



freiburger zentrum für datenanalyse  
und modellbildung



UNIVERSITÄTS  
FREIBURG **KLINIKUM**

# High-dimensional omics data in Freiburg: Experimental and statistical experts join forces

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Modern molecular measurement techniques in biomedicine, such as microarrays, promise deeper insight into subject matter questions. However, they require careful experimental design, preprocessing of the resulting high-dimensional data, and often advanced statistical modeling techniques. Furthermore, all these steps are interlinked. No single discipline or researcher can provide all these components, and even closely related steps such as preprocessing and statistical modeling may require expertise from different researchers.

The Freiburg Center for Data Analysis and Modeling (FDM) provides such specific expert knowledge in several methodological areas, which can provide additional insight when combined with the competencies of the clinical and biological departments. We illustrate how such a cooperation can take place, highlighting core competencies of the involved groups. This will include a discussion of which tasks are best performed by which group, providing starting points for future collaboration.

Schedule:

- 14.00 – 14.10 **Martin Schumacher**  
Data analysis workflows and the role of the FDM in design, obtaining data, preprocessing and the statistical analysis
- 14.10 – 14.35 **Clemens Kreutz**  
Processing of high-dimensional data for mathematical modeling
- 14.35 – 15.00 **Dietmar Pfeifer, Alla Bulashevskaya**  
Core facility II Genomics/ Department of Hematology & Oncology: Omics data based on Affymetrix GeneChip arrays - from assay to analysis
- 15.00 – 15.25 **Harald Binder**  
Statistical techniques for linking high-dimensional molecular data to complex clinical endpoints
- 15.25 – 15.50 **Thorsten Kurz**  
Core facility genomics, versatile genome or transcriptome analyses based on quantifiable high-throughput data ascertainment
- 15.50 – 16.00 **Jens Timmer**  
Discussion: Initiating future collaboration