

Projects, PS Modeling (SS 2019)

Projects will be worked on in groups of two to three people. The project presentation will be held on Monday 17.06 and 24.06 from 12:15-14:00. Each student is allotted to talk for 7 minutes. After the presentation there will be an opportunity to ask questions. Each group is expected to hand in a short summary of their project with some of the results and conclusions (1-2 pages).

Groups and corresponding topics:

1. **[24.06](Niederkofler, Schwarzer, Tomelleri)**. Chapter 16.7 'Cooling a Monocrystalline Bar'.
2. **[24.06](Valentiner-Branth, Klingler, Gutbrunner)**. Chapter 16.6 'Groundwater Flow and Rain'.
3. **[17.06](Lechner, Pfurtscheller, Wolfahrt)**. Turing instability of chemical reactions. Chapter 1 of Turing Instabilities and Spatial Pattern Formation in One-Dimension
4. **[24.06](Schneckenreiter, Elisabeth, Kröll)**. Chapter 16.13 'Determining Chemical Composition by Electrophoresis'.
5. **[17.06](Zaric, Falkensteiner, Deutschmann)**. Chapter 16.3 'Thermal Explosion in a Vessel'.
6. **[17.06](Klingsbigl, Burger, Rotschopf)**. Chapter 16.1 'Production of Resin-Containing Panels'.
7. **[17.06](Hartmut, Bialas)**. Modeling chemical reactions using law of mass action. Literature: Introduction to modeling by ordinary differential equations and How to build ordinary differential equations corresponding to a set of chemical reactions.
8. **[24.06] (Präg, Thimm)**. Gyroscope. Literature: Rigid Body Dynamics: Tops and Gyroscopes and Feynman lectures