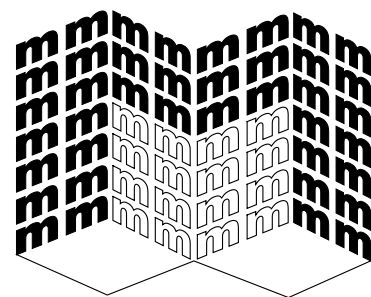

Micro-Macro-Interactions

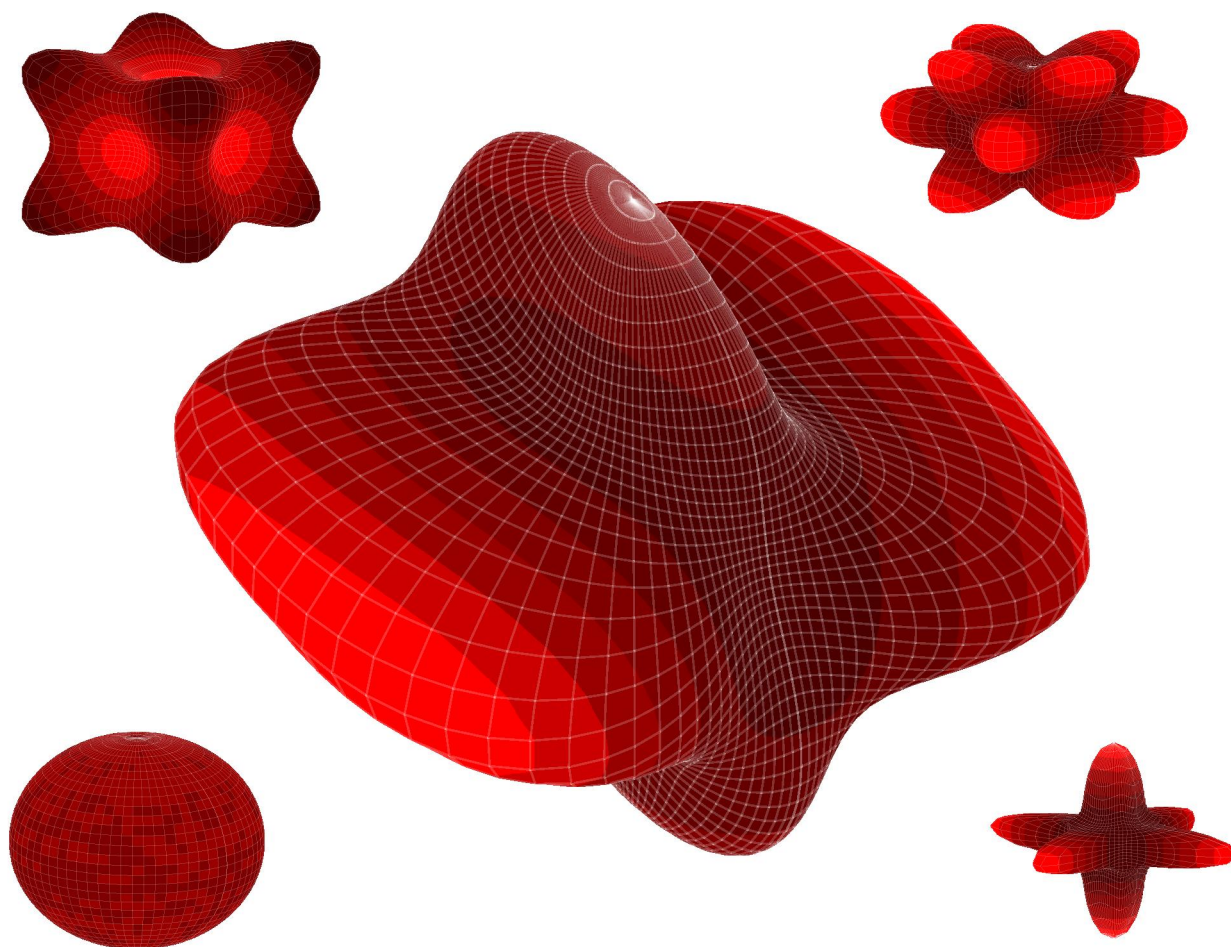
in Structured Media and Particle Systems



Programme

Wolfenbüttel

Winter Workshop 2017



Preface

The research training group 1554 is located at the Otto von Guericke University, Magdeburg (OvGU) and is financed by the German Research Foundation (DFG). The members are PhD students, post-docs, and professors from the faculties of mechanical engineering, process and systems engineering, mathematics and natural sciences. Their working areas cover topics from different engineering branches, applied mathematics as well as theoretical and computational physics.

In order to promote scientific exchange and discussions, workshops take place twice a year. These semi-annual workshops are traditionally organized by the PhD students themselves.

This document contains all necessary information for the Winter Workshop 2017 of the DFG research training group *Micro-Macro-Interactions in Structured Media and Particle Systems*, which will take place at the *Parkhotel Hotel* in *Wolfenbüttel* from October 26th to 27th, 2017.

Magdeburg, October 13th, 2017

Sebastian Dieck & Joachim Nordmann

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1 Location and Travel Guide

1.1 Hotel

Parkhotel Altes Kaffeehaus GmbH
Harztorwall 18
38300 Wolfenbüttel

+49 (0) 5331 888-0
info@parkhotel-wolfenbuettel.de
www.parkhotel-wolfenbuettel.de

1.2 Journey at 26th of October to Wolfenbüttel

- we meet at 06:45 at train station Magdeburg Hbf on platform 4
- train IC 2434 starts at 06:59 on platform 4
- we arrive at 07:47 on platform 6 in Braunschweig Hbf
- then we go to platform 3a and take train RB 34265 at 07:57
- we arrive at 08:07 on platform 2 in Wolfenbüttel Hbf
- walking to the hotel (700m)

1.3 Journey at 27th of October back to Magdeburg

- walking to the train station Wolfenbüttel Hbf from our Hotel
- train RB 34296 starts at 13:36 on platform 1
- we arrive at 13:45 on platform 4 in Braunschweig Hbf
- then we go to platform 7 and take train IC 2039 at 14:10 to Magdeburg Hbf
- we arrive at 14:56 on platform 13 in Magdeburg Hbf

2 Timetable

2.1 Thursday

09:00	Opening		
S1			Chair: Sara Bucci
09:05	Jannik	Voges	Tracking of Normal and Tangential Directions in Closed Phase Field Cracks
09:25	Johanna	Eisenträger	Implementation of a Phase Mixture Model for Rate-Dependent Inelasticity of Tempered Martensitic Steels
09:45	Joachim	Nordmann	Visualisation of Elastic Anisotropy - Theory and Implementation
10:05	Coffee Break		
S2			Chair: Johanna Eisenträger
10:25	Sara	Bucci	Investigations on the Elastic-Plastic Behaviour of Regular Honeycomb Structures
10:55	Zhengkun	Liu	Phase-Field Modelling of Crack Propagation in Hybrid Materials: A First Introduction
11:15	Sebastian	Dieck	Reversed Austenite for Enhancing Ductility of Martensitic Stainless Steel
11:35	Olha	Popovych	Creep of Mo-Si-B Alloys: Creep Properties of the Mo_3Si and Mo_5SiB_2 Phases
11:55	Lunch		
S3			Chair: Janett Schmelzer
13:00	Evgeniya	Roydeva	Preparation of SAPO 34 and Zeolite 13X Coatings on Alumina Beads by a Fluidized Bed Procedure
13:20	Yasaman	Jabbari	Kinetics of Spontaneous Liquid Imbibition in Porous Media studied by Pore Network Simulations and Continuum Scale Models
13:40	Abhinandan Kumar	Singh	Morphology of Spray Fluidized Bed Agglomerates
14:00	Coffee Break		
S4			Chair: Sebastian Dieck
Presentation of Posters (max. 3min each)			
	Marcus	Aßmus	Eigenfrequencies of Photovoltaic Composite Structures
	Xiang	Lu	One-Equation Continuum Model Parameters for Different Pore Structures obtained from Pore Network Drying Simulations
	Resam	Makvandi	Numerical Simulation of Eutectic Solidification
	Christoph	Matern	Numerical Solutions for a Weakly Hyperbolic Two-Phase Flow Model
	Ahu	Öncü	3D-Analysis of Fine-Grained Metallic Thin Films

	Martin	Weber	Distances of Stiffness Tetrads to the Symmetry Groups of Elasticity
	Nicole	Vorhauer	Temperature Affected Moisture Migration in Porous Media - a Pore Network Study
14:20	Poster Session with Coffee and Cake		
15:20	Board Meeting		
16:20	City Tour		
18:00	Dinner at BAYRISCHER HOF		

2.2 Friday

S5			Chair: Gaurav Abhay Kulkarni
09:00	Janett	Schmelzer	Formation of Silicides in Mechanically Alloyed V-Si Solid Solution Powders
09:20	Sebastian	Hütter	Generation of Dislocation Networks for Use in Molecular Dynamics Simulations
09:40	Abbas	Kamranian Marnan	Influence of adding Cohesive Ultra-Fine Powders on Particulate Fluidization of Fine Particle Beds
10:00	Coffee Break		
S6			Chair: Abbas Kamranian Marnan
10:20	Omid	Kazemi	Prediction of Phase Distribution Pattern in Phase Field Simulations on Mo_5SiB_2 -Primary Areas in near Eutectic Mo-Si-B Alloy
10:40	Seyed Ali	Hosseini	Multi-Species Flow Modeling with the Lattice Boltzmann Method
11:00	Gaurav Abhay	Kulkarni	Heat Transfer during the Startup Phase of D.C. Casting
11:20	Hazem	Yaghi	A Diffuse Interface Multi-Phase Mixture Model with Chemical Reactions
11:40	Closing Remarks		
11:45	Student Meeting and Elections		
12:00	Lunch		
13:00	Departure		

Please adhere to your specified presentation time, i.e. 15 minutes of speaking time for presentations and maximum 3 minutes of speaking time for posters. Talks exceeding this limit will be canceled by the chairman or chairwoman, respectively.

3 Social Programme

After finishing the workshop on Thursday we will go for a city tour through *Wolfenbüttel*. The tour will start at 16:20 before our Hotel. You can choose between two tours. One is in English and the other in German. During this tour we will get a little impression of LESSINGtown *Wolfenbüttel*, see some famous buildings (e.g. GEORG-AUGUST-Library) and get to know something about the history of this town.

4 Dinner

The city tour ends right in front of the restaurant BAYRISCHER HOF where our dinner takes place at 18:00, approximately. Please remember which dish you have chosen.

The address is:

Bayrischer Hof
Brauergildenstrasse 5
38300 Wolfenbüttel

+49(0) 5331-5078

<https://www.google.de/maps/dir/52.1625468,10.5384972/52.1589266,10.5402139/@52.1606683,10.5372063,17z/data=!3m1!4b1!4m2!4m1!3e2>

Please check the website of the research training group for updated versions of the programme:
www.grk1554.ovgu.de

5 List of Participants

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