



Model Uncertainty and Spatial Econometric models - applied tools for growth and technology analysis

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Short description of the lecture:

This course presents a class of methods of applied econometric analysis and tools directed to PhD students. Presented methods which being universal in nature can be successfully applied in a variety of disciplines (including management and production technology in industry, logistics). Within industrial management field the methods can be used in modelling suppliers risk using Bayesian networks, planning and investment decision making, management of complex projects. Given target audience specialization, a specific application to industry studies will be discussed (case studies). Major focus of the course is on methods of model averaging as an approach to deal with specification uncertainty in econometric models. It combines a presentation of the statistical foundations of the assessment of model uncertainty using Bayesian methods with empirical applications. It provides students with the background required to perform rigorous empirical work using methods which account for model uncertainty. The course focuses on the linear regression model, but also offers insights to nonlinear regression and limited dependent variable specifications.

Contents:

1. Model uncertainty: Why it matters:
 - 1.1 Modelling and uncertainty
 - 1.2. Model selection vs Model averaging
2. Extreme Bounds Analysis
 - 2.1. Early approaches
 - 2.2. EBA and model weighting
3. Model Averaging: Frequentist approaches
 - 3.1. From EBA to BACE
 - 3.2. Model selection criteria as averaging weights
4. Bayesian Model Averaging: The linear regression case



- 4.1. An introduction to Bayesian econometrics
- 4.2. The linear regression model
- 4.3. Model uncertainty and BMA
- 5. Bayesian Model Averaging in presence of spatial spillovers
 - 5.1. Standard approaches
 - 5.2. Spatial filtering and BMA
- 6. Empirical applications and case studies

Terminy wykładów			
Data	Dzień tyg.	Godzina	Sala
2015-09-24	Cz	16.15-21.00	06/08 Stary Gmach WETI
2015-09-25	Pt	16.15-21.00	06/08 Stary Gmach WETI
2015-09-26	So	9.15-14.00	06/08 Stary Gmach WETI