On Bilevel Extensions of Network Optimization Problems

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Abstract

Bilevel optimization models capture decision-making processes that involve two (or more) independent decision-makers, namely, the leader and the follower(s), who act in a hierarchical manner. The involved decision-makers may be collaborative or conflicting. Bilevel optimization approaches has been applied in several important application domains. In general, the idea of extending single-level combinatorial optimization problems into the bilevel framework has attracted considerable research attention in past decades. In this talk we overview some of the work in the area, in particular, focusing on bilevel problems in network settings.