ANU College of Engineering & Computer Science
The Australian National University

Seminar Details

Generalized Linear Dynamic Factor Models - An Approach via Singular Autoregressions

Prof. Manfred Deistler (Technical University of Vienna)

SYSTEMS AND CONTROL SERIES

DATE: 2010-02-26
TIME: 11:00:00 - 12:00:00
LOCATION: RSISE Seminar Room, ground floor, building 115, cnr. North and Daley Roads, ANU
CONTACT: Hendra.Nurdin@anu.edu.au

ABSTRACT:
We consider generalized linear dynamic factor models. These models have been developed recently and they are used for high dimensional time series in order to overcome the "curse of dimensionality". We present a structure theory with emphasis on the zeroless case, which is generic in the setting considered. accordingly the latent variables are modeled as a possibly singular autoregressive process and (generalized) Yule-Walker equations are used for parameter estimation. The Yule-Walker equations do not necessarily have a unique solution in the singular case, and the resulting complexities are examined with a view to find a stable and coprime system.

Joint work with B.D.O. Anderson (ANU), A. Filler (TU Vienna), Ch. Zinner (Group of Market Risk BAWAG P.S.K. Vienna), and W. Chen (ANU).

BIO:
Manfred Deistler is a Professor of Econometrics and System Theory at Vienna University of Technology. He received his Dr. techn. (approximately corresponding to a PhD) from Vienna University of Technology in 1970. Manfred Deistler has served on the editorial board of a number of journals, at present he is an Associate Editor of Journal of Econometrics and of Journal of Time Series Analysis and he is a member of the Advisory Board of Econometric Theory. He is a Fellow of the Econometric Society, a Fellow of IEEE (The Institute of Electrical and Electronic Engineers) and a Fellow of the Journal of Econometrics.

Manfred Deistler s research interests are in econometrics, system identification and time series analysis. As far as theory and methods are concerned the focus of his work is on structure theory and estimation for multivariate ARMAX- and state space systems and for linear dynamic factor- and errors- in- variables models. His current research interests are modelling of high dimensional time series and parameterization of multivariate state space systems. As far as applications are concerned, his current interests are: Forecasting of financial assets, analysis of electroencephalograms and data-driven modelling of combustion engines.

MEDIA:
Canberra_2010.pdf
video.html

UPDATED: **23 February 2010** / RESPONSIBLE OFFICER: **Dean, CECS** / PAGE CONTACT: **CECS Webmaster**