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A forward scheme for backward SDEs. (English) Zbl 1131.60054
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A forward numerical scheme for simulating backward SDEs avoiding high order nestings of conditional expectations backwards in time is introduced. The authors present an implementable algorithm. Mean square convergence of related numerical approximations is studied under the usual assumptions. Finally, as an example, a financial problem is numerically solved. Their algorithm shows several improvements compared to previously reported ones (e.g., error reduction, higher efficiency, absence of explosions, etc.).

Reviewer: [Henri Schurz \(Carbondale\)](#)

MSC:

- [60H10](#) Stochastic ordinary differential equations (aspects of stochastic analysis)
- [65C30](#) Numerical solutions to stochastic differential and integral equations
- [65C05](#) Monte Carlo methods
- [91G80](#) Financial applications of other theories

Cited in **1** Review
Cited in **50** Documents

Keywords:

[backward SDE](#); [numerics](#); [Monte Carlo simulation](#); [convergence](#); [finance](#)

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