

# On the complexity of some projective splitting methods for solving monotone inclusion problems

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In this work we continue to study the iteration complexity of the Hybrid Proximal Extragradient Projective method (HPEP) for solving monotone inclusion problems (MIP), due to Solodov and Svaiter [Numer. Funct. Anal. Optim., 22(7-8): 1013-1035, 2001]. In particular, we consider the case in which the MIP is defined by a strongly monotone operator. Also, we establish complexity bounds for some variants of the projective splitting methods recently studied by Jhonstone and Eckstein [arXiv: 1806.03920 [math. OC]]. To do so, we show that these splitting projective methods can be seen as instances of the HPEP method applied to a suitable reformulation of the initial MIP and then apply the complexity estimates derived for this later method in a previous work.