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Jerome Detemple, Matthew Lorig, Marcel Rindisbacher, Stephan Sturm and
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02134. *Analytical Expansion to Forward-Backward Stochastic Differential Equations.*

In this paper, we document a powerful converging asymptotic expansion method in solving a general non-linear uncoupled forward-backward stochastic differential equation (FBSDE). As numerical illustration, an exponential OU stochastic volatility option pricing model is considered to show the effectiveness and accuracy of the method. To the best of our knowledge, our scheme is among the very few methods in the literature that are converging. The complexity of the solution increases not exponentially but according to a power function with the increase in the dimensionality of the problem. (Received September 07, 2015)