



## Einladung

Im Rahmen des Schwerpunktskolloquiums „Analysis und Numerik“ hält

**Herr Prof. Dr. Vladimír Janovský**  
(Charles University in Prague )

am **Freitag , dem 23. Mai 2014**, einen Vortrag zum Thema:

### On parameter dependent static contact problems

Der Vortrag findet um **13:30 Uhr** in Raum **E 403** statt.

Alle Interessenten sind herzlich eingeladen.

Andrea Barjasic

Beauftragte für das Kolloquium

**Abstract:** Let us consider the static contact problem with Coulomb friction on two planar domains assuming a standard finite element approximation. Under generic assumptions the problem has always a solution.

The aim is to construct examples of *non-unique* solutions. We exploit the *continuation* with respect to a given parameter. Changes of the parameter of the problem correspond to solution changes. The resulting *solution path* is continuous, piecewise smooth. It consists of oriented smooth branches connected by transition points. The particular transition points called *folds* are responsible for the emergence of non-unique solutions.

We developed a) a predictor-corrector algorithm to follow oriented smooth branches, b) branching and orientation indicators to detect transition points and the folds, in particular. The techniques incorporate semi-smooth Newton iterations and inactive/active set strategy on the contact zone.