Torsten Sderstrm

List of Publications by Citations

131 papers	2,263 citations	23 h-index	43 g-index
134 ext. papers	2,600 ext. citations	3.6 avg, IF	5.36 L-index

#	Paper	IF	Citations
131	Errors-in-variables methods in system identification. *Automatica*, **2007**, 43, 939-958	5.7	294
130	Identification of stochastic linear systems in presence of input noise. *Automatica*, **1981**, 17, 713-725	5.7	184
129	Instrumental-variable methods for identification of Hammerstein systems. *International Journal of Control*, **1982**, 35, 459-476	1.5	120
128	Convergence properties of the generalised least squares identitication method. *Automatica*, **1974**, 10, 617-626	5.7	90
127	Model-structure selection by cross-validation. *International Journal of Control*, **1986**, 43, 1841-1878	1.5	88
126	Bias correction in least-squares identification. *International Journal of Control*, **1982**, 35, 449-457	1.5	84
125	Perspectives on errors-in-variables estimation for dynamic systems. *Signal Processing*, **2002**, 82, 1139-1154	1.4	83
124	Instrumental variable methods for system identification. *Circuits, Systems, and Signal Processing*, **2002**, 21, 1-9	2.2	60
123	Identification of continuous-time AR processes from unevenly sampled data. *Automatica*, **2002**, 38, 709-718	5.7	57
122	A generalized instrumental variable estimation method for errors-in-variables identification problems. *Automatica*, **2011**, 47, 1656-1666	5.7	51
121	On instrumental variable and total least squares approaches for identification of noisy systems. *International Journal of Control*, **2002**, 75, 381-389	1.5	42
120	An Overview of Important Practical Aspects of Continuous-Time ARMA System Identification. *Circuits, Systems, and Signal Processing*, **2006**, 25, 17-46	2.2	41
119	System identification for the errors-in-variables problem. *Transactions of the Institute of Measurement and Control*, **2012**, 34, 780-792	1.8	40
118	Errors-in-variables identification using maximum likelihood estimation in the frequency domain. *Automatica*, **2017**, 79, 131-143	5.7	33
117	Accuracy analysis of time domain maximum likelihood method and sample maximum likelihood method for errors-in-variables and output error identification. *Automatica*, **2010**, 46, 721-727	5.7	33
116	Extending the Frisch scheme for errors-in-variables identification to correlated output noise. *International Journal of Adaptive Control and Signal Processing*, **2008**, 22, 55-73	2.8	32
115	A covariance matching approach for identifying errors-in-variables systems. *Automatica*, **2009**, 45, 2018-2031	5.7	30

114	Convergence properties of bias-eliminating algorithms for errors-in-variables identification. *International Journal of Adaptive Control and Signal Processing*, **2005**, 19, 703-722	2.8	30
113	Accuracy analysis of bias-eliminating least squares estimates for errors-in-variables systems. *Automatica*, **2007**, 43, 1590-1596	5.7	25
112	The Cramér-Rao lower bound for noisy input-output systems. *Signal Processing*, **2000**, 80, 2421-2447	4.4	25
111	Computing stochastic continuous-time models from ARMA models. *International Journal of Control*, **1991**, 53, 1311-1326	1.5	24
110	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	5.7	23
109	Accuracy analysis of a covariance matching approach for identifying errors-in-variables systems. *Automatica*, **2011**, 47, 272-282	5.7	23
108	Identification of Continuous-Time ARX Models From Irregularly Sampled Data. *IEEE Transactions on Automatic Control*, **2007**, 52, 417-427	5.9	23
107	On the asymptotic accuracy of pseudo-linear regression algorithms. *International Journal of Control*, **1984**, 39, 115-126	1.5	23
106	On the parsimony principle. *International Journal of Control*, **1982**, 36, 409-418	1.5	23
105	Asymptotic behaviour of some bootstrap estimators. *International Journal of Control*, **1981**, 33, 433-454	1.5	22
104	Accuracy Analysis of the Frisch Scheme for Identifying Errors-in-Variables Systems. *IEEE Transactions on Automatic Control*, **2007**, 52, 985-997	5.9	20
103	Errors-in-variables system identification using structural equation modeling. *Automatica*, **2016**, 66, 218-230	5.7	19
102	Identification of dynamic errors-in-variables models: Approaches based on two-dimensional ARMA modeling of the data. *Automatica*, **2003**, 39, 929-935	5.7	19
101	On identification methods for direct data-driven controller tuning. *International Journal of Adaptive Control and Signal Processing*, **2011**, 25, 448-465	2.8	17
100	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		17
99	Improved estimation performance using known linear constraints. *Automatica*, **2004**, 40, 1307-1318	5.7	17
98	Common factor detection and estimation. *Automatica*, **1997**, 33, 985-989	5.7	16
97	A Simplified Form of the Bias-Eliminating Least Squares Method for Errors-in-Variables Identification. *IEEE Transactions on Automatic Control*, **2007**, 52, 1754-1756	5.9	16

96	Analysis of an output error identification algorithm. *Automatica*, **1981**, 17, 861-863	5.7	16
95	Comparing some classes of bias-compensating least squares methods. *Automatica*, **2013**, 49, 840-845	5.7	15
94	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		15
93	Approximate maximum likelihood frequency estimation. *Automatica*, **1994**, 30, 131-145	5.7	15
92	Approximate maximum-likelihood approach to ARMA spectral estimation. *International Journal of Control*, **1987**, 45, 1281-1310	1.5	15
91	Optimal instrumental-variable methods for identification of multivariable linear systems. *Automatica*, **1983**, 19, 425-429	5.7	15
90	Optimal sensor locations for nonparametric identification of viscoelastic materials. *Automatica*, **2008**, 44, 28-38	5.7	14
89	High-order Yule-Walker equations for estimating sinusoidal frequencies: The complete set of solutions. *Signal Processing*, **1990**, 20, 257-263	4.4	14
88	An efficient linear method for ARMA spectral estimation. *International Journal of Control*, **1994**, 59, 337-356	1.5	13
87	Least-squares, Yule-Walker, and overdetermined Yule-Walker estimation of AR parameters: a Monte Carlo analysis of finite-sample properties. *International Journal of Control*, **1986**, 43, 13-27	1.5	12
86	Uniqueness of prediction error estimates of multivariable moving average models. *Automatica*, **1982**, 18, 617-620	5.7	12
85	Can errors-in-variables systems be identified from closed-loop experiments?. *Automatica*, **2013**, 49, 681-684	5.7	11
84	On the accuracy in errors-in-variables identification compared to prediction-error identification. *Automatica*, **2011**, 47, 2704-2712	5.7	11
83	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	4.8	11
82	On spectral and root forms of sinusoidal frequency estimators. *Signal Processing*, **1991**, 24, 93-103	4.4	11
81	On the convergence of pseudo-linear regression algorithms. *International Journal of Control*, **1985**, 41, 1429-1444	1.5	11
80	USING CONTINUOUS-TIME MODELING FOR ERRORS-IN-VARIABLES IDENTIFICATION. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 428-433		10
79	On the estimation of complex modulus and Poisson's ratio using longitudinal wave experiments. *Mechanical Systems and Signal Processing*, **2006**, 20, 2080-2094	7.8	10

78	Uniqueness of estimated k-step prediction models of ARMA processes. *Systems and Control Letters*, **1984**, 4, 325-331	2.4	10
77	Optimization with respect to covariance sequence parameters. *Automatica*, **1985**, 21, 671-675	5.7	10
76	IDENTIFICATION OF DYNAMIC ERRORS-IN-VARIABLES SYSTEMS WITH PERIODIC DATA. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 809-814		9
75	Reduced order models for diffusion systems using singular perturbations. *Energy and Buildings*, **2001**, 33, 769-781	7	9
74	On SVD-based and TLS-based high-order Yule-Walker methods of frequency estimation. *Signal Processing*, **1992**, 29, 309-317	4.4	9
73	A user perspective on errors-in-variables methods in system identification. *Control Engineering Practice*, **2019**, 89, 56-69	3.9	8
72	A generalised instrumental variable estimator for multivariable errors-in-variables identification problems. *International Journal of Control*, **2012**, 85, 287-303	1.5	8
71	Covariance Matching for Continuous-Time Errors-in-Variables Problems. *IEEE Transactions on Automatic Control*, **2011**, 56, 1478-1483	5.9	8
70	System Identification Techniques for Estimating Material Functions from Wave Propagation Experiments. *Inverse Problems in Science and Engineering*, **2002**, 10, 413-439		8
69	Reduced order models for diffusion systems. *International Journal of Control*, **2001**, 74, 1543-1557	1.5	8
68	Eigenvalue location of certain matrices arising in convergence analysis problems. *Automatica*, **1982**, 18, 487-489	5.7	8
67	Frequency domain EIV identification combining the Frisch scheme and Yule-Walker equations **2015**,		7
66	A unified framework for EIV identification methods when the measurement noises are mutually correlated. *Automatica*, **2014**, 50, 3216-3223	5.7	7
65	Identification Methods of Dynamic Systems in Presence of Input Noise. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2000**, 33, 199-204		7
64	Investigation of the intersample variance in sampled-data control. *International Journal of Control*, **1989**, 50, 1587-1602	1.5	7
63	An approximate maximum likelihood approach to ARMA spectral estimation **1985**,		7
62	Frequency domain identification of FIR models in the presence of additive input–output noise. *Automatica*, **2020**, 115, 108879	5.7	6
61	Frequency domain maximum likelihood identification of noisy input–output models. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 4625-4630		6

60	On the accuracy of a covariance matching method for continuous-time errors-in-variables identification. *Automatica*, **2013**, 49, 2982-2993	5.7	6
59	Frequency domain EIV identification: a Frisch Scheme approach. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2014**, 47, 4631-4636		5
58	Estimation of material functions using system identification techniques. *Control Engineering Practice*, **2012**, 20, 972-990	3.9	5
57	System identification in a networked environment using second order statistical properties. *Automatica*, **2013**, 49, 652-659	5.7	5
56	On model order determination for errors-in-variables estimation*. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 1347-1352		5
55	Estimation of Continuous-time Stochastic System Parameters **2008**, 31-66		5
54	Bayesian approaches for identification of the complex modulus of viscoelastic materials. *Automatica*, **2007**, 43, 1369-1376	5.7	5
53	ERRORS-IN-VARIABLES METHODS IN SYSTEM IDENTIFICATION. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 1-19		5
52	Model validation and model structure determination. *Circuits, Systems, and Signal Processing*, **2002**, 21, 83-90	2.2	5
51	Optimally Weighted MUSIC for Frequency Estimation. *SIAM Journal on Matrix Analysis and Applications*, **1995**, 16, 811-827	1.5	5
50	Asymptotic statistical analysis of autoregressive frequency estimates. *Signal Processing*, **1994**, 39, 277-292	4.4	5
49	Inter-sample behaviour as measured by continuous-time quadratic criteria. *International Journal of Control*, **1989**, 49, 2077-2083	1.5	5
48	Why are errors-in-variables problems often tricky? **2003**,		5
47	Extended accuracy analysis of a covariance matching approach for identifying errors-in-variables systems. *Automatica*, **2014**, 50, 2597-2605	5.7	4
46	Statistical Analysis of a Third-Order Cumulants Based Algorithm for Discrete-Time Errors-in-Variables Identification. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 420-425		4
45	ACCURACY ANALYSIS OF BIAS-ELIMINATING LEAST SQUARES ESTIMATES FOR ERRORS-IN-VARIABLES IDENTIFICATION. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 190-195		4
44	Computationally efficient estimation of wave propagation functions from 1-D wave experiments on viscoelastic materials. *Automatica*, **2004**, 40, 713-727	5.7	4
43	Periodic signal analysis by maximum likelihood modeling of orbits of nonlinear ODEs. *Automatica*, **2005**, 41, 793-805	5.7	4

42	Reduced Order Models for Diffusion Systems via Collocation Methods. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2000**, 33, 977-982		4
41	Optimal Excitation for Nonparametric Identification of Viscoelastic Materials. *IEEE Transactions on Control Systems Technology*, **2011**, 19, 238-244	4.8	3
40	Continuous-time errors-in-variables system identification through covariance matching without input signal modeling **2009**,		3
39	Comparison of three Frisch methods for errors-in-variables identification. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 414-419		3
38	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		3
37	Adaptive instrumental variable methods for frequency estimation. *International Journal of Adaptive Control and Signal Processing*, **1992**, 6, 441-469	2.8	3
36	Instrumental Variable Methods for ARMA Models. *Control and Dynamic Systems*, **1987**, 25, 79-150		3
35	2D-frequency domain identification of complex sinusoids in the presence of additive noise. *IFAC-PapersOnLine*, **2018**, 51, 820-825	0.7	3
34	A note on the estimation of real- and complex-valued parameters in frequency domain maximum likelihood identification. *Automatica*, **2019**, 110, 108584	5.7	2
33	Frequency domain identification of ARX models in the presence of additive input□output noise. *IFAC-PapersOnLine*, **2017**, 50, 6226-6231	0.7	2
32	Frequency domain identification of complex sinusoids in the presence of additive noise. *IFAC-PapersOnLine*, **2017**, 50, 6244-6250	0.7	2
31	Errors-in-variables identification using covariance matching and structural equation modeling **2013**,		2
30	Errors-in-variables identification using a Generalized Instrumental Variable Estimation method **2010**,		2
29	Separation of waves governed by the one-dimensional wave equation□ stochastic systems approach. *Mechanical Systems and Signal Processing*, **2009**, 23, 823-844	7.8	2
28	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		2
27	Least Squares Harmonic Signal Analysis Using Periodic Orbits of ODEs. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2003**, 36, 1543-1548		2
26	Reduced order models for a two-dimensional heat diffusion system. *International Journal of Control* , **2004**, 77, 1532-1548	1.5	2
25	On criterion selection and noise model parametrization for prediction-error identification methods. *International Journal of Control*, **1981**, 34, 801-811	1.5	2

24	Perspectives on Errors-In-Variables Estimation for Dynamic Systems **2002**, 271-280		2
23	How Accurate Can Instrumental Variable Models Become? **2012**, 3-25		2
22	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	2.8	1
21	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		1
20	Sampling approximations for continuous-time identification. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 1145-1150		1
19	Identifying Errors-in-Variables Systems By Using A Covariance Matching Approach. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 1551-1556		1
18	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		1
17	A Frisch scheme for correlated output noise errors-in-variables identification **2007**,		1
16	NONPARAMETRIC IDENTIFICATION OF COMPLEX MODULUS USING A NON-EQUILIBRIUM SHPB PROCEDURE. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2006**, 39, 1318-1323		1
15	OPTIMAL SENSOR LOCATIONS FOR NONPARAMETRIC IDENTIFICATION OF VISCOELASTIC MATERIALS. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2005**, 38, 686-691		1
14	Comments on Identification of closed-loop systems via least-squares method *International Journal of Adaptive Control and Signal Processing*, **1999**, 13, 37-41	2.8	1
13	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	2.2	1
12	An investigation of the intersample variance for linear stochastic control **1986**,		1
11	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		
10	Parameter estimation from wave propagation tests on a tube perforated by helical slots. *Mechanical Systems and Signal Processing*, **2013**, 40, 385-399	7.8	
9	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		
8	Sampled Data Errors-in-Variables Systems. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2009**, 42, 1157-1162		
7	Feedforward Design for a Mechanical System with Marginally Stable Inverse. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2008**, 41, 2270-2275		

List of Publications

6	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	
5	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	
4	Asymptotic accuracy of the Aitken-Markov estimator. *International Journal of Control*, **1985**, 41, 1175-1188	1.5
3	Blind identification of two-channel FIR systems: a frequency domain approach. *IFAC-PapersOnLine*, **2020**, 53, 914-920	0.7
2	The Frisch scheme for EIV system identification: time and frequency domain formulations. *IFAC-PapersOnLine*, **2020**, 53, 907-913	0.7
1	Identification of two dimensional complex sinusoids in white noise: a state-space frequency approach. *IFAC-PapersOnLine*, **2018**, 51, 996-1001	0.7