

Program

Seminar on *Fracture, FEM, Fatigue*
February 9. – 10. 2026, Room 210, Seminar Building



Day 1	
10:15 – 10:30	Arrival and Welcoming
10:30 – 11:10	Vladislav Mantič: <i>Predicting crack onset and propagation by minimising the total energy with a strength condition</i>
11:10 – 11:30	Carsten Wickmann: <i>A Reproducible Machine Learning Framework for Tabular Materials Data with Applications in VHCF-Regime</i>
11:30 – 11:40	Coffee Break
11:40 – 12:00	Matti Christmann: <i>CT-Scan-Based Phase-Field Fracture of Particle Bed 3D Printed Concrete Parts</i>
12:00 – 12:20	Hossein Saberi: <i>Multilevel Mesh Adaptivity in Finite Element Phase-Field Simulations of Dynamic Brittle Fracture</i>
12:20 – 12:40	Luigi Greco: <i>Phase-field brittle fracture simulation for real ductile experiments</i>
12:40 – 13:40	Lunch Break
13:40 – 14:10	Laboratory Tour
14:10 – 14:30	Sophia Poeppel: <i>Numerical crack propagation investigations on a VHCF sample with artificial defect</i>
14:30 – 14:50	Lea Rieß: <i>Investigations into fatigue in the VHCF range of ship propeller materials under the influence of seawater</i>
14:50 – 15:10	Arne Schirmer: <i>Bistable laminates with stiffeners: loss of bistability and stiffener debonding</i>
15:10 – 15:30	Coffee Break
15:30 – 16:10	Michał K. Budzik: <i>Designing composite fracture metamaterials</i>
19:00	Dinner
Day 2	
10:00 – 10:20	Florian Rheinschmidt: <i>A model for mode partitioning: Identifying the mixed-mode fracture toughness for weak snow layers</i>
10:20 – 10:40	Naveen Kanna: <i>Influence of subcycles and mixed-mode loading on fatigue crack propagation in turbine materials</i>
10:40 – 10:50	Coffee Break
10:50 – 11:10	Maksim Ignatev: <i>Predicting IGBT Module TMF Life with a Unified Creep–Plasticity Damage Model for Solder</i>
11:10 – 11:30	Mathis Hach: <i>Anticrack Propagation in Porous Materials: Definitions, Experiments and Models</i>
11:30 – 11:40	Coffee Break
11:40 – 12:20	Andreas Ricoeur: <i>Crack growth simulations in isotropic and anisotropic solids with FEM and VEM</i>