Modeling Dependent Functional Data

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Abstract

We consider various situations where we observe independent realizations of multiple functional data that are dependent. A first scenario concerns multivariate functional data, where interaction processes are of interest. In a second scenario one has repeatedly observed functions for each subject in the sample, for which various covariance structures can be considered. A third scenario concerns longitudinal compositional data, which can be represented as trajectories on a sphere. The methods will be illustrated with various examples.

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