

Constraint qualifications and approximate-KKT sequences

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Many nonlinear optimization algorithms generate sequences that seem to approximate the KKT conditions, called AKKT sequences. Under suitable constraint qualifications (CQs) it is possible to show that the limit of AKKT sequences are in fact KKT points. Many traditional CQs, like regularity and Mangasarian-Fromovitz, can play this role. Recently, more general CQs that play well with AKKT sequences have been introduced using the notion of constant rank or the weaker notion of constant positive generators (CPG). In this talk, we introduce a new constraint qualification that is equivalent to state that every limit of an AKKT sequence is a KKT point. We also show how it relates to other weak conditions like CPG, pseudonormality, and Abadie's condition.

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