

IWH-DPE/CGDE

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21 January to 23 January 2015 (each day 9:00-12:00 pm and 13:00-16:00 pm)

SPECIAL COURSE

– Bayesian Econometrics –

Course Objectives

This course offers a self-contained presentation of the basics of Bayesian econometrics. It combines a presentation of the statistical foundations of econometric modelling using Bayesian methods with empirical applications. It provides students with the background required to perform rigorous empirical work using Bayesian econometrics on their own and understand modern literature which uses such a methodological framework. The course focuses on the linear regression model, but also offers insights to nonlinear regression and limited dependent variable specifications.

Structure

- Introduction: Bayesian Theory
 - priors, likelihood and posteriors
 - Bayesian computation
- The Normal Linear Regression Model
 - the model with natural conjugate priors and a single explanatory variable
 - the model with natural conjugate priors and multiple explanatory variables
 - the model with independent Normal-Gamma priors
- The Linear Regression Model with General Error Covariance Matrix
 - heteroskedastic errors
 - autocorrelated errors
 - seemingly unrelated regressions model
- Bayesian Model Averaging
 - model uncertainty in Bayesian analysis
 - BMA priors and posteriors
 - BMA applications
- Time Series Models
 - the local level model
 - state space models
- Limited Dependent Variable Models
 - the probit model
 - the ordered probit model
 - the multinomial probit model

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in Economics

Basic Literature

Koop, G. (2003): Bayesian Econometrics. Wiley.

Supplementary Literature

Koop, G.; Poirier, D. J.; Tobias, J. L. (2007): Bayesian Econometric Methods. Cambridge University Press.

Lancaster, T. (2004): Introduction to Modern Bayesian Econometrics. Wiley-Blackwell.

Grading

The grade of the course is based on the result of a take-home assessment.

Venue

Halle Institute for Economic Research (IWH)
Kleine Maerkerstrasse 8
06108 Halle (Saale)
conference room (ground floor)

Registration

Please contact Annett Hartung, Phone: +49 345 7753 751, E-mail: annett.hartung@iwh-halle.de, until 28 November 2014.

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