IWH-DPE/CGDE

Advanced Econometrics

Due to COVID-19, the lecture-format will be both in-class and online.

I. Introduction (Day 1)

1. Review of Linear Models and Asymptotic Theory

Date: 02.11.2020

Time: 09:15–10:45

Speaker: Professor Dr Steffen Müller, IWH and Otto von Guericke University Magdeburg

II. Estimation Methods for Non-linear Models (Day 2)

2. Maximum-likelihood Estimation
3. Bayesian Estimation and Inference

Date: 16.11.2020

Time: 09:00–12:30

Speaker: Professor Dr Christoph Wunder, Martin Luther University Halle-Wittenberg

III. Binary, Categorial and Limited Dependent Outcomes (Day 3)

4. Models for Binary and Categorial Outcomes
5. Models for Limited Dependent Variables

Date: 30.11.2020

Time: 09:00–12:30

Speaker: Professor Dr Christoph Wunder, Martin Luther University Halle-Wittenberg

IV. Causal Inference (Day 4 and Day 5)

6. Instrumental Variables
7. Regression Discontinuity

Date: 14.12.2020

Time: 09:00–12:30

Speaker: Professor Dr Felix Noth, IWH and Otto von Guericke University Magdeburg

8. Matching

Date: 08.01.2021

Time: 09:00–10:30

Speaker: Professor Xiang Li, PhD, IWH and Martin Luther University Halle-Wittenberg

9. Differences-in-Differences

Date: 08.01.2021

Time: 11:00–12:30

Speaker: Professor Dr Felix Noth, IWH and Otto von Guericke University Magdeburg

V. Special Topics (Day 6)

10. Empirical Methods in Lab and Field Experiments

Date: 18.01.2021

Time: 09:00–10:30

Speaker: Professor Dr Sabrina Jeworrek, IWH and Otto von Guericke University Magdeburg

11. Control Function Estimators

Date: 18.01.2021

Time: 11:00–12:30

Speaker: Dr Daniel Fackler, IWH

VI. Time Series (Day 7 and Day 8)

12. Univariate Time Series Models and Non-stationary Data

13. Dynamic Regression and (Vector) Error-correction Models

Date: 01.02.2021

Time: 09:00–12:30

Speaker: Professor Boreum Kwak, PhD, IWH and Martin Luther University Halle-Wittenberg

14. Vector Autoregressions and Local Projections

15. Structural Vector Autoregressions

Date: 15.02.2021

Time: 09:00–12:30

Speaker: Professor Boreum Kwak, PhD, IWH and Martin Luther University Halle-Wittenberg

Venue

Halle Institute for Economic Research (IWH) – Member of the Leibniz Association, Kleine Maerkerstrasse 8, 06108 Halle (Saale), conference room (ground floor).

Problem sets

There will be 8 assignments throughout the term. At the end of each Day, the lecturer will post assignments which are due on the last day before the next lecture (11.59 pm). We encourage all doctoral students to engage in group work.

Selected Textbooks

Angrist, J. D.; Pischke, J.-S. (2015): Mastering Metrics. Princeton University Press.

Angrist, J. D.; Pischke, J.-S. (2009): Mostly Harmless Econometrics: An Empiricist's Companion. Princeton University Press.

Cameron, A.C.; Trivedi, P.K. (2005): Microeconometrics, Methods and Applications, Cambridge University Press.

Gelman, A.; Carlin, J. B.; Stern, H. S.; Dunson, D. B.; Vehtari, A.; Rubin, D. B. (2013): Bayesian Data Analysis, Third Edition. Chapman & Hall/CRC Press.

Greene, W.H. (2017): Econometric Analysis, 8th edition, Pearson.

Imbens, G. W.; Rubin, D. B. (2015): Causal Inference for Statistics, Social, and Biomedical Sciences: An Introduction. Cambridge University Press.

Kilian, L.; Lütkepohl, H. (2017): Structural Vector Autoregressive Analysis, Cambridge University Press, 2017.

McElreath, R. (2016): Statistical Rethinking. A Bayesian Course with Examples in R and Stan. Chapman & Hall/CRC Press.

Winkelmann, R.; Boes, S. (2006): Analysis of Microdata. Springer.

Wooldridge, J. M. (2010). Econometric analysis of cross section and panel data. MIT press.

Additional literature to prepare for every dates will be announced.