

Numerical solving the economical problem of mean-field game

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First, the mathematical model is formulated in the frame of mean-field game theory. The model consists of two coupled partial differential parabolic equations with adjoint operators which solution minimizes some cost functional. Second, we present the discrete approximation of these equations with preserving their special properties including conjugation of discrete operators. Third, we present the iterative algorithm for solving the coupled discrete problem with successive minimization of the cost functional. Finally, we illustrate this problem by some economical problem with minimization of heating cost.