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On the finite convergence of a projected cutter method.


Summary: The subgradient projection iteration is a classical method for solving a convex inequality. Motivated by works of Polyak and of Crombez, we present and analyze a more general method for finding a fixed point of a cutter, provided that the fixed point set has nonempty interior. Our assumptions on the parameters are more general than existing ones. Various limiting examples and comparisons are provided.

Keywords: convex function; cutter; Fejér monotone sequence; finite convergence; quasi firmly nonexpansive mapping; subgradient projector
doi:10.1007/s10957-014-0659-7