

论文

倒向随机微分方程解的光滑性

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摘要:

该文讨论了倒向随机微分方程 $Y_t = \xi + \int_t^T g(s, Y_s, Z_s) ds - \int_t^T Z_s dW_s$  解在Malliavin微分意义下的光滑性.对任意的 $n$ 讨论其解在Malliavin 意义下 $n$  阶可微性,并且证明它是一个线性倒向随机微分方程的解,从而说明BSDE解的光滑性.

关键词: 倒向随机微分方程;Malliavin 微分;光滑性.

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Smoothness of Solution for | Backward Stochastic Differential Equation

LI N Qing-Quan

Abstract:

The author discusses the smoothness of solution for BSDE  $Y_t = \xi + \int_t^T g(s, Y_s, Z_s) ds - \int_t^T Z_s dW_s$  in Malliavin calculus sense. For any  $n$  the author discusses differentiability of  $n$  th order in the Malliavin sense for the solution, and it satisfies a linear BSDE, as a result the solution for BSDE is smoothness in the sense.

Keywords: Backward stochastic differential equation; Malliavin calculus; Smoothness

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- ▶ 倒向随机微分方程; Malliavin 微分; 光滑性.

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