

Titel: Functional Variance Processes and Applications

We want to analyze functional data which have some mean structure and more important some variance structure which contains relevant information.

Therefor we introduce the notion of functional variance processes. Starting with two kind of data sets and their relevant questions we develop suitable models. Then the tools for the statistical analysis coming from smoothing

and functional data analysis will be provided and some asymptotic results will be presented.

Finally the results for the data in question will be discussed.