VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

Zeit: Donnerstag, 16. April 2015, 17:30 Uhr

Ort: Raum 111, Gebäude 20.13

Es spricht: Dr. Axel Dreves, Universität der Bundeswehr München

Zum Thema: **Finding all or selecting specific generalized Nash equilibria**

Abstract: In this talk we consider generalized Nash equilibrium problems, which are non-cooperative games, where each players' cost function and also his possible strategies depend on the other players' decision. These problems typically have no unique solution, in particular in the presence of common constraints for all players.

One way to solve these problems is to compute all generalized Nash equilibria, or as many as possible. For a subclass (linear/ quadratic problems with single decision variable) we develop an algorithm that is able to compute the entire solution set as a finite union of polyhedral sets using sign conditions for the derivatives of the cost and constraint functions.

A second approach is to compute only solutions with specific properties. Here we discuss a new concept that models the process of finding a compromise between the players by a tracing procedure. This procedure leads to generalized Nash equilibria and we will see conditions guaranteeing a unique limit and an algorithm that can be shown to converge to this solution.

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.