

Mean-field reflected backward stochastic differential equations

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Abstract

In this talk, we study a class of reflected backward stochastic differential equations (BSDEs) of mean-field type, where the mean-field interaction in terms of the expected value $\mathbb{E}[Y]$ of the Y -component of the solution enters both the driver and the lower obstacle. Under mild Lipschitz and integrability conditions on the coefficients, we obtain the well-posedness of such a class of equations. Under further monotonicity conditions we show convergence of the standard penalization scheme to the solution of the equation. This class of models is motivated by applications in pricing life insurance contracts with surrender options.

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