Lecture (M.Sc.)
Forecasting

Dr. Dominik Heinisch (Volkswagen AG)

Winter Term 2023-24 (block seminar)

Time & Location: 3 days with 4 lectures each: 30.10.2023, 13.11.2023, and 27.11.2023 (9:00-12:00 and 13:00-16:00), additional 1 or 2 days for presenting the results at the end of the semester
Room: Senatssaal, Gießhaus

6 Credits: **MSc Economic Behavior and Governance** (Module 1b); **MSc Business Studies** (Module: METHODS)

Scope and Format:

Even though predictions often go wrong, they are everywhere. But why is it so difficult to foresee the future, and is there any chance to improve? Or are we hopelessly lost to the fortune of coincidences? In this lecture, we will embark on an adventurous journey through the universe of forecasting. We will start from chaos and venture towards determinism, always in search of signals from the future that will guide us to enlightenment. Our exploration will reveal how easily we could be led astray by noisy data and/or our intuition. We will grasp what constitutes a good forecast and how forecasts can translate into helpful decisions. This journey will be less theoretically oriented and more focused on real-world problems and pragmatic solutions. The lecture aims to provide a general understanding of different forecasting techniques in a daily forecaster's life, with a focus on data-driven approaches including statistics, econometrics, and machine learning techniques, combined with concepts from behavioral economics. Expect to gain practical knowledge, insights, and strategies.

For successful participation in the course, prior knowledge of econometrics is required. Please register only if you have completed an econometrics course before.

Credit requirements:

Presentations with (short) assignment (approx. 5-10 pages)

Preparation and active participation in seminars.

Registration required:

Please register by sending an email to forecastinglecture@icloud.com (registration closes on October 27).

Outline:

1. Introduction (October 30)

2. Basic Concepts (October 30)

3. Statistical forecasting techniques I (October 30)

4. Statistical forecasting techniques II (October 30)

5. Measuring forecast quality (November 13)

6. Forecasting without data (November 13)

7. Updating (November 13)

8. Super-Forecasters (November 13)

9. A better Crystal Ball (November 27)

10. Communicating Forecasts (November 27)

11. Man vs. Machnine (November 27)

12. Biases Nudges (November 27)

13. Open Topics (so far not predictable) (open)