

Organizers

JProf. Dr. Matti Schneider
Institute of Engineering Mechanics
Karlsruhe Institute of Technology (KIT)
Germany

Dr.-Ing. Dipl.-Math. techn. Felix Fritzen
Head of Emmy-Noether group EMMA
Efficient Methods for Mechanical Analysis
University of Stuttgart, Germany

Contact

JProf. Dr. Matti Schneider
Institute of Engineering Mechanics
Karlsruhe Institute of Technology
Kaiserstr. 10, Building 10.23
76131 Karlsruhe, Germany

Tel.: +49 721 608-46899
Fax: +49 721 608-44187
E-Mail: matti.schneider@kit.edu

Link to GAMM AG Data

One focus of the GAMM activity group Data-driven modeling and numerical simulation of microstructured materials is the simulation and characterization of materials based on digital image data. The thematic workshop intends to provide a forum for focussed discussions on this specific topic.

Support

Financial support of the workshop through



DFG International Research Training Group GRK2078 "Integrated engineering of continuous-discontinuous long fiber reinforced polymer structures"



EMMA - Efficient Methods for Mechanical Analysis (DFG-FR2702/6)

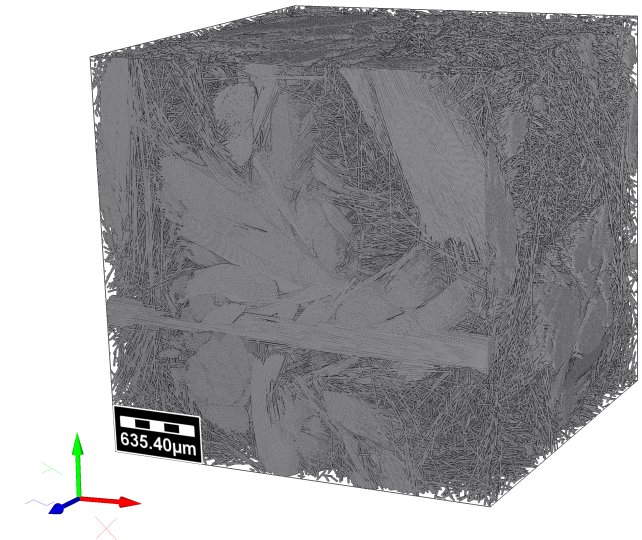
is highly acknowledged.



Activity Group
Data-driven modeling and numerical simulation
of microstructured materials

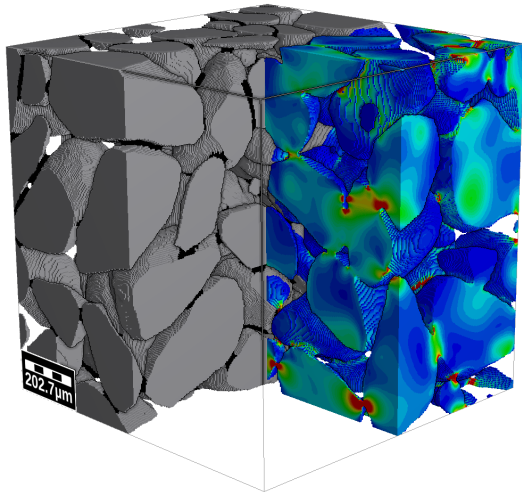
Thematic workshop

Computational challenges for mechanical simulations based on digital image data



Dec. 6-7, 2017
Karlsruhe, Germany

Scope of the workshop



The simulation of microstructured solids in the context of mechanical multiscale problems remains a challenging field with many questions being unanswered. Particularly, the reduction of the computational cost (cpu time and memory) while limiting numerical artifacts induced by the employed discretization methods is sought after. The thematic workshop aims at developing, within a familiar atmosphere, discussions and interaction. Therefore, a scientific program including not only presentations but dedicated time slots for small group discussions is anticipated.

Workshop topics

- FFT-based numerical methods
- microstructure generation
- microstructure characterization
- coupled problems

Time table (preliminary)

Dec. 6	11:30-12:00	Informal meeting
Dec. 6	12:00-13:00	Lunch in the KIT mensa
Dec. 6	13:00-17:00	Workshop
Dec. 7	09:00-11:30	Workshop
Dec. 7	11:30	Final discussion

Registration

Registration is by **e-mail** to **matti.schneider@kit.edu** until **Nov. 5, 2017**. Please provide the following information:

- Name, First Name
- Institution
- E-Mail
- title of the presentation and a short abstract (in case you wish to present)

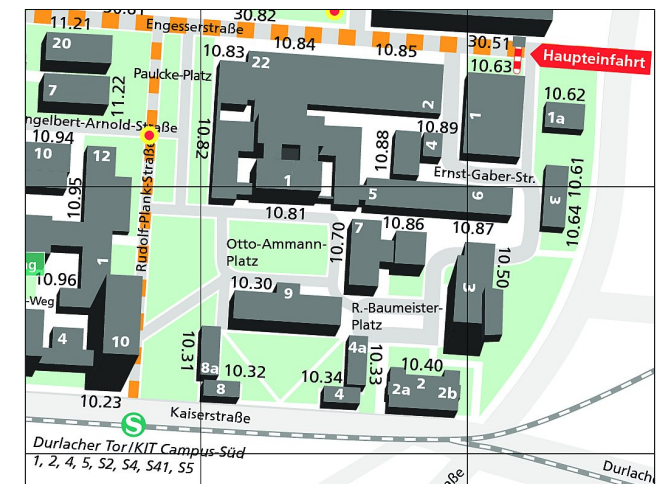
Workshop venue

KIT Campus Süd
Institute of Engineering Mechanics
Kaiserstr. 10, Building 10.23
76131 Karlsruhe, Germany
Tel.: +49 721 608-46107
Fax: +49 721 608-44187
E-Mail: helga.betsarkis@kit.edu
URL: <http://www.itm.kit.edu/cm>

Travel information

By train

In front of the main exit of Karlsruhe Central Station, all trams passing by KIT leave in rightwards direction. Direct connections are offered by tram 2 ("Wolfartsweier") or S4 ("Bretten/Gölshausen" or "Heilbronn"). Get off at the tram station "Durlacher Tor/KIT Campus-Süd". Our building 10.23 is located next to this station.



By car

If you arrive by car and want to enter the campus, please use the Eastern entrance (the "Hauptzufahrt"; see map) and ask for a permit at the gate.