



ECONOMETRICS RESEARCH SEMINAR

December 15, 2011, 9 am

**Institute for Advanced Studies
1060 Vienna, Stumpergasse 56
HS II (lecture room II)**

Please note that the seminar will start at 9 am sharp!

Ulrike Schneider

TU Vienna

Distributional Properties of Lasso-Type and Thresholding Estimators

Penalized least-squares estimators, such as the famous Lasso estimator, have been studied intensively in recent literature. While many properties of these estimators are now well understood, the understanding of their distributional characteristics, such as finite- and large-sample distributions, convergence rates and confidence sets is still incomplete.

We give a literature overview and discuss results for penalized least-squares estimators in an orthogonal linear regression model. We also present results for thresholding estimators within a (non-orthogonal) linear regression model where the number of parameters k can depend on sample size n and may diverge with n . In this setting we study versions of the estimators when the error-variance is unknown and also investigate the effects of having to estimate the variance when the degrees of freedom $n-k$ does not tend to infinity or does so very slowly.

with Benedikt Pötscher (University of Vienna and IHS)

References:

B.M. Pötscher and U. Schneider, Distributional Results for Thresholding Estimators in High-Dimensional Gaussian Regression Models, arxiv:1106.6002, submitted.

B.M. Pötscher and U. Schneider, Confidence Sets Based on Penalized Maximum Likelihood Estimators, *Electron. J. Stat.* 4 (2010) 334-360.

B.M. Pötscher and U. Schneider, On the Distribution of the Adaptive LASSO Estimator, *J. Stat. Plann. Inference* 139 (2009) 2775-2790.



ECONOMETRICS RESEARCH SEMINAR

Manfred Deistler (University of Technology Vienna and IHS), **Robert Kunst** (IHS),
Benedikt Pötscher (University of Vienna and IHS), **Leopold Sögner** (IHS)

Venue: Institute for Advanced Studies, 1060 Vienna, Stumpergasse 56

Schedule 2011/2012

UNIT	DATE	ROOM	SEMINAR
1	Thu, Oct 27 9:00 am	HS II	Jerry Hausman , MIT
2	Thu, Nov 03 9:00 am	HS II	Carlos Velasco , Universidad Carlos III de Madrid
3	Thu, Nov 10 9:00 am	HS II	Matthias Koch , Vienna University of Economics and Business
4	Thu, Nov 17 9:00 am	HS II	Adam Rosen , University College London
5	Thu, Nov 24 9:00 am	HS II	Genaro Sucarrat , BI Norwegian Business School
6	Thu, Dec 01 9:00 am	HS II	Bernd Funovits , Vienna Graduate School of Economics
7	Thu, Dec 15 9:00 am	HS II	Ulrike Schneider , TU Vienna
8	Thu, Jan 12 9:00 am	HS II	Sabyasachi Das , Vienna Graduate School of Economics
9	Thu, Jan 19 9:00 am	SZ VI	Siegfried Hörmann , Université Libre de Bruxelles
10	Thu, Jan 26 9:00 am	HS II	Martin Wagner , Institute for Advanced Studies
11	Thu, Feb 23 9:00 am	HS II	Michel Dacorogna , SCOR
12	Thu, Mar 15 9:00 am	HS II	Steven Durlauf , University of Wisconsin-Madison
13	Thu, Mar 22 9:00 am	HS II	Jan G. De Gooijer , Universiteit van Amsterdam
14	Thu, Apr 19 9:00 am	HS II	Peter Hansen , EUI
15	Thu, Apr 26 9:00 am	HS II	Domenico Giannone , Université libre de Bruxelles
16	Thu, May 24 9:00 am	HS II	Michael Wolf , University of Zurich
17	Thu, Jun 21 9:00 am	HS II	Maximilian Kasy , UCLA

DOWNLOAD SITE FOR PAPERS (IF AVAILABLE) AND SEMINAR SCHEDULE: <http://economics.ihs.ac.at/seminars>

NOTE: Participation of advanced students in this seminar is highly recommended.