

Discrete-time Approximation of Multidimensional BSDEs with oblique reflections

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Abstract

In this paper, we study the discrete-time approximation of multi-dimensional reflected BSDEs presented by Hu and Tang [3]. In comparison to the penalizing approach followed by Hamadène and Jeanblanc [2] or Elie and Kharroubi [1], we study a more natural scheme based on oblique projections. We provide a control on the error of the algorithm by introducing and studying the notion of multidimensional discretely reflected BSDE. In the particular case where the driver does not depend on the variable Z , the error on the grid points is of order $\frac{1}{2} - \epsilon$, $\epsilon > 0$. This a joint work with J.-F. Chassagneux and R. Elie.

References

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