



Vortragsankündigung

Referent:	DOROTHEE KNEES WIAS Berlin
Thema:	CRACK PROPAGATION IN POLYCONVEX MATERIALS
Ort:	Ruhr-Universität Bochum Raum IA 3/21
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Inhalt:

In this lecture we discuss a model for crack evolution in nonlinear elastic materials. The basis of our model is the energetic Griffith criterion. Assuming that the crack path is known, we develop a quasi-static, rate independent model to describe the motion of the crack tip. Since it is intrinsic to such type of models that the evolution might be discontinuous, the major task is to formulate suitable jump conditions for the discontinuities. We discuss some properties of the energy release rate for polyconvex materials and formulate an existence result for our model. Finally, we discuss an example to illustrate the behavior of the model.

This is joint work with Chiara Zanini (University of Udine) and Alexander Mielke (WIAS Berlin).

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