Einladung zum virtuellen Biometrischen Kolloquium

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NEUTRAL COMPARISON STUDIES: ILLUSTRATION THROUGH A BENCHMARK STUDY ON OMICS BASED PROGNOSTIC MODELLING AND DISCUSSION

11. November 2020, 9:15h

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Meeting number: 121 029 5803
Password: JPsTgJDn275 (57784536 from video systems)

HOST: Georg Heinze

ABSTRACT:

In the first part of my talk, I will first briefly present several methods for deriving prognostic models of patient outcomes using clinical and multi-omics data. IPF-LASSO consists of using a different penalty parameter lambda for variables of different (omics) types in lasso regression. If the user has prior knowledge about the importance of the different omics types or a preference for practical reasons (e.g., because one of the omics types is much cheaper to measure), the recently developed "priority-lasso" may be a valuable option. I will then present an extensive benchmark study comparing these and other methods for multi-omics based prognostic modelling.

This study is intended as "neutral" and will serve as case example in the second part of my talk, which addresses different aspects of what may be called the "replication crisis in methodological (statistical) research". With a focus on methodological studies (i.e. studies considering statistical methods as research objects), I will discuss problems such as fishing expeditions and over-optimism, publication bias, the design and necessity of neutral comparison studies, and the importance of reporting and research synthesis.