Bernoullis Tafelrunde

Graduate Student Seminar

6 December 12:15-13:00
Hybrid seminar
Seminar room 00.003, Spiegelgasse 1 / Zoom

Corinne Emmenegger

ETH Zürich

Double machine learning in partially linear models

Abstract

Double machine learning is a tool in statistics to estimate and make inference for the parametric part of a model that consists of a parametric and a potentially complex nonparametric part. To cope with the nonparametric part, standard approaches use estimators of limited complexity. In contrast, double machine learning allows us to use machine learning algorithms.

We introduce double machine learning and apply it in two situations where additional dependency structures are present in the data. In the first situation, some variables of the model are not observable, which introduces endogeneity. For instance, this may happen if a treatment is not randomly assigned. In the second situation, measurements are taken repeatedly on the same subjects.