

VORträge zum Operations Research

Kolloquium des Instituts für Operations Research

Zeit: Dienstag, 17. Juli 2018, 14:00 Uhr

Ort: Raum 320, Gebäude 09.21

Es spricht: Dr. Simone Sagratella, Sapienza University of Rome, Italy

Zum Thema: **Numerically tractable optimistic bilevel problems**

Abstract: We consider a class of optimistic bilevel problems. Specifically, we address bilevel problems in which the lower level objective function is fully convex. We show that this nontrivial class of mathematical programs is sufficiently broad to encompass significant real-world applications and proves to be numerically tractable. From this respect, we establish that the critical points for a relaxation of the original problem can be obtained addressing a suitable generalized Nash equilibrium problem. The latter game is proven to be convex and with a nonempty solution set. Leveraging this correspondence, we provide a provably convergent, easily implementable scheme to calculate critical points of the relaxed bilevel program. As witnessed by some numerical experiments on an application in economics, this algorithm turns out to be numerically viable also for big dimensional problems.

This is joint work with Lorenzo Lampariello, Roma Tre University.

Die Vorträge zum Operations Research wenden sich an alle Interessierten!

Bei Rückfragen wenden Sie sich bitte an:
Prof. Dr. Oliver Stein, Institut für Operations Research.