

# VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

*Zeit:* Donnerstag, 24. März 2011, 17:30 Uhr

*Ort:* Raum 111, Gebäude 20.13

*Es spricht:* Dr. Vladimir Shikhman, RWTH Aachen

*Zum Thema:* **Bilevel Optimization: on the Structure of the Feasible Set**

*Abstract:* We consider bilevel optimization from the optimistic point of view. Let the pair  $(x, y)$  denote the variables. The main difficulty in studying such problems lies in the fact that the lower level contains a global constraint. In fact, a point  $(x, y)$  is feasible if  $y$  solves a parametric optimization problem  $L(x)$ . We restrict ourselves to the special case that the variable  $x$  is one-dimensional. We describe the generic structure of the feasible set  $M$ . Moreover, we discuss local reductions of the bilevel problem as well as corresponding optimality criteria. Finally, we point out typical problems that appear when trying to extend the ideas to higher dimensional  $x$ -dimensions. This will clarify the high intrinsic complexity of the general generic structure of the feasible set  $M$  and corresponding optimality conditions for the bilevel problem  $U$ .

**Die Vorträge zum Operations Research wenden sich an alle Interessierten!**

Ab 17:00 Uhr ist am Institut für Operations Research (Gebäude 20.13, Raum 104) Gelegenheit zu einem Gespräch mit dem Referenten bei einer Tasse Kaffee gegeben.

Bei Rückfragen wenden Sie sich bitte an:

Prof. Dr. Oliver Stein, Institut für Operations Research.