

学术论文

# 非线性随机微分方程终值问题的适应解和连续依赖性

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**摘要** 本文讨论了一般形式非线性随机微分方程的终值问题  $x(t) + \int_t^T f(s, x(s), y(s)) ds + \int_t^T g(s, x(s), y(s)) dW(s) = \xi$ ,  $0 \leq t \leq T$ , 这里  $W$  为  $d$ -维标准 Wiener 过程, 证明了在某种弱于 Lipschitz 条件下方程存在唯一适应解, 并给出了解的估计和非线性随机微分方程的解关于终值的连续依赖性

**关键词** [随机微分方程, 适应解, 存在唯一性, 连续依赖性.](#)

分类号

## Adapted Solutions and Continuous Dependence for Nonlinear Stochastic Differential Equations with Terminal Condition

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**Abstract** In this paper, we consider a nonlinear stochastic differential equation:  $x(t) + \int_t^T f(s, x(s), y(s)) ds + \int_t^T g(s, x(s), y(s)) dW(s) = \xi$ ,  $0 \leq t \leq T$ , where  $W$  is a  $d$ -dimensional standard Wiener process. The existence and uniqueness results of the adapted solution under a condition weaker than the Lipschitz one are proved. The moment estimates of the solutions and the continuous dependence on terminal value of the nonlinear stochastic differential equation are also obtained.

### Key words

DOI

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