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Research Training Group
GRK 2423

Fracture across Scales

1st RTG SEMINAR

Thursday, June 27, 2019

Seminar Room 2.049, RRZE
Martensstraße 1, 91058 Erlangen



FRASCAL

GRK 2423

PROGRAMME

9:15 – 9:30 **WELCOME & INTRODUCTION**

9:30 – 9:50 **Tobias Müller (P1)**

Chemistry at the crack tip: First MD simulations

9:50 – 10:10 **Tarakeshwar Lakshmipathy (P2)**

Influence of crack tip radius on fracture behaviour: An atomistic study

10:10 – 10:30 **Julian Konrad (P3)**

Preparation of polymer composites for MD-simulation

10:30 – 10:50 **COFFEE BREAK**

10:50 – 11:10 **Ali Mauricio Velasco Sabogal (P4)**

Multisphere fitting algorithm to represent arbitrary shaped grains

11:10 – 11:30 **Jonas Ritter (P5)**

Identification of a suitable framework for the micromechanical simulation of compressive failure in highly porous materials

11:30 – 11:50 **Christof Bauer (P6)**

Adaptivity of the Capriccio-Method: Particle-based regions moving within a continuum

11:50 – 13:30 **BOARD OF PAs /
PHOTO SESSION /
JOINT LUNCH**

PROGRAMME

13:30 – 13:50 **Nosaibeh Esfandiary (P7)**

Modelling fracture in materials with hierarchical microstructures

13:50 – 14:10 **Paras Kumar (P8)**

Implementing viscoelasticity with deal.ii - Software development aspects

14:10 – 14:30 **Dhananjay Phansalkar (P9)**

Analytical and numerical solutions of 1D quasi-static phase field problem

14:30 – 14:50 **COFFEE BREAK**

14:50 – 15:10 **Elmira Birang (P10)**

On configurational forces in molecular statics

15:10 – 15:30 **Sukhminder Singh (P11)**

Uniqueness challenge in the solution of quasi-static crack problem

15:30 – 15:50 **Christian Wick (P12)**

Modelling chemical change in epoxy resins: Model chemistries and curing reactions



Team of GRK 2423 FRASCAL

Image: G. Pöhlein