ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Invitation to a Guest Lecture

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"Degeneracy in Semidefinite Programming"

N.0.15. Thursday, 17 November 2022 10:00 a.m.

Abstract

Conic linear programs can be classified in four mutually exclusive feasibility types: strictly-feasible, weakly-feasible, weakly-infeasible, and strongly-infeasible. On the practical side, there are implementations using interior point methods (IPMs) or Newton-type algorithms that can often provide the floating-point approximation of a solution but the lack of feasible interior points can cause theoretical and numerical difficulties. Some IPMs are able to obtain a certificate of infeasibility if the problem is strongly infeasible, but the situation is less clear in the presence of so-called weak feasibility/infeasibility. In this talk, we discuss some aspects of degenerate SDPs and some approaches to tackle them.

Daniel Brosch and the Department of Mathematics look forward to seeing you at the talk!