Universität Karlsruhe (TH)
Fakultät für Wirtschaftswissenschaften

Karlsruhe Institute of Technology

VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

Zeit:	Donnerstag, 13. Dezember 2012, 17:30 Uhr
Ort:	Raum 109, Gebäude 20.13
Es spricht:	Tim Schulze, MSc, Universität Edinburgh
Zum Thema:	**Solving Stochastic Unit Commitment by Column Generation**

Abstract: In recent years the expansion of energy supplies from volatile renewable sources such as wind has triggered an increased interest in stochastic optimization models for generation unit commitment. Several studies have modelled the problem as a mixed-integer stochastic (piecewise linear or convex quadratic) multi-stage problem. Solving this problem directly is computationally intractable for large instances and many alternative approaches have been proposed. However, few of them exploit the structure of the multi-stage formulation. In this talk we outline how a Dantzig-Wolfe reformulation can be used to decompose the stochastic problem by scenarios. We develop a Branch & Price framework which can handle general convex generation costs and is capable of solving stochastic unit commitment problems to optimality. Numerical results are given to illustrate that convergence can be achieved within a few iterations of our method.
This is joint work with Andreas Grothey and Ken McKinnon.

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.