

An Improved Full Nesterov-Todd Interior-Point Algorithm for Symmetric Optimization

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Abstract: In this talk, an improved complexity analysis of full Nesterov-Todd step feasible interior-point method for symmetric optimization is considered. Using several new results from Euclidean Jordan algebras and associated symmetric cones, a sharper quadratic convergence result than previously known is established, leading to a wider quadratic convergence neighborhood of the central path for the iterates in the algorithm. However, the best known iteration bound for full Nesterov-Todd step feasible interior-point methods is still achieved.