ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

9. Ordinary Differential Equations and Dynamical Systems

1991 MS Classification: 34A60
Brokate, Martin, University of Kiel, Germany
On a rate independent variational inequality
We consider an ODE system coupled to a nonsmooth nonlinearity in the form of an evolution variational inequality or, equivalently, a sweeping process or a hysteresis operator. We present results concerning existence, uniqueness and asymptotic behaviour. We also discuss the connection to elastoplastic stress-strain laws of nonlinear kinematic hardening type. Most of these results is joint work with Pavel Krejčí and Alexei Pokrovskiĭ.
Reference: M. Brokate, Elastoplastic constitutive laws of nonlinear kinematic hardening type, in: Functional analysis with current applications in science, technology and industry, Pitman Research Notes in Mathematics Series 377, 1998, 238 – 272.