Modeling course based on COMSOL

June 13, 2023

Dear all,

hereby I invite all members of FIT and people working at FIT to the first modeling course by the core facility III. This course will give a introduction into the basic usage of the COMSOL-Multiphysics® software-package that is capable to cover a large variety of problems. The package basically solves (coupled) differential equations related to the physics of the problem on finite difference grids.

We will also cover the important question about how modeling approaches work in general and what to expect from them. There is always a certain level of abstraction needed as the real world generally is too complicated to be mapped into a model. The “best” model is that of maximal simplicity (i.e. maximal abstraction) - it should not be oversimplified, however.

The course is mainly aimed at providing experimental scientist with some basic knowledge to perform their own modeling tasks with or without further support by the core facility.

In order to use your time most effectively, I ask the participants to prepare:

1. The research topics addressed at FIT are diverse. Please think about what part of your research could be supported by modeling and what are the relevant equations for the problem. These questions are of course also open for discussion during the course.
2. Please install COMSOL Multiphysics® and get access to a license to use it (please contact edv@imtek.uni-freiburg.de in advance of the course to get a student licence) . Please let me know (Michael.Walter@fmf.uni-freiburg.de) in case you face problems with that. We want to get our “hands dirty” and solve a small problem to get used to the package.
3. Please register by sending an email to Michael.Walter@fmf.uni-freiburg.de latest June 31st 2023.

The course will take place in the FIT Seminar room

Topic: Modeling course based on COMSOL Multiphysics®
Time: **July 11, 2023 14:00-16:00**

Please let me know, in case you request participation via zoom.

I am looking forward to meeting you and to discussing the problems of your research in the viewpoint of modeling with you.

Michael Walter (FIT, core facility III)