



11th GAMM AG Data Workshop

Feb 06/07 2024

DAY 1

11-12 h Registration
12-13 h Welcome lunch
13-18 h Scientific talks
19-? h Workshop dinner

DAY 2

9-12 h Scientific talks
12-13 h Lunch
13-16 h Scientific talks & closing
16-19 h AG data meets AG phase-field (optional event)
19-? h Joint dinner (optional)

VENUE

The workshop will take place at the TU Dresden on the main campus. It is easily reachable by tram from the city center, the main station and the airport.

ACCOMMODATION

Special contingents at reduced rates are available at [Intercity Hotel](#). Rooms can be booked under the keyword "GAMM-Workshop".

TOPICS

- Data-supported modeling of the constitutive behavior of materials
- Data-driven simulation techniques
- Machine learning tools for materials engineering
- High-performance data-processing
- Microstructure generation, simulation and analysis, e.g. via machine learning or AI tools

OBJECTIVES

- Discuss the state of the art and recent trends in data-driven approaches
- In-depth discussions and exchange

ABSTRACTS

Template:

mib.uni-stuttgart.de/dae/ag-data

Format:

max. 250 words, PDF & TeX

Please submit to agdata2024@tu-dresden.de providing:

- Title, Name, First Name, Institution

REGISTRATION & WORKSHOP FEE

Please register by email until **Jan 07, 2024** to agdata2024@tu-dresden.de. Please provide:

- Title, Name, First Name
- Institution, postal address, phone number

The **workshop fee** of EUR 150 covers workshop participation, printed program / book of abstracts, coffee breaks, workshop dinner, welcome and farewell lunch

DATES

Abstract Submission
Abstract Acceptance
Registration

Dec 22, 2023
Jan 05, 2024
Jan 07, 2024

Preliminary Schedule

About GAMM AG DATA

The GAMM AG Data aims at coordinating the activities of the members of the International Association of Applied Mathematics and Mechanics (GAMM) in the field of data-based modeling, simulation and analysis in the context of microstructured materials.

In recent years, the field of imaging based experimental methods has experienced significant technological improvements. For instance, the quality and the speed of computed tomography based imaging techniques have advanced considerably, while at the same time, X-ray computed tomography devices are now available in many research facilities. By virtue of the obtained three-dimensional images, microstructures of modern natural and artificial materials can be analyzed and used directly in numerical simulations. Incorporating three dimensional microstructure data is, however, highly non-trivial from a numerical point of view. Special data-processing techniques that are able to operate on billions of unknowns, are required. Developing algorithms and data processing techniques for processing three-dimensional data sets constitute major topics within the GAMM AG Data. Innovative image processing techniques for automatic phase segmentation and microstructure reconstructions are of equal importance.

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