Literature

The standard book on convex analysis is [12]. A more recent work is [8].

A comprehensive book on the theory, applications, and methods of convex optimization is [4]. It covers a good fraction of the course material. Another book on this topic is [2].

The theory of interior-point methods with self-concordant barriers in conic optimization is laid out in the theoretical book [11]. This includes also the theory of self-concordant functions. The monograph [10] covers a much broader spectrum of convex optimization methods, in particular first-order methods. An introduction into symmetric cones and Jordan algebras can be found in [6].

Convex optimization with uncertain data and robust counterparts of conic programs can be looked up in [1].

For further information on the MaxCut problem see [5]. Here one can find also the description of an application of MaxCut to finding ground states of spin glasses. The classical article describing the semi-definite relaxation of the MaxCut problem and the randomized procedure to recover a sub-optimal cut is [7].

Sums of squares and moment relaxations of polynomial optimization problems are described in [3] and [9], respectively. The first of these books is a collection and has a bias towards algebraic geometry.

A very recent account on first order methods in convex optimization is [10].

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