

Subspace Techniques for Nonlinear Optimization*

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Abstract

In this talk, we review some recent advances on subspace techniques used in numerical methods for nonlinear optimization. Particularly we discuss the combination of subspace techniques and trust region techniques for nonlinear optimization, both unconstrained problems and constrained problems. Subspace techniques used in direct methods for derivative-free optimization and subspace algorithms for some special non-smooth optimization problems such as L_1 minimization problem and matrix decomposition problems are also discussed.

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