Mathematisches Institut
der Universität Bayreuth

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Prof. Dr. A. Schiela

VORTRAGSANKÜNDIGUNG

Im Rahmen unseres gemeinsamen Oberseminars

„Numerische Mathematik, Optimierung und Dynamische Systeme"

spricht

Herr **Dr. Jiri Outrata**
Institute of Information Theory and Automation (UTIA),
Academy of Sciences of the Czech Republic (ASCR), Prague, Czech Republic

am Donnerstag, 24.11.2022, 10 Uhr s.t.

über das Thema

**"On the application of the SCD semismooth* Newton method
to variational inequalities of the second kind"**

Abstract:

The first part of the lecture deals with a description of the SCD (subspace containing derivative) mappings and the SCD semismooth Newton method for the solution of general inclusions. This method is then applied to a class of variational inequalities of the second kind. As a result, one obtains an implementable algorithm exhibiting a locally superlinear convergence. Finally we demonstrate the efficiency of a globalized version of this method via a Cournot-Nash equilibrium in which the objectives of the players (firms) are nonsmooth due to the presence of the so-called cost of change. The problem is modeled as a variational inequality of the second kind and, to test the performance of the applied method, one admits really large numbers of players and produced commodities.*

Joint work with: Helmut Gfrerer and Jan Valdman.

Das Oberseminar findet im S 25, Gebäude GEO II statt.

gez. Lars Grüne