

## Venue

Panorama Berghotel Wettiner Höhe  
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## Autuum Retreat in Seiffen

18 - 20 September 2018



Institute for Mechanics and Fluid  
Dynamics

Applied Mechanics  
Solid Mechanics

Prof. Dipl.-Ing. Björn Kiefer, Ph.D.  
Prof. Dr. rer. nat. habil. Meinhard Kuna

**Tuesday, 18th September 2018**

- 9:45 **Arrival / Registration**
- 10:00 **Opening**
- 10:10 **Björn Kiefer**  
On the enforcement of Karush-Kuhn-Tucker inequality constraints in local and non-local settings
- 11:10 **Sergii Kozinov**  
Investigation of mechanically induced crack tip fields in ferroelectric materials
- 12:10 **Omar El-Khatib**  
Thermal influence on the crack tip fields in ferroelectrics under electro-mechanical loading
- 13:10 **Lunch**
- time for  
individual discussions and  
leisure activities  
(trail running 14:30 - 16:00)
- 16:15 **Coffee Break**
- 16:30 **Geralf Hütter**  
On the predictions of generalized homogenisation approaches for homogeneous and inhomogeneous microstructures
- 17:30 **Ngoc Anh Giang**  
Influence of effective plastic strain gradient on initiation and propagation of cleavage micro-crack in ferritic steels
- 18:30 **Mehul Lukhi**  
Micromechanical simulation of fatigue in nodular cast iron
- 19:30 **Dinner**

**Wednesday, 19th September 2018**

- 7:30 **Breakfast**
- 8:30 **Michael Budnitzki**  
A phase-field approach to the interaction of dislocations with phase boundaries
- 9:30 **Mohan Kumar Rajendran**  
Phase-field modeling of martensitic phase transformations
- 10:30 **Coffee Break**
- 10:45 **Stephan Roth**  
Some aspects of cohesive zone modeling using a phase field description
- 11:45 **Jeffy Abraham**  
Modelling the failure behaviour of high performance metallic materials during thermomechanical fatigue
- 12:45 **Lunch**
- time for  
individual discussions and  
leisure activities  
(cycling tour 13:30 - 16:00)
- 16:15 **Coffee Break**
- 16:30 **Andreas Burgold**  
Modeling of the mechanical behavior of TRIP-steel under cyclic loading
- 17:30 **Andreas Seupel**  
A gradient-enhanced damage model motivated by engineering approaches to ductile failure of steels
- 18:30 **Stefan Prüger**  
Recent advances in the constitutive modeling of rate-(in)dependent single crystals
- 19:30 **Dinner**

**Thursday, 20th September 2018**

- 7:30 **Breakfast**
- 8:30 **Martin Abendroth**  
Ball on three ball testing of silicium wafers
- 9:30 **Christoph Settgast**  
A hybrid approach to consider the elastic-plastic behaviour of open-cell ceramic foams
- 10:30 **Coffee Break**
- 10:45 **Marcel Selent**  
Determination of creep and fracture properties of modern high-temperature materials using small scale specimens
- 11:45 **Henry Zielke**  
Crack propagation in chevron-notched specimens
- 12:45 **Lunch**
- 13:45 **Jarno Hein**  
Using the small punch test for the characterization of SMAs
- 14:45 **Meinhard Kuna**  
Micromechanical modeling of fracture in metallic materials
- 15:45 **Closing**
- 16:00 **Departure**