

## GAMM AG Data Workshop 2018

# Challenges and Perspectives in Data-driven modeling

May 03–04, 2018



### Organizers

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### Report

- **Collaboration with DGM**

On May 02, 2018 the DGM Arbeitskreis Mikromechanik organized a meeting at Helmholtz-Zentrum Geesthacht. In order to foster closer collaboration of GAMM AG Data and DGM, B. Klusemann and F. Fritzen attended the meeting in Geesthacht. Additionally, three further participants of this DGM meeting participated in the subsequent GAMM workshop.

DGM was further represented by Prof. Alexander Hartmaier (Ruhr-Universität Bochum, Vorsitzender of DGM) and by Prof. Stefan Sandfeld (TU Bergakademie Freiberg, DGM AK 3D Data Science).

A continuation of joint activities of both groups is anticipated.

- **Scientific program**

A total of 12 scientific presentations included two invited keynote lectures by Prof. Michael Ortiz and Prof. Alexander Hartmaier were included in the workshop. The topics were partitioned into two parts: modeling related presentations on May 03 and more data-oriented talks on May 04. Vivid discussions were initiated which spanned also the coffee breaks and the workshop dinner.

- A total of **32 participants** joined the workshop.

- **Experimental Lab Tour (Helmholtz-Zentrum Geesthacht)**

The workshop was complemented by very interesting lab tours at the Helmholtz center. First, solid state joining processes including friction stir welding were presented including live demonstrations of metal-metal friction spot welding as well as metal-polymer composite joining and friction surfacing. Later, the Magnesium Innovation Center (MagIC) was visited where the production and analysis of industrial and academic magnesium alloys are investigated. Finally, a tour through the joining and assessment lab featured

laser welding and laser-driven 3D material deposition using wires and powders was offered.

- **Ongoing and future activities of GAMM AG Data**
  - next meeting anticipated for early 2019 (i.e. 9-12 month cycle)
  - small meetings of working groups are encouraged in the AG Data scope before the next workshop
  - submission of a minisymposium proposal for MSE 2020 in Darmstadt
  - DGM Strategiepapier “Digitale Transformation in der Materialwissenschaft und Werkstofftechnik” (presented by Prof. Stefan Sandfeld) will be made available as soon as its final version is approved
  - **e-mail polls** (to [felix.fritzen@mechbau.uni-stuttgart.de](mailto:felix.fritzen@mechbau.uni-stuttgart.de))
    - Who is interested in a **DFG Priority Program (SPP)**? Who is willing to be part of the DFG SPP working group (includes duties)?  
**DEADLINE for e-mail poll: 15 June 2018**
    - Who is willing to contribute to a possible summer school in 2019 or 2020? Topic collection via e-mail.  
**DEADLINE for e-mail poll: 15 June 2018**
    - Who is interested in organizing the next GAMM AG Data Workshop to be held in the first half of 2019?  
**DEADLINE for e-mail poll: 15 June 2018**
- **Spokesperson**  
**Prof. Stefan Diebels** who is head of GAMM AG Experimentelle Festkörpermechanik offered to free the position in order to prevent doubling in the official GAMM AG boards. **Prof. Benjamin Klusemann** was proposed as second spokesperson. The proposal was accepted (with no dissenting vote and no abstention). The change will take place immediately.

## Impressions

Leuphana University of Lüneburg (May 03, 2018)



Helmholtz-Zentrum Geesthacht (May 04, 2018)

