

# Interdisziplinäres Statistik-Kolloquium (ISK) der Universitäten Marburg und Gießen

Im Rahmen des Interdisziplinären Statistik-Kolloquiums der Philipps-Universität Marburg und der Justus-Liebig-Universität Gießen wird

**Prof. Moritz Jirak**  
(TU Braunschweig)

am

***Dienstag, den 12. Februar 2019***

zum Thema

**“Relative perturbation bounds and robust pca “**

vortragen.

Abstract: A problem of fundamental importance in quantitative science is to estimate how a perturbation of a covariance operator effects the corresponding eigenvalues and eigenvectors. Due to its importance, this problem has been heavily investigated and discussed in the literature. In this talk, perturbation expansions for empirical covariance operators are presented that allow to describe how perturbations carry over to eigenvalues and vectors in terms of necessary and sufficient conditions. The usefulness of these expansions is demonstrated by discussing pca in various setups, including in particular more exotic cases where the data is assumed to exhibit (very) heavy tails.

Der Vortrag findet um **18:15 Uhr** im Hörsaalgebäude, Biegenstraße 14, Raum: HS 00/0070, statt. Alle Interessenten sind herzlich eingeladen!

Prof. Dr. Hajo Holzmann  
Prof. Dr. Markus Bibinger