

# A PROXIMAL SPLITTING METHOD TO SOLVE SOME STATIONARY MEAN FIELD GAME SYSTEMS

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ABSTRACT. In this talk we present a proximal splitting method to solve a discretized version of a mean field game problem with local interactions, introduced by Achdou et al.. The presence of local interactions implies that, at the continuous level, the mean field game system can be formally obtained as the optimality condition of an associated variational problem. The same argument applies in the discretized version. However, since one of the term in the cost is only sub-differentiable, a suitable splitting method is used in order to obtain a globally convergent algorithm.