Please join the Biometric Colloquium

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ADVANCES IN DISTRIBUTIONAL REGRESSION

May 17th, 2023 at 9:00 am

Schulungsraum Center for Medical Data Science (previously CeMSIIS),
Spitalgasse 23, Room 88.03.512
Medical University of Vienna, 1090 Wien

HOST: Georg Heinze

ABSTRACT

Recent progress in computer science has led to data structures of increasing size, detail and complexity in many scientific studies. In particular nowadays, where such data applications do not only allow but also require more flexibility to overcome modelling restrictions that may result in model misspecification and biased inference, further insight in more accurate models and appropriate inferential methods is of enormous importance. In regression, recent years have seen considerable progress in this regard making the statistical development of distributional regression models an omnipresent topic in the literature and the academic community of statisticians. This talk introduces selected recent parametric, semi- and non-parametric contributions of Bayesian regularization and statistical learning approaches to both univariate and multivariate distributional regression models along small and large scale data illustrations. The increased flexibility in distributional regression models poses additional challenges in the model building and model checking process. We therefore present a versatile framework for performing general effect selection in structured additive distributional regression models aiming at facilitating the usage of these advanced models for applied researchers.