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DK Seminar

Jun 21, 2017, 14:15 - 15:45
University of Vienna,
Oskar-Morgenstern-Platz 1, HR 2

David Melching

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Damage in nonlinear elastoplasticity at finite strains

We are interested in the evolution of damage in a nonlinearly elastoplastic material. These kind of evolutions can be described in the setting of rate-independent models which involve a state space \mathcal{Q} , an energy functional \mathcal{E} and a dissipation potential \mathcal{R} . The underlying partial differential inclusion which a solution should satisfy is doubly nonlinear and nonsmooth. We reformulate the problem to introduce a weak notion of solutions, so called energetic solutions, and show existence of a solution.