

Complete Characterizations of Tilt Stability in Nonlinear Programming under Weakest Qualification Conditions

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and

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This talk is devoted to the study of tilt stability of local minimizers for classical nonlinear programs with equality and inequality constraints in finite dimensions described by twice continuously differentiable functions. The importance of tilt stability has been well recognized from both theoretical and numerical perspectives of optimization, and this area of research has drawn much attention in the literature, especially in recent years. Based on advanced techniques of variational analysis and generalized differentiation, we derive here complete pointbased second-order characterizations of tilt-stable minimizers entirely in terms of the initial program data under the new qualification conditions, which are the weakest ones for the study of tilt stability.

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