

# CONTACT

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## Announcement:

**March 12 and 13, 2020**

2nd Visitors Workshop, Schloss Atzelsberg  
Online registration:



[www.frascal.research.fau.eu/  
events-2/events/2nd-visitors-  
workshop/](http://www.frascal.research.fau.eu/events-2/events/2nd-visitors-workshop/)

Research Training Group  
GRK 2423

# Fracture across Scales

## 3rd RTG SEMINAR

Thursday, February 20, 2020

Seminar Room 00.044, LTM  
Egerlandstraße 5, 91058 Erlangen



**FRASCAL**  
  
**GRK 2423**

# PROGRAMME

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## 09:15 - 09:30 WELCOME & INTRODUCTION

Prof. Paul Steinmann (spokesperson)

## 09:30 - 09:50 Paras Kumar (P8)

*Modelling Size Effect in Polymer Nano-Composites*

## 09:50 - 10:10 Maximilian Ries (P6)

*Deriving Interphase Properties of Polymer Nanocomposites by Coupled FE-MD Simulations*

## 10:10 - 10:30 Elmira Birang (P10)

*Uncertainty of Energy Release Calculation in Molecular Mechanics; Can Configurational Forces Resolve It?*

## 10:30 - 10:50 COFFEE BREAK

## 10:50 - 11:10 Nosaibeh Esfandiary (P7)

*Detachment Properties of Hierarchical Materials*

## 11:10 - 11:30 Samaneh Esfandiary (P7)

*Robustness and Failure of Brain Activity Patterns*

## 11:30 - 11:50 Wuyang Zhao (P6)

*A Viscoelastic-Viscoplastic Constitutive Model for Polymers Based on Molecular Dynamics Simulations under Uniaxial Deformation*

# PROGRAMME

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## 11:50 - 13:00 JOINT LUNCH

## 13:00 - 13:20 Dhananjay Phansalkar (P9)

*On the Demanding Relation Between  $\varepsilon$  and  $h$  in a Numerical Phase-Field Model*

## 13:20 - 13:40 Christof Bauer (P6)

*Investigating the Relation of Particle Movements and the Continuum Displacement Field of Thermoplastics*

## 13:40 - 14:00 Ahmad Hosseini (P5)

*A Beam Network Model for Strength Optimization of Fibrous Materials*

## 14:00 - 14:20 COFFEE BREAK

## 14:20 - 14:40 Jonas Ritter (P5)

*Designing a Confined Uniaxial Compression Test for Porous Materials within a Peridynamic Framework*

## 14:40 - 15:00 Ali Mauricio Velasco Sabogal (P4)

*Dynamics and Fractures of Real-Shaped DEM grains*