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Optimality conditions for generalized semi-infinite programming problems

In this talk we consider the first order optimality conditions for the class of generalized semi-infinite programming problems (GSIPs). We extend the well-known constraint qualifications for finite programming problems such as the calmness condition, the Abadie constraint qualification, the Kuhn–Tucker constraint qualification, the Zangwill constraint qualification, the Slater condition, the linear independence constraint qualification and the weak reverse convex constraint qualification to GSIPs and analyze the extent to which a corresponding Karush–Kuhn–Tucker condition depends on these extensions. Relationships among various constraint qualifications are also given.