

Inexact reduced gradient methods in smooth nonconvex optimization

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Abstract

The talk introduces new gradient-type methods with inexact gradient information for finding stationary points of nonconvex continuously differentiable functions on finite-dimensional spaces. A general scheme for inexact reduced gradient (IRG) methods with different stepsize selections is proposed to construct sequences of iterates with stationary accumulation points. Convergence results with convergence rates for the developed IRG methods are established under the Kurdyka-Lojasiewicz property. The conducted numerical experiments confirm the efficiency of the proposed algorithms.

References

- [1] KHANH P. D., MORDUKHOVICH B. S. & TRAN D. B., Inexact reduced gradient methods in smooth nonconvex optimization, submitted, arxiv.org/abs/2204.01806

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