

# SALZBURG MATHEMATICS COLLOQUIUM

Summer 2016

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## „High-dimensional multivariate repeated measures analysis with unequal covariance matrices“

May 12, 2016

### Abstract:

In this talk, test statistics for repeated measures design are introduced when the dimension is large. Asymptotic distribution of the statistics are derived for the equal as well as unequal covariance cases in the balanced as well as unbalanced cases. Consistent and unbiased estimators of the asymptotic variances will also be presented. Simulation study provides favorable evidence for the accuracy of the asymptotic approximation under the null hypothesis and power simulations show that the new methods possess enormous advantage when the dimension is large. Data from Electroencephalograph (EEG) experiment will be analyzed to illustrate the application of the results.

Thursday, **15:00-15:45**  
Hörsaal 414, 1. Stock