

## **Schriftenverzeichnis - List of Publications**

(Selected)

### **(a) Dissertation**

"Die Theorie stationärer stochastischer Prozesse und ihre Anwendung in der Spektralanalyse von Zeitreihen". Diss. TU Wien, 1970

### **(b) Papers**

- (1) Mit G. Feichtinger: "The Linear Model Formulation of a Multi-type Branching Process applied to Population Dynamics". JASA (J. of the American Statistical Association) 69, 662-664, 1974
- (2) "Z-Transform and Identification of Linear Econometric Models with Autocorrelated Errors". Metrika 22, 13-25, 1975
- (3) Mit G. Feichtinger: "Nullwachstum der Bevölkerung im linearen populationsdynamischen Modell". Zeitschr. für Bevölkerungswissenschaft 2, 39-53, 1975
- (4) "The Identifiability of Linear Econometric Models with Autocorrelated Errors", I.E.R. (Internat. Economic Review) 17, 26-46, 1976
- (5) Mit H.G. Seifert: "Identifiability and Consistent Estimability in Econometric Models". Econometrica 46, 969-980, 1978
- (6) "The Structural Identifiability of Linear Models with Auto-correlated Errors in the Case of Cross-Equation Restrictions". Journal of Econometrics 8, 23-31, 1978
- (7) Mit W. Dunsmuir und E.J. Hannan: "Vector Linear Time Series Models: Corrections and Extensions". Adv. in Applied Probability 10, 360-372, 1978
- (8) Mit J. Schrader: "Linear Models with Autocorrelated Errors: Identifiability without Minimality Assumptions". Econometrica 47, 495-504, 1979
- (9) Mit E.J. Hannan und W. Dunsmuir: "Estimation of Vector ARMAX Models". Journal of Multivariate Analysis 10, 275-295, 1980
- (10) Mit E.J. Hannan: "Some Properties of the Parametrization of ARMA Systems with Unknown Order". Journal of Multivariate Analysis 11, 474-484, 1981
- (11) "The Properties of the Parametrization of ARMAX Systems and Their Relevance for Structural Estimation and Dynamic Specification". Econometrica 51, 1187-1208, 1983
- (12) Mit B.M. Pötscher und J. Schrader: "The Uniqueness of the Transfer Function of Linear Systems from Input-Output Observations". Metrika 31, 157-181, 1984
- (13) Mit B.D.O. Anderson: "Identifiability in Dynamic Errors-in-Variables Models". Journal of Time Series Analysis 5, 1-13, 1984
- (14) Mit B.M. Pötscher: "The Behaviour of the Likelihood Function for ARMA Models". Adv. in Applied Probability 16, 843-865, 1984

- (15) "General Structure and Parametrization of ARMA and State Space Systems and its Relation to Statistical Problems". In: E.J. Hannan, P.R. Krishnaiah, M.M. Rao (eds.): Handbook of Statistics 5, North Holland, Amsterdam, 257-277, 1985
- (16) "Linear Dynamic Errors-in-Variables Models". In: J. Gani and M. Priestley (eds.): Essays in Time Series and Allied Processes. Papers in honour of E.J. Hannan. Applied Probability Trust, 23-39, 1986
- (17) Mit B.D.O. Anderson: "Dynamic Errors-in-Variables Systems with Three Variables". Automatica, Vol. 23, No. 5, 611-616, 1987
- (18) Mit E. Reschenhofer und R. Vollmer: "Segmentation of the EEG by Minimization of the Total Gain in Information". Neuropsychobiology 18, 155-159, 1987
- (19) Mit W. Fraissler, G. Petritsch und W. Scherrer: "Ein Vergleich von Methoden zur Kurzfristprognose elektrischer Last". Archiv für Elektrotechnik 71, 389-397, 1988
- (20) Mit W. Ploberger: Comment on "ARMA Memory Index Modeling of Economic Time Series". Econometric Theory 4, 35-59, 1988
- (21) Mit M. Gevers: "Properties of the Parametrization of Monic ARMA Systems". Automatica, Vol. 25, No. 1, 87-95, 1989
- (22) Mit B.D.O. Anderson: "Linear Dynamic Errors-in-Variables Models: Some Structure Theory". Journal of Econometrics 41, 1-25, 1989
- (23) Mit L. Wang: "The Common Structure of Parametrizations for Linear Systems". Linear Algebra and its Applications 122/123/124, 921-941, 1989
- (24) Mit B.D.O. Anderson: "Identification of Dynamic Systems from Noisy Data: The Case  $m^*=1$ ". In: A.C. Antoulas (ed.): Mathematical System Theory. (Festschrift in honour of R. E. Kalman on the occasion of his 60th birthday). Springer-Verlag, Berlin, 423-436, 1991
- (25) Mit B.D.O. Anderson: "Identification of Dynamic Systems from Noisy Data: Single Factor Case". Mathematics of Control, Signals, and Systems, (MCSS) Vol.6, No 1, 10-29, 1993
- (26) Mit K. Peterzell und W. Scherrer: "Consistency and Relative Efficiency of Subspace Methods", Automatica, 31, No. 12, 1865-1875, 1995
- (27) Mit B.D.O. Anderson, L. Farina und L. Benvenuti: "Nonnegative Realization of a Linear System with Nonnegative Impulse Response", IEEE Tr. CAS (Transactions on Circuits and Systems) 43, No 2, 1-8, 1996
- (28) Mit B.D.O. Anderson und W. Scherrer: "Solution Set Properties for Static Errors-in-Variables Problems", Automatica, 32 (7), 1031-1035, 1996
- (29) Mit K. Peterzell und W. Scherrer: "Statistical Analysis of Novel Subspace Identification Methods", Signal Processing, 161-177, 1996
- (30) "Time Series Econometrics", CWI Quarterly, 9, No. 3, 165-179, 1996
- (31) Mit C. Heij und W. Scherrer: "System Identification by Dynamic Factor Models", SIAM Journal on Control and Optimization, Vol.35, No. 6, 1924-1951, 1997

- (32) Mit G. Bauer, A. Gleiß, E. Glenck, T. Matyus: "Identification of Material Flow Systems", Environmental Science and Pollution Research, Vol. 4, No.2, 105-112, 1997
- (33) Mit C. Heij und W. Scherrer: "System Identification by Dynamic Factor Models", Proceedings of 36th IEEE Conference on Decision and Control, San Diego, 1997
- (34) Mit W. Scherrer: "A Structure Theory for Linear Dynamic Errors in Variables Models", SIAM Journal on Control and Optimization, Vol. 36, No. 6, 2148-2175, 1998
- (35) Mit W. Schachermayer: "The Set of Observationally Equivalent Errors-in-Variables Models", Systems and Control Letters, 34, 101-104, 1998
- (36) Mit M. Dörfler: "A Structure Theory for Identification of Recurrent Neural Nets, Part 1", Proceedings of NoLCos (4th IFAC 'Nonlinear Control Systems Design Symposium), 459-464, 1998
- (37) Mit A. Gleiß, T. Matyus, G. Bauer, E. Glenck und C. Lampert: „Identification of Material Flow Systems-Extensions and Case Study“, Environmental Science and Pollution Research, Vol. 5, No. 4, 245-258, 1998
- (38) Mit M. Wagner, E. Altan und H. Yildiz: „Ökonomische und massenflußbasierte Verfahren zur Bewertung ökologischer Probleme“, SUSTAIN Eigenverlag, Institut für Verfahrenstechnik, TU. Graz, 1998
- (39) Mit D. Bauer und W. Scherrer: „Consistency and Asymptotic Normality of some Subspace Algorithms for Systems without Observed inputs“, Automatica, 35, 1243-1254, 1998
- (40) Mit D. Bauer: "Balanced Canonical Forms for System Identification", IEEE Tr. AC (Transactions on Automatic Control), 44, 1118 – 1131, 1998
- (41) „Geschichte und Perspektiven der Ökonometrie“, RWL (Rheinisch-Westfälisches Institut für Wirtschaftsforschung) – Mitteilungen, 50, 3, 109-127, 1999
- (42) „Ökonometrie.“ In: K. Acham (Hrsg.): Cognitio Humana, Passagenverlag, Wien, 177-203, 2000
- (43) "Linear Dynamic Multiinput/Multioutput Systems." In: D. Pena, et.al. (eds.): A Course in Time Series Analysis, John Wiley, New York, Chapter 16, 436-456, 2001
- (44) Discussion "Comments on the Contribution by C.W.J. Granger and J.J. Heckman" Journal of Econometrics, 100, 71 – 72, 2000
- (45) "System Identification – General Aspects and Structure" In G. Goodwin (ed.) "System Identification, and, Adaptive Control" (Festschrift for B.D.O. Anderson), Springer, London, 3 – 26, 2001
- (46) Mit G. Bauer und W. Scherrer: „Time Series Models for Short Term Forecasting of Ozone in the Eastern Part of Austria“ in Environmetrics, 12, Issue 2, 117 – 130, 2001
- (47) "Wold Decomposition" In: M. Hazewinkel (ed): Encyclopaedia of Mathematics, in supplement III, 446 – 447, 2001
- (48) Mit S. Weiland und W. Scherrer: "On Continuity and Consistency of  $l_{\infty}$ -optimal Models, Systems and Control Letters, 44, 167 – 176, 2001

- (49) Mit T. Ribarits und T. McKelvey: "An Analysis of the Parametrization by Data Driven Local Coordinates for Multivariable Linear Systems", Automatica, Vol 40, No 5, 789 – 803, 2004
- (50) Mit T. Ribarits und B. Hanzon: „An Analysis of Separable Least Squares Data Driven Local Coordinates for Maximum Likelihood Estimation of Linear Systems“, Automatica, Special Issue on Data-Based Modelling and System Identification, Vol 41, No 3, 531-544, 2005
- (51) Mit T. Ribarits und B.Hanzon: "On New Parametrization Methods for the Estimation of State-Space Models", International Journal of Adaptive Control and Signal Processing, Special Issue on Subspace-based Identification, Vol 18., 717-743, 2004
- (52) Mit E. Hamann: "Identification of Factor Models for Forecasting Returns", "Journal of Financial Econometrics", Vol 3, No 2, 256-281, 2005
- (53) Mit M. Überwimmer: "Modelling Effects of Advertising for Non-Durable Goods" in: P. Neijens, C. Hess, B. van den Putte und E. Smit "Content and Media Factors in Advertising", Spinhuis Publishers, Amsterdam, 189-194, 2004
- (54) "Linear Models for Multivariate Time Series", in: M. Winterhalder, B.Schelter and J. Timmer (eds.): Handbook of Time Series Analysis, Wiley VCH, Berlin, 283-308, 2006
- (55) Mit Ch. Zinner: "Modelling High Dimensional Time Series by Generalized Linear Factor Models: An Introductory Survey", Festschrift for Tyrone Duncan, Communications in Information and Systems, Vol 7, 153-166, 2007
- (56) "A Birds Eye View on System Identification", in: A. Chiuso, A. Ferrante and S. Pinzoni (eds.): Festschrift for Giorgio Picci, Lecture Notes in Information and Control Sciences, Vol 364, Springer, 59-71, 2007
- (57) Mit BDO Anderson: "Generalized Linear Dynamic Factor Models – A Structure Theory". Proceedings of IEEE CDC 2008, Cancun, 1980-1985, 2008
- (58) Mit BDO Anderson: "Properties of Zero-free Transfer Function Matrices", SICE Journal of Control, Measurement, and System Integration (Invited Paper), Vol 1, No 4, 284-292, 2008
- (59) Mit BDO Anderson: "Properties of Zero-free Spectral Matrices," IEEE Tr. AC (Transactions on Automatic Control), 2365-2375, 2009
- (60) Mit A. Filler, BDO Anderson, W. Chen und Ch. Zinner: "Generalized Linear Dynamic Factor Models - An Approach via Singular Autoregressions". Proceedings of ECC Budapest, 1203-1208, 2009
- (61) Mit A.Graef, M. Hartmann und T. Kluge: "Regression-based Analysis of Synchronization in Multichannel EEG in Epilepsy". Proceedings of IEEE EMBC (Engineering in Medicine and Biology), Minneapolis, 4743 – 4746, 2009
- (62) Mit BDO. Anderson, W. Chen und A. Filler: "AR Models of Singular Spectral Matrices": Proceedings of IEEE CDC 2009, Shanghai, 5721-5726, 2009
- (63) Mit BDO Anderson, W. Chen, A. Filler und Ch. Zinner: "Generalized Linear Dynamic Factor Models - An Approach via Singular Autoregressions". European Journal of Control, 16, 211-224, 2010 (invited paper, with discussions)

- (64) Mit E.W. Bai: "An Interactive Term Representation and Estimation Approach to Non-parametric FIR Nonlinear System Identification". IEEE Tr. AC (Transactions on Automatic Control), 1952-1957, 2010
- (65) Mit BDO Anderson, W. Chen und A. Filler: "Modelling High Dimensional Time Series by Generalized Factor Models", Semi Plenary Lecture at the MTNS (Mathematical Theory of Networks and Systems) Symposium 2010, Proceedings of MTNS 2010, Budapest, 323-329, 2010
- (66) Mit A. Filler, BDO Anderson, W. Chen und E. Felsenstein: „Singular Autoregressions for Generalized Dynamic Factor Models“. Proceedings of the IEEE CDC 2010, Atlanta (Invited Session); 2875-2879; 2010
- (67) Mit D. Rosadi: "Estimating the Codifference Function of Linear Time Series Models with Infinite Variance", Metrika, Vol 73, No 3, 395-429, 2011
- (68) Mit W. Chen, BDO Anderson und A. Filler: "Solutions of Yule- Walker Equations for Singular AR Processes". Journal of Time Series Analysis, Vol 32, No 5, 531-538, 2011
- (69) Mit A. Filler und B. Funovits: "AR Systems and AR Processes, the Singular Case" Communications in Information and Systems (Festschrift for B.D.O. Anderson), Vol 11, No 3, 225-236, 2011
- (70) Mit M. Zamani, W. Chen, BDO Anderson und Alexander Filler „On the Zeros of Blocked Linear Systems with Single and Mixed Frequency Data“, IEEE CDC 2011, Orlando, 4312-4317, 2011
- (71) Mit W. Chen, BDO Anderson und A. Filler: "Properties of Blocked Linear Systems", Automatica, Vol 48, No 10, 2520-2525, 2012
- (72) Mit BDO. Anderson, W. Chen und A. Filler: "AR Models of Singular Spectral Matrices": Automatica, Vol 48, No 11, 2843-2849, 2012
- (73) Mit K. Neusser: „Prognose uni- und multivariater Zeitreihen“, in Mertens P. und Rässler S. (Hrsg) „Prognoserechnung“, 7. Auflage, Springer-Verlag, Berlin Heidelberg, 225-256, 2012
- (74) Mit C. Flamm, U. Kalliauer, M. Waser, und A. Graef: „Graphs for Dependence and Causality in Multivariate Time Series" in L. Wang und H. Garnier (Hrsg.) „System Identification, Environmental Modelling, and Control System Design“, Springer, 133-157, 2012
- (75) Mit A. Graef, C. Flamm, S. Pirker, und C. Baumgartner: "A Physiologically Motivated ECoG Segmentation Method for Epileptic Seizure Onset Zone Detection", Proceedings of the IEEE EMBC (Engineering in Medicine and Biology) 2012, San Diego, 3500-3503, 2012
- (76) Mit B.D.O. Anderson, W. Chen, P. Zadrozny, M. Eichler, E. Felsenstein, B. Funovits und M. Zamani: „Identifiability of Regular and Singular Multivariate Autoregressive Models from Mixed Frequency Data“, Proceedings of the IEEE CDC, Maui, 4312-4317, 2012
- (77) Mit M. Zamani, B.D.O. Anderson and E. Felsenstein: "On Modeling of Tall Linear Systems with Multirate Outputs", 9th Asian Control Conference ASCC, 1-6, 2013

- (78) Mit M. Zamani, E. Felsenstein and B.D.O. Anderson: "Mixed Frequency Structured AR Model Identification", European Control Conference ECC 2013, Zurich, 1928-1933, 2013
- (79) Mit A. Graef, M. Hartmann, C. Flamm, C. Baumgartner, T. Kluge: „A Novel Method for the Identification of Synchronization Effects in Multichannel ECoG with an Application to Epilepsy” Biological Cybernetics, Vol 107, No 3, 321-335, 2013
- (80) Mit C. Flamm, A. Graef, S. Pirker, C. Baumgartner: „Influence Analysis for High-Dimensional Time Series with an Application to Epileptic Seizure Onset Zone Detection“ Journal of Neuroscience Methods, Vol 214, No 1, 80-90. 2013
- (81) Mit A. Graef, C. Flamm, S. Pirker, C. Baumgartner, G. Matz: „Automatic Ictal HFO Detection for Determination of Initial Seizure Spread“ Proceedings of the IEEE EMBC (Engineering in Medicine and Biology), Osaka, 2096-2099, 2013
- (82) Mit E. Felsenstein, B. Funovits, BDO Anderson, M. Zamani: „Exact Interpolation in Singular Multirate AR Systems“, Manuscript, Research Group Econometrics and System Theory, TU Vienna, 2013
- (83) Mit M. Waser, H. Garn, T. Benke, P. Dal-Bianco, G. Ransmayr, D. Grossegger, R. Schmidt: „EEG in the Diagnostics of Alzheimer’s Disease“, Statistical Papers, Vol 54, No 4, 1095-1107, 2013
- (84) Mit B.D.O. Anderson und A. Filler: „Generic Properties of System Zeros“, Manuscript, Research Group Econometrics and System Theory, TU Vienna, 2013
- (85) Mit H. Garn, M. Waser, T. Benke, P. Dal-Bianco, G. Ransmayr, H. Schmidt, G. Sanin, P. Santer, G. Caravias, S. Seiler, D. Grossegger, W. Fruehwirt, and R. Schmidt, "Quantitative Electroencephalographic Biomarkers Explain Severity of Early Alzheimer’s Disease in the PROspective DEMentia Registry Austria (PRODEM)", To appear in Clinical Neurophysiology, 2015
- (86) Mit H. Garn, M. Waser, T. Benke, P. Dal-Bianco, G. Ransmayr, H. Schmidt, G. Sanin, P. Santer, G. Caravias, S. Seiler, D. Grossegger, W. Fruehwirt, and R. Schmidt, "Electroencephalographic Complexity Markers Explain Neuropsychological Test Scores in Alzheimer’s Disease", IEEE Int’l Conf. BHI 2014, 496-499
- (87) Mit H. Garn, M. Waser, R. Schmidt, P. Dal-Bianco, G. Ransmayr, J. Zeitlhofer, H. Schmidt, S. Seiler, G. Sanin, G. Caravias, P. Santer, D. Grossegger, W. Fruehwirt, and T. Benke, "Quantitative EEG in Alzheimer’s Disease: Cognitive State, Resting State and Association with Disease Severity", Int’l Journal of Psychophysiology, 390-397, 2014
- (88) Mit M. Waser, H. Garn, R. Schmidt, T. Benke, P. Dal-Bianco, G. Ransmayr, H. Schmidt, S. Seiler, G. Sanin, F. Mayer, G. Caravias, D. Grossegger, W. Fruehwirt, "Quantifying synchrony patterns in the EEG of Alzheimer’s patients with linear and non-linear connectivity markers", Journal of Neural Transmission, 123(3), 297-316, 2016
- (89) M. Waser, H. Garn, M. Deistler, T. Benke, P. Dal-Bianco, G. Ransmayr, H. Schmidt, G. Sanin, P. Santer, G. Caravias, S. Seiler, D. Grossegger, W. Fruehwirt, and R. Schmidt, "Using Static and Dynamic Canonical Correlation Coefficients as

- Quantitative EEG Markers for Alzheimer's Disease Severity", Proc. IEEE Int'l Conf. EMB 2014, 2801-2804
- (90) Mit W. Scherrer und B.D.O. Anderson: "The Structure of Generalized Linear Dynamic Factor Models" in J. Beran, Y Feng und H. Hebbel (eds) "Empirical Economic and Financial Research - Theory, Methods and Practice", Springer 2015, 379-400
- (91) Mit M. Waser, H. Garn, R. Schmidt, T. Benke, P. Dal-Bianco, G. Ransmayr, H. Schmidt, S. Seiler, G. Sanin, F. Mayer, G. Caravias, D. Grossegger und W. Fruehwirt: „Quantifying synchrony patterns in the EEG of Alzheimer's patients with linear and non-linear connectivity markers“. J Neural Transmission 123, 297-316, 2016, available online
- (92) Mit L. Koelbl, A. Braumann und E. Felsenstein: "Estimation of VAR Systems from Mixed Frequency Data: The Stock and the Flow Case", Advances in Econometrics, Vol 35, 43-73, 2016
- (93) Mit A. Graef: "Fokus-Erkennung bei Epilepsiepatienten mithilfe moderner Verfahren der Zeitreihenanalyse". Schnappschüsse moderner Mathematik aus Oberwolfach 8, 1-11, 2016
- (94) Mit B.D.O. Anderson, E. Felsenstein, B. Funovits und M. Zamani: "Multivariate AR Systems and Mixed Frequency Data: G-Identifiability and Estimation", Econometric Theory 32, 793-826, 2016, available online
- (95) Mit B.D.O. Anderson, E. Felsenstein und L. Koelbl: "The Structure of Multivariate AR and ARMA Systems: Regular and Singular Systems; the Single and the Mixed Frequency Case", Journal of Econometrics 192, 366-373, 2016, available online
- (96) Mit L. Koelbl und B.D.O. Anderson: "Non-Identifiability of VMA and VARMA Systems in the Mixed Frequency Case", Econometrics and Statistics, 2017, available online
- (97) Mit L. Koelbl: "A New Approach for Estimating VAR Systems in the Mixed-Frequency Case", to appear in Statistical Papers, 2018
- (98) Mit A. Braumann und D. Fresoli: "Generalized Linear Dynamic Factor Models - Estimation and Forecasting in the Single- and Mixed-Frequency Case", Mimeo, 2016
- (99) Mit M. Wagner: "Cointegration in Singular ARMA Models", Economics Letters, 155, 39-42, 2017 [DOI]
- (100) Mit C. Coronel, H. Garn, M. Waser, T. Benke, P. Dal-Bianco, G. Ransmayr, S. Seiler, D. Grossegger und R. Schmidt: "Quantitative EEG Markers of Entropy and Auto Mutual Information in Relation to MMSE Scores of Probable Alzheimer's Disease Patients", to appear in Entropy, 2017
- (101) Mit B.D.O. Anderson und J.M. Dufour: "On the sensitivity of Granger causality", Mimeo, submitted 2017

### (c) Bücher

Mit E.J. Hannan: "The Statistical Theory of Linear Systems". Wiley, New York, 1988,  
Reprint in SIAM Classics in Applied Mathematics, Philadelphia, 2012

Mit W. Scherrer: "Modelle der Zeitreihenanalyse". Birkhäuser Springer, Cham, 2018

**List of abbreviations:**

CDC:	Conference on Decision and Control
CWI:	Center of Mathematics and Computer Science, Amsterdam
ECAS:	European Courses in Advanced Statistics
ECC:	European Control Conference
ECMI:	European Consortium for Mathematics in Industry
IEEE:	The Institute of Electrical and Electronics Engineers
MTNS:	Mathematical Theory of Networks and System
SIAM:	The Society for Industrial and Applied Mathematics