

## **Design and Data Analysis for Experiments, Winter Term 2015/2016**

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Wednesday, 25. Nov. 2015, 8:15 to 13:00; 14:00 to 18:00

Thursday, 26. Nov. 2015, 8:15 to 13:00; 14:00 to 18:00

Friday, 27. Nov. 2015, 8:15 to 13:00; 14:00 to 15:45

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### **Overview**

Experiments have developed to become an established method in economics, in addition to theory and the empirical analysis of field data. Econometrically, experiments 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 an introduction to the experimental method and discuss the econometrical problem typical in the analysis of economic experiments.

### **Content**

Experience experiments

Non-parametric tests

Applications to different experiment types

Experimental method – advantages and limits of experiments

Experimental design

Regressions for experimental data

Modeling economic behavior and testing theories

Heterogeneity

Practical questions: Data collection and organization

### **Literature**

Nicholas Bardsley, Robin Cubitt, Graham Loomes, Peter Moffatt, Chris Starmer & Robert Sugden, *Experimental Economics: Rethinking the Rules*, Princeton University Press.

Daniel Friedman and Shyam Sunder. *Experimental Methods: A Primer for Economists*. Cambridge University Press, 1994.

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*.