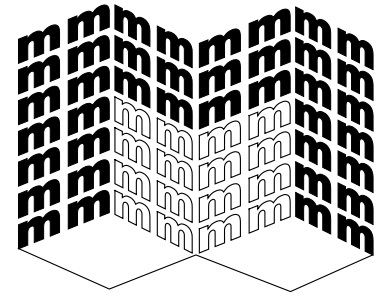


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# Micro-Macro-Interactions

in Structured Media and Particle Systems

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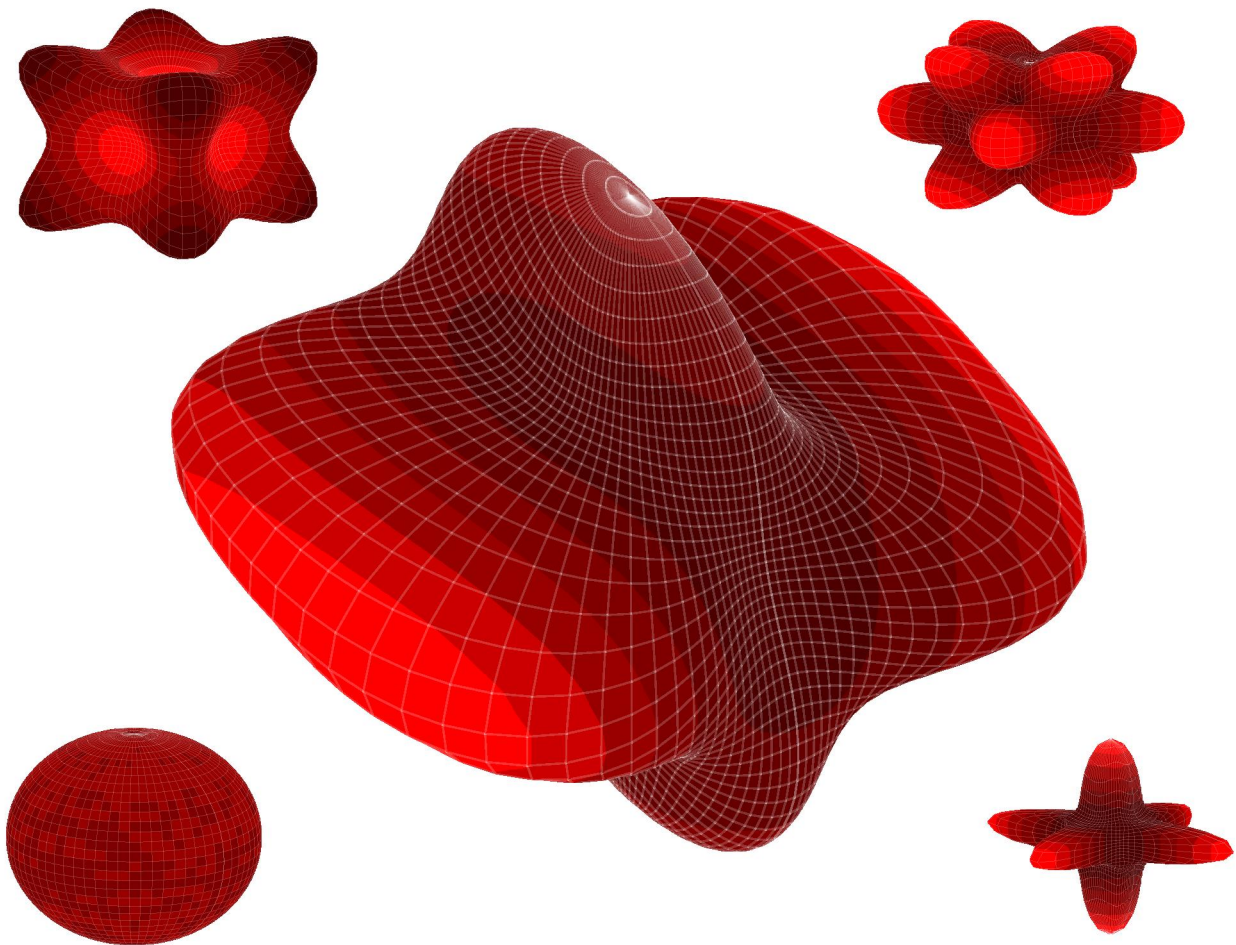
Programme

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Tangermünde

Summer Workshop 2018

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# 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 Summer Workshop 2018 of the DFG research training group *Micro-Macro-Interactions in Structured Media and Particle Systems*, which will take place at the hotel *Schwarzer Adler* in *Tangermünde* from May 24<sup>th</sup> to 25<sup>th</sup>, 2018.

Magdeburg, May 16<sup>th</sup>, 2018

Sebastian Dieck & Joachim Nordmann

# Contents

<b>1</b>	<b>Location and Travel Guide</b>	<b>2</b>
1.1	Hotel . . . . .	2
1.2	Journey by train . . . . .	2
1.2.1	Journey at 24 <sup>th</sup> of May to Tangermünde . . . . .	2
1.2.2	Journey at 25 <sup>th</sup> of May back to Magdeburg . . . . .	2
1.3	Journey by bike . . . . .	2
1.3.1	Journey at 23 <sup>rd</sup> of May to Tangermünde . . . . .	2
1.3.2	Journey at 25 <sup>th</sup> of May back to Magdeburg . . . . .	3
1.4	Arrival on Wednesday . . . . .	3
<b>2</b>	<b>Timetable</b>	<b>4</b>
2.1	Thursday . . . . .	5
2.2	Friday . . . . .	6
<b>3</b>	<b>Social Programme</b>	<b>6</b>
<b>4</b>	<b>Dinner</b>	<b>7</b>
<b>5</b>	<b>List of Participants</b>	<b>7</b>
5.1	Professors . . . . .	8
5.2	Post-Docs . . . . .	8
5.3	Students . . . . .	8

# 1 Location and Travel Guide

## 1.1 Hotel

**Hotel Schwarzer Adler**  
**Lange Straße 52**  
**39590 Tangermünde**

+49 (0) 39322-960  
rezeption@adler-tgm.de  
[www.adler-tgm.de](http://www.adler-tgm.de)

## 1.2 Journey by train

### 1.2.1 Journey at 24<sup>th</sup> of May to Tangermünde

- we meet at 07:55 at train station Magdeburg Hbf on platform 7
- train S1 starts at 08:08 on platform 7
- we arrive at 08:56 on platform 3 in Stendal
- then we go to platform 8 and take train RB 26813 to Tangermünde
- we arrive at 09:18 in Tangermünde
- short walk to the hotel (750 m / 9 min)

### 1.2.2 Journey at 25<sup>th</sup> of May back to Magdeburg

- walk to train station Tangermünde
- train RB 26820 starts at 13:24
- we arrive at 13:38 on platform 8 in Stendal
- go to platform 5 and take train S1 to Magdeburg Hbf
- we arrive at 14:43 on platform 7 in Magdeburg Hbf

## 1.3 Journey by bike

### 1.3.1 Journey at 23<sup>rd</sup> of May to Tangermünde

- we meet at 12:00 in front of building 04
- our journey goes along ELBERADWEG  
[www.radkompass.de/D-Route/elbe-radweg-etappe-8.html](http://www.radkompass.de/D-Route/elbe-radweg-etappe-8.html)
- at 16:00 we should be in Rogätz to make a little break

- then we move on and should be at 19:00 at hotel Schwarzer Adler in Tangermünde

Keep in mind that we do a bike tour and it could be very hot or start to rain during our ride. Therefore, put a rain jacket in your luggage and a full bottle of water. If someone is exhausted after half of the journey it is possible to go on by train from Rogätz (35km away from Magdeburg).

### 1.3.2 Journey at 25<sup>th</sup> of May back to Magdeburg

- we start at 13:00 at hotel *Schwarzer Adler* in Tangermünde
- we ride the same way back
- at 15:00 we should be in Rogätz again for a little break
- at 18:00 we should be at the university

## 1.4 Arrival on Wednesday

- Manja **Krüger**
- Konstantin **Naumenko**
- Franziska **Scheffler**
- Gerald **Warnecke**
- Dana **Zöllner**
- Sebastian **Dieck**
- Joachim **Nordmann**
- Madeleine **Ruhbaum**
- Marcus **Aßmus**
- Behnaz **Bagheri**
- Julia **Becker**
- Johanna **Eisenträger**
- Christoph **Matern**
- Ahu **Öncü**



# 2 Timetable

## 2.1 Thursday

09:35	<b>Opening</b>		
<b>S1</b>		<b>Chair: Sebastian Dieck</b>	
09:40	Resam	Makvandi	Crack Propagation and Gradient Elasticity: A Numerical Investigation
10:00	Joachim	Nordmann	A Damage Mechanics based Cohesive Zone Model
10:20	Jannik	Voges	An Approach for Modeling the Behavior of Phase Field Cracks
10:40	<b>Coffee Break</b>		
<b>S2</b>		<b>Chair: Joachim Nordmann</b>	
10:50	Martin	Weber	Material Plasticity using the Example of Fibre-Reinforced Materials
11:10	Behnaz	Bagheri	Delamination Modelling of Different Self-Adhesive Polyethylene Films with Traction-Separation-Law
11:30	Xiang	Lu	Influence of pore structure on continuum model parameters investigated by pore network drying simulation
11:50	Reihaneh	Pashmineh	SPATIAL MORPHOLOGY OF REAL STRUCTURE AND SIMPLIFIED MODEL OF IRREGULAR AGGLOMERATES
12:10	<b>Lunch</b>		
<b>S3</b>		<b>Chair: Martin Weber</b>	
13:00	Sebastian	Hütter	Prediction of thermodynamic properties metallic materials from first-principles calculations
13:20	Sebastian	Dieck	On SD effect in martensitic stainless steel under Q&P heat treatment condition
<b>S4</b>		<b>Chair: Martin Weber</b>	
<b>Presentation of Posters</b> (max. 3min each)			
	Abbas	Kamranian Mar-nan	Influence of adding ultra-fine particles on re-fluidization of a fine particle bed after applying a compression process
	Seyed Ali	Hosseini	Development of a weakly compressible thermal multi-species lattice BOLTZMANN model
	Johanna	Eisenträger	Thermo-Mechanical Analysis of a Power Plant Component
	Abhinandan Kumar	Singh	Stochastic model to simulate the spray fluidized bed agglomeration
	Yasaman	Jabbari	Determination of moisture transport coefficient for spontaneous imbibition

	Janett	Schmelzer	Formation of silicides in mechanically alloyed V-Si solid solution powders
	Omid	Kazemi	Phase field simulation of microstructure and phase distribution evaluation in Mo rich area of Mo-Si-B alloys
	Zhengkun	Liu	Multi-Phase Field Approach for Fracture in Heterogeneous Brittle-Ductile Materials
	Julia	Becker	Microstructures and mechanical properties of multiphase Mo-5X (X = V, Ti, Zr) alloys
14:00	<b>Poster Session with Coffee and Cake</b>		
15:00	<b>Board Meeting</b>		
16:00	<b>City Tour</b>		
18:00	<b>Dinner at ALTE BRAUEREI</b>		

## 2.2 Friday

<b>S5</b>			<b>Chair: Janett Schmelzer</b>
09:00	Ahu	Öncü	Experimental and computational analysis of grain growth in ultrafine-grained thin films
09:20	Olha	Popovych	Creep of Mo-Si-B alloys
09:40	Nicole	Vorhauer	Experimental study of the intermittent microwave drying of wet clay
10:00	<b>Coffee Break</b>		
<b>S6</b>			<b>Chair: Jannik Voges</b>
10:20	Yuan	Fang	Influence of Surface Roughness on quenching hot metals
10:40	Gaurav	Kulkarni	Influence of water ejection on thermal stresses in DC casting of Aluminium Alloys
11:00	Hazem	Yaghi	A diffuse interface multi-phase mixture model with chemical reactions
11:20	Christoph	Matern	The RIEMANN problem for a weakly hyperbolic two-phase flow model
11:40	<b>Closing Remarks</b>		
11:45	<b>Student Meeting</b>		
11:50	<b>Lunch</b>		
13:00	<b>Departure</b>		

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 Tangermünde. The tour will start at 16:00 in front of 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 Hansestadt Tangermünde and learn something about the history of this town.

### 4 Dinner

After the city tour we go to the restaurant ALTE BRAUEREI where our dinner takes place at 18:00, approximately. Please remember which dish you have chosen.

The address is:

**Alte Brauerei**  
**Lange Straße 34**  
**39590 Tangermünde**

+49 (0) 39322-44145

[www.hotel-alte-brauerei.de/tangermuende/speisen-getraenke.htm](http://www.hotel-alte-brauerei.de/tangermuende/speisen-getraenke.htm)

Please check the website of the research training group for updated versions of the programme:  
[www.grk1554.ovgu.de](http://www.grk1554.ovgu.de)



# 5 List of Participants

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