

Convergence Rate of Halpern's Iteration Method and Anchored Technique for Minimax Problems

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Abstract

Recently Lieder (2021) proved the $O(1/k)$ convergence rate of Halpern's iteration method in the Hilbert space setting with the open loop choice $1/(k + 1)$ of the anchoring parameters. In this talk I will first present a convergence result of Halpern's iteration method with at least the $O(1/k)$ rate of convergence with an adaptive choice of the anchoring parameters. I will then move on the anchored technique for iteratively solving convex-concave minimax problems. [The first part is a joint work with Songnian He.]