101	Reduced order models for a two-dimensional heat diffusion system. International Journal of Control, 2004, 77, 1532-1548.	1.2	3
102	Sampled Data Errors-in-Variables Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1157-1162.	0.4	3
103	On covariance matching for multiple input multiple output errors-in-variables systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1371-1376.	0.4	3
104	Perspectives on Errors-In-Variables Estimation for Dynamic Systems. , 2002, , 271-280.		3
105	On criterion selection and noise model parametrization for prediction-error identification methods. International Journal of Control, 1981, 34, 801-811.	1.2	2
106	An investigation of the intersample variance for linear stochastic control. , 1986, , .		2
107	Comments on "Identification of closed-loop systems via least-squares method". International Journal of Adaptive Control and Signal Processing, 1999, 13, 37-41.	2.3	2
108	OPTIMAL SENSOR LOCATIONS FOR NONPARAMETRIC IDENTIFICATION OF VISCOELASTIC MATERIALS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 686-691.	0.4	2

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109	NONPARAMETRIC IDENTIFICATION OF COMPLEX MODULUS USING A NON-EQUILIBRIUM SHPB PROCEDURE. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1318-1323.	0.4	2
110	Separation of waves governed by the one-dimensional wave equation—a stochastic systems approach. Mechanical Systems and Signal Processing, 2009, 23, 823-844.	4.4	2
111	Sampling approximations for continuous-time identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1145-1150.	0.4	2
112	Identifying Errors-in-Variables Systems By Using A Covariance Matching Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1551-1556.	0.4	2
113	Approximative weighting for a covariance-matching approach for identifying errors-in-variables systems. International Journal of Adaptive Control and Signal Processing, 2011, 25, 535-543.	2.3	2
114	Errors-in-variables identification using covariance matching and structural equation modeling. , 2013, , .		2
115	Frequency domain identification of ARX models in the presence of additive input—output noise. IFAC-PapersOnLine, 2017, 50, 6226-6231.	0.5	2
116	Frequency domain identification of complex sinusoids in the presence of additive noise. IFAC-PapersOnLine, 2017, 50, 6244-6250.	0.5	2
117	Comparative performance study of SVD-based and QRD-based high-order Yule-Walker methods for frequency estimation. Circuits, Systems, and Signal Processing, 1993, 12, 105-117.	1.2	1
118	A Frisch scheme for correlated output noise errors-in-variables identification. , 2007, , .		1
119	Accuracy Analysis of Time-domain Maximum Likelihood Method and Sample Maximum Likelihood Method for Errors-in-Variables Identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 1372-1377.	0.4	1
120	Accuracy Analysis of a Covariance Matching Method for Continuous-time Errors-in-variables System Identification*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1383-1388.	0.4	1
121	A unified framework for EIV identification methods in the presence of mutually correlated noises. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 4644-4649.	0.4	1
122	Asymptotic accuracy of the Aitken-Markov estimator. International Journal of Control, 1985, 41, 1175-1188.	1.2	0
123	Computationally and Statistically Efficient Common Factor Detection and Estimation with Application in System Identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 4279-4284.	0.4	0
124	BIAS AND VARIANCE OF THE PARAMETER ESTIMATES FOR A ONE DIMENSIONAL HEAT DIFFUSION SYSTEM. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 259-264.	0.4	0
125	Separation of One-dimensional Waves - a Stochastic Systems Approach. Conference Record of the Asilomar Conference on Signals, Systems and Computers, 2007, , .	0.0	0
126	Feedforward Design for a Mechanical System with Marginally Stable Inverse. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 2270-2275.	0.4	0



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127	Asymptotic accuracy of covariance function based errors-in-variables system parameter estimates. , 2010, , .		0
128	Model order determination based on rank properties of almost singular covariance matrices*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 1653-1658.	0.4	0
129	Parameter estimation from wave propagation tests on a tube perforated by helical slots. Mechanical Systems and Signal Processing, 2013, 40, 385-399.	4.4	0
130	Model validation methods for errors-in-variables estimation. , 2013, , .		0
131	Identification of two dimensional complex sinusoids in white noise: a state-space frequency approach. IFAC-PapersOnLine, 2018, 51, 996-1001.	0.5	0
132	Blind identification of two-channel FIR systems: a frequency domain approach. IFAC-PapersOnLine, 2020, 53, 914-920.	0.5	0
133	The Frisch scheme for EIV system identification: time and frequency domain formulations. IFAC-PapersOnLine, 2020, 53, 907-913.	0.5	0