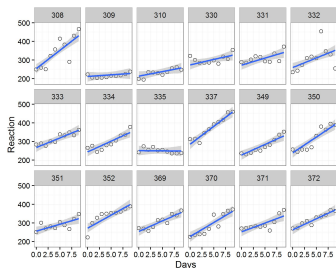Multilevel Models
(Block-)Seminar in the Winter-Semester 24/25

Multilevel Models

- Modeling hierarchical data
- Example: Students nested within classes which are nested within schools
- Hierarchical structure of parameters: $\theta_i \sim \text{normal}(\mu, \tau)$
- All θ_i as well as (μ, τ) are estimated from the data
- Applications in almost all quantitative sciences

Modalities

- Seminar in English for BSc. and MSc.
- Requirements: Linear Models

- Examination:
  1. Presentation (weighted 50%)
  2. Report (weighted 50%)
  3. Discussion of other presentations (not graded)
- Seminar-Structure:
  - Block of two weeks towards the end of the semester
  - Week 1:
    - Selection of topics (hierarchical dataset to be analysed)
    - Plenary input sessions
    - Data analysis and preparation of presentations
  - Week 2:
    - Presentations and feedback
    - Work on the reports
  - Deadline for handing in the reports a few weeks later