



**Marburg
University**

RESEARCH SEMINAR

Modelling Lung Function Trajectories for Cystic Fibrosis Patients with Mixed Models for Location and Scale via Gradient Boosting

Tuesday, January 20th 2026, 4 pm

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Chair of Spatial Data Science and
Statistical Learning
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Abstract:

Cystic Fibrosis (CF) suffer from comorbidities having impact on many different organs. The lung however, is usually affected most severely. We use data collected by the Cystic Fibrosis Registry Germany to model both, the development of the mean and the variance of the lung function over time. This talk will address issues arising, when using random effects in a gradient boosting setup and explain a possible solution to those issues.

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