LOCATION

Schloss Atzelsberg

Atzelsberg 1
91080 Marloffstein

Travel information

By car:
Motorway A73 from Nuremberg: Leave the A73 at exit 31 “Erlangen-Nord” in the direction of Bubenreuth. Follow the signs "Rathsberg/Atzelsberg". In Rathsberg drive straight on in the direction of Marloffstein until you see Atzelsberg Castle on the left.
Road B4 from Nuremberg: Leave the B4 at the exit “Erlangen-Ost/Tennenlohe”. At the roundabout, take the second exit and follow Kurt-Schumacher-Straße. Follow this road straight ahead. At the end of the district Sieglitzhof keep to the right and drive in the direction of Spardorf. Follow the course of the St2242 to Marloffstein. In the centre of Marloffstein turn left after the church to Atzelsberg. After 2 km you will see Atzelsberg Castle on the right.
Motorway A73 from Bamberg: Leave the A73 at exit 30 “Möhrendorf” in the direction of Bubenreuth. At the roundabout take the first exit and drive to Bubenreuth. At the end of Bubenreuth follow the road in the direction of Bräuningshof. In the centre Bräuningshof turn right in the direction of Marloffstein. Keep left at the T-junction. After 300 meters, you will see Atzelsberg Castle on the left side of the street.
There are sufficient parking spaces available.

By bus:
Direct connection bus no. 252: Take bus no. 252 (direction “Baiersdorf Am Kreuzbach”) from bus stop “Erlangen Hugenottenplatz” (very close to the railway station) to bus stop “Atzelsberg”.

CONTACT

If you want to participate in the Workshop, we kindly ask to register by **February 27, 2020** at the latest.

The online registration form can be found here:
https://www.frascal.research.fau.eu/events-2/events/2nd-visitors-workshop/

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FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG

Research Training Group
GRK 2423

Fracture across Scales

2nd VISITORS WORKSHOP

March 12-13, 2020

Schloss Atzelsberg
Atzelsberg 1, Marloffstein

Zentralinstitut SCIENTIFIC COMPUTING

FRASCAL
GRK 2423

GRK 2423 FRASCAL

The GRK 2423 FRASCAL aims to improve understanding of fracture behaviour in brittle heterogeneous materials by developing simulation methods that are able to capture the multiscale nature of failure.

With (i) its rooting in different scientific disciplines, (ii) its focus on the influence of heterogeneity on fracture behaviour at different length and time scales as well as (iii) its integration of highly specialized approaches into a "holistic" concept, the Research Training Group (RTG) addresses a truly challenging interdisciplinary topic in mechanics of materials. Although various simulation approaches describing fracture behaviour exist for particular types of materials and specific time and length scales, an integrated and all-encompassing approach that is able to capture fracture processes in different – and in particular heterogeneous – materials at various length and time resolutions is still lacking. Thus, the objective of this interdisciplinary RTG consisting of experts from mechanics, materials science, mathematics, chemistry, and physics is to develop the necessary methodology to investigate the mechanisms underlying brittle fracture and how they are influenced by heterogeneity in various materials.

Within the RTG, young researchers under the supervision of experienced PAs perform cutting-edge research on challenging scientific aspects of fracture. The RTG fosters synergies in research and advanced education and is a key element in FAU's interdisciplinary research areas "New Materials and Processes" and "Modelling–Simulation–Optimization"

PROGRAMME

Thursday, March 12

14:00 - 14:15 Opening & Welcome
Prof. Paul Steinmann (spokesperson)

14:15 - 15:00 Laura De Lorenzis
ETH Zurich, Zurich, Switzerland
Fracture and fatigue modeling with phase-field approaches

15:00 - 15:45 Chris Pearce
University of Glasgow, Glasgow, Scotland
Modelling of fracture propagation in heterogeneous materials using configurational mechanics

15:45 - 17:00 Coffee Break & Poster Session

17:00 - 17:45 Franz-Josef Ulm
Massachusetts Institute of Technology, Cambridge, MA, USA
Griffith's conjecture: Fracture mechanics in the grand canonical ensemble

18:00 Dinner (exclusively for FRASCAL members and invited guests)

Poster Session:

The poster session will include a *Poster Blitz*:
Each poster is to be presented by max. 2 slides within a 1-minute-oral presentation. There will be no questions from the audience, as all discussions can take place during the poster sessions.

www.frascal.fau.eu

PROGRAMME

Friday, March 13

09:00 - 09:45 Gilles A. Francfort
Paris University 13, Paris, France
Initiation and kinking: The fracture lines of fracture

09:45 - 10:30 James Kermode
University of Warwick, Coventry, UK
Multiscale modelling of materials chemomechanics: Brittle fracture, dislocation glide and beyond

10:30 - 11:45 Coffee Break & Poster Session

11:45 - 12:30 Stefano Zapperi
University of Milan, Milan, Italy
How glasses break

12:30 Concluding Remarks & Joint Lunch

Image: G. Pöhlein

Young Researcher-Team of FRASCAL

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