CONTACT

SPOKESPERSON GRK 2423 FRASCAL

Prof. Dr. – Ing. Paul Steinmann
Institute of Applied Mechanics
Dept. of Mechanical Engineering
Egerlandstraße 5, 91058 Erlangen
Phone: +49 9131 85 28502
paul.steinmann@fau.de

CO-SPOKESPERSON

Prof. Dr. Michael Stingl
Chair of Applied Mathematics (Continuous Optimization)
Dept. of Mathematics
Cauerstraße 11, 91058 Erlangen
Phone: +49 9131 85 67141
michael.stingl@fau.de

COORDINATION

Dr. rer. nat. Anna Donhauser
FAU Competence Center Scientific Computing
Martensstraße 5a, 91058 Erlangen
Phone: +49 9131 85 20104
anna.don.donhauser@fau.de

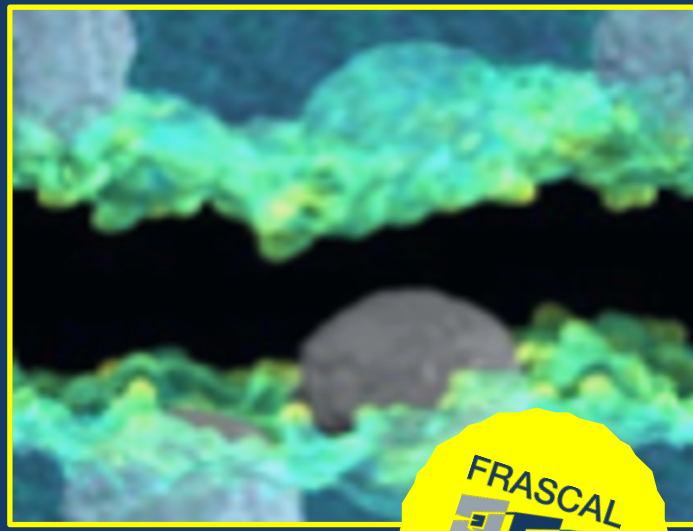
ADMINISTRATION

Nicole Güthlein
FAU Competence Center Scientific Computing
Martensstraße 5a, 91058 Erlangen
Phone: +49 9131 85 20780
nicole.guethlein@fau.de

FAU Friedrich-Alexander-Universität
Competence Center
Scientific Computing | CSC

12th FRASCAL SEMINAR

October 24th 2025



LTM Seminar Room
Egerlandstraße 5 | 91058 Erlangen
www.frascal.fau.eu

FRASCAL GRK 2423

PROGRAM

10:00 – 10:10 **Welcome & Introduction**
Michael Stingl

10:10 – 10:40 **Javad Karimi (P13)**
Two-stage approach to rock fracture mechanics: ELLE image segmentation and discrete element modeling of Brazilian tensile tests

10:45 – 11:15 **Bakul Mathur (P13)**
Simulating deformation bands evolution in geomaterials using DEM

11:20 – 11:50 **Aditi Sharma (P10)**
Investigating neural network approaches for accelerating continuum-kinematics-inspired peridynamics simulations

11:50 – 12:05 **Break**

12:05 – 12:35 **Anna Titlbach (aP10)**
The flexoelectric effect in bone - a numerical study of its impact on density increase at microcracks

12:40 – 13:10 **Max Zetzmann (P11)**
On the convergence of the discretization of the linear state-based peridynamic equations

13:10 – 14:10 **Break**

14:10 – 14:40 **Sampanna Pahi (aP12)**
Effect of the covalent network on the epoxy polymerization reaction

14:45 – 15:15 **Bariscan Arican (aP12)**
StrainDriver: A QM/MD multiscale framework for polymer fracture

15:20 – 15:50 **Azad Kirsan (P1)**
Simulation of crack propagation with a Li-O machine-learned interatomic potential

15:55 – 16:25 **Christian Ritterhoff (P1)**
Fine-Tuning and distillation of GRACE foundation models

16:25– 16:35 **Closing**
Paul Steinmann