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

L. BRICEÑO-ARIAS, D. KALISE, AND F. J. SILVA

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. [1]. The presence of local interactions imply 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.

Keywords: Mean field games, non-smooth optimization, proximal methods.

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REFERENCES

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UNIVERSIDAD TÉCNICA FEDERICO SANTA MARÍA, DEPARTAMENTO DE MATEMÁTICA, AV. VICUÑA MACKENNA 3939, SAN JOAQUÍN, SANTIAGO, CHILE.
E-mail address: `luis.briceno@usm.cl`

RICAM, AUSTRIAN ACADEMY OF SCIENCES ALTENBERGERSTRASSE 69 A-4040 LINZ, AUSTRIA
E-mail address: `dante.kalise@oeaw.ac.at`

INSTITUT DE RECHERCHE XLIM-DMI, UMR-CNRS 7252 FACULTÉ DES SCIENCES ET TECHNIQUES UNIVERSITÉ DE LIMOGES, 87060 LIMOGES, FRANCE
E-mail address: `francisco.silva@unilim.fr`