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1003-60-1585 **Dongjin Kim*** (dongkim@uwyo.edu), Department of Mathematics, 1000 E. University, Laramie, WY 82071-3036, and **Dan Stancu**. *Low-Storage Runge-Kutta Methods for Stochastic Differential Equations.*

Runge-Kutta methods that require only two memory locations per variable and have strong order $\gamma = 1.5$ for non-commutative systems of stochastic differential equations are devised in this paper. A first step in the derivation is to extend existing deterministic methods to the commutative stochastic case, for which higher accuracy is also obtained. Numerical results are presented to validate the approach. (Received October 05, 2004)