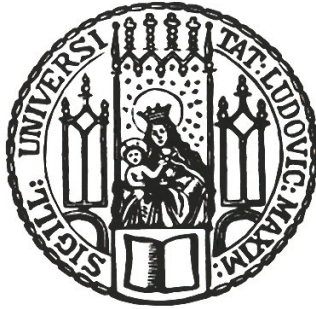


Ludwig-Maximilians-Universität
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Statistical Consulting



UARE-Program

Invitation to the consulting presentation

Assessing Reproducibility in rs-fMRI

The Human Connectome Project (HCP, www.humanconnectome.org) by the WU-Minn Consortium provides a multitude of resting-state functional magnetic resonance imaging (rs-fMRI) data characterized by both high temporal and spatial resolution. As the reproducibility of neuro-imaging studies is heavily criticized, this data can be used to assess reproducibility of rs-fMRI studies. The method of investigation is a procedure being currently developed by Dr. Sunil Kalmady: New “simulated studies“ are generated via subsampling from the overall (HCP) data set, each producing a set of significant results by standard methods of analyses. These sets of results based on two independent “simulated studies“ are then compared by the Jaccard Index, constituting a measure of reproducibility.

Due to the extensive HCP data structure with 4 data acquisition runs per participant, variance components of the data can be considered separately, enabling the investigation of their influence on these Jaccard Scores.

The goals of this project were both to evaluate reproducibility of rs-fMRI studies and to further extend the understanding of Kalmady’s method.

Date:	08.06.2017, 6:15pm (Munich) / 10:15am (Edmonton)
Place:	Department of Statistics, Ludwigstr. 33, Room 144
Projectpartner:	Prof. Dr. Russ Greiner and Dr. Sunil Kalmady University of Alberta, Edmonton, Canada
Advisor:	Dr. Fabian Scheipl
Consultant:	Patrick Schwaferts
