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Title

Robust Optimization for Network Design and Energy Supply Problems

Abstract

In these lectures, we will learn about dealing with optimization problems under uncertainty, with applications in communication and energy networks. Uncertain input data makes it difficult to find the (one and only) optimal solution. Instead, we define an uncertainty set and find determine solutions that are feasible for all realizations within the uncertainty set. The best so-called robust solution is chosen among these as an optimal solution. We study this concept for basic network optimization and discuss extensions for particular applications like dayahead energy supply.