

## **Data Analysis for Experiments, Winter Term 2009/2010**

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Thursday, 5.11.2009, Friday, 6.11.2009, Friday, 20.11.2009, Friday, 4.12.2009

9:00 to 12:00 and 13:30 to 17:30

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### **Overview**

In recent time, also in economics, experiments have increasingly been used. Econometrically, they have important advantages compared to non experimental data sets. They allow controlling the parameters of the situation, which reduces uncontrolled variance. Most importantly, exogenous treatment variations allow drawing causal conclusions. Nevertheless, there are also econometrical problems typical for experimental data. Data sets are small, variables are often discrete and the interaction in a typical experiment creates dependencies in the data. In this course, I will give a short introduction to the experimental method and discuss the econometrical problem typical in the analysis of economic experiments.

### **Content**

Introduction: Advantages and limits of experiments

Nonparametric tests

OLS for experimental data

Discrete data models (probit, ordered probit, multinomial probit)

Experimental designs

Sample size

Experiments and instrumental variables

The problem of dependency

Quantal Response Equilibrium

Testing theories

Heterogeneity

Practical questions: Data collection and organization

### **Literature**

Sidney Siegel and N. John, Jr. Castellan. Nonparametric Statistics for the Behavioral Sciences. (difficult to get).

James H. Stock and Mark W. Watson. Introduction to Econometrics, Addison-Wesley Longman, Amsterdam.

Joshua D. Angrist and Jörn-Steffen Pischke. Mostly Harmless Econometrics: An Empiricist's Companion.