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Jungmin Choi* (choi@math.fsu.edu), Department of Mathematics, 208 LOVE Building, 1017 Academic Way, Tallahassee, FL 32306-4510, and **Max Gunzburger**. *Option Pricing in the Presence of Random Arbitrage Return.*

We consider option pricing problems when we relax the condition of no arbitrage in the Black Scholes model. The derived pricing equation is in the form of Stochastic Partial Differential Equation (SPDE). We used Karhunen-Loève expansion to approximate the stochastic term, and the numerical solution of the SPDE is computed using Finite Element Method. (Received September 15, 2008)