

# Project “Computer Experiments”

Fallstudien II / Case Studies II

Prof. Dr. Katja Ickstadt

Dr. Henrike Weinert

Yassine Talleb

Carmen van Meegen

WS 2025/26

November 25, 2025

## Guiding Questions

- **Analysis of Computer Experiments**  
*What could be possible research questions?*
- **Design of Computer Experiments**  
*How to select “optimal” design points for evaluating the computer model?*
- **Surrogate Modeling**  
*What is a suitable choice for a surrogate model?*

## Surrogate Modeling

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### Possible Surrogate Models:

- Polynomial Regression Models
- Gaussian Process Models / Kriging
- Artificial Neural Networks
- Radial Basis Functions
- Support Vector Machines
- Random Forest
- Multivariate Adaptive Regression Spline
- Inverse Distance Weighting
- Polynomial Chaos Expansion
- Ensemble Techniques
- $\vdots$