



Seminar Series in Statistics and Data Science

07.05.2019, 14:15 @ Erling Sverdrups plass, Niels H. Abels hus, 8th floor

Andreas Mayr: Boosting regression models for multi-variate responses

Abstract: In modern clinical or epidemiological studies most often various clinical endpoints that are related to each other are observed jointly. There is hence a need for regression techniques that are able to relate the different response variables simultaneously to a set of covariates. Additionally, in the era of digital medicine, the number of potential explanatory variables is increasing even in classical clinical studies or registries. This presentation will give an overview on boosting techniques for multivariate distributional regression (in the spirit of generalized additive models for location, scale and shape) as well as an algorithm for the joint modelling of longitudinal and time-to-event data. These approaches are able to simultaneously select and estimate prediction models for the different outcome dimensions while still being feasible for potentially high-dimensional data with more candidate variables than observations.



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Andreas Mayr is Professor of Statistical Methods in Epidemiology at the Department of Medical Biometry, Informatics and Epidemiology of the Rheinische Friedrich-Wilhelms-Universität of Bonn (GER). He obtained his Ph.D. in 2013 at the Friedrich-Alexander-Universität Erlangen-Nürnberg (GER), where it worked as a post-doc until 2017. After a year of interim professorship at the Ludwig-Maximilians-Universität of München (GER), he become Head of WG Statistical Methods in Epidemiology and Deputy Head of the Department of Medical Biometry, Informatics and Epidemiology of the Rheinische Friedrich-Wilhelms-Universität of Bonn (GER). His research interests include statistical boosting; generalized additive models for location, scale and shape; quantile regression; prediction inference and prediction intervals.

Next seminar

21.05.2019 @ 14:15 **Sam Efromovich**
University of Texas at Dallas (USA)

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