Lehrstuhl I für Technische Chemie
School of Natural Sciences
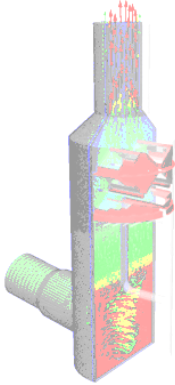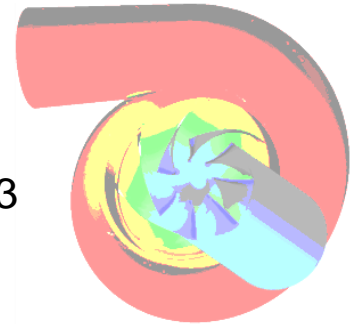Technische Universität München

TUM

CFD with Open-Source Software

Seminar announcement

WS 2022/23 – 5 ECTS

14 March 2023 – 31 March 2023

Structure

- Intended for: Master, final year Bachelor & PhD students from chemical, process, mechanical and computational engineering programs
- Structure: lecture course and practical course
- 6 lecture sessions & 8 simulation sessions from 14.03.23 to 31.03.2023
- The lecture course is mandatory to attend the practical course.
- Max. 16 attendees

Contents of the Lecture Course

- General Introduction to Computational Fluid Dynamics
- Introduction to Multiphase Flows
- Modelling of Transport Processes in Chemical Reactors by CFD simulations

Contents of the Practical Course

- Numerical simulation of five different cases using the software OpenFOAM®
- Working in teams of 2 with hands-on supervision
- Starting with basic operations in OpenFOAM®, different fluid flow issues from the field of chemical engineering will be simulated.
- Summarizing simulation results & conclusions in reports
- At the end the participants will be able to use CFD simulations to solve fluid flow issues during their further studies and professional life.

Furter Information

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