



Institut für Biomechanik
Vorstand: Universitätsprofessor
Dipl.-Ing. Dr.techn. Gerhard A. Holzapfel

Univ.-Prof. Dipl.-Ing. Dr.techn.
Gerhard A. Holzapfel
Technische Universität Graz
Stremayrgasse 16/II
A-8010 Graz

E-mail: holzapel@TUGraz.at
Tel.: ++43 316 873 35500
Fax: ++43 316 873 35502
URL www.biomech.tugraz.at

Invitation to a Lecture on

Virtual Element Formulation for Phase-Field Modeling of Ductile Fracture

Prof. Dr.-Ing. habil. Dr. h.c. mult. Dr.-Ing. E.h. **Peter Wriggers**
Institut für Kontinuumsmechanik, Leibniz Universität Hannover

An efficient low order virtual element method (VEM) the phase field modeling of ductile fracture is outlined in this lecture. The recently developed VEM is a competitive discretization scheme for meshes with highly irregular shaped elements. Also the phase-field approach is a powerful technique to simulate complex crack phenomena in multi-physical environments. The formulation in this contribution is based on a minimization of a pseudo-potential density functional for the coupled problem undergoing large strains. A main aspect of this formulation is the extension towards VEM due to its flexibility in dealing with complex shapes and arbitrary number of nodes.

Date: Thursday, November 22, 2018, 17:00h s.t.

Place: Stremayrgasse 16/I, Room BMT01038