1023-35-1260 **Jerome A. Goldstein*** (jgoldste@memphis.edu), Department of Mathematical Sciences, University of Memphis, Memphis, TN 38152, **Rosa Maria Mininni**, Dipartimento di Matematica, Universita di Bari, via Orabona, 4, 70125 Bari, Italy, and **Silvia Romanelli**, Dipartimento di Matematica, Universita di Bari, via Orabona, 4, 70125 Bari, Italy. *A new explicit formula for the solution of the Black-Merton-Scholes equation.* Preliminary report.

In the early 1970s, F. Black, R. Merton and M. Scholes figured out how to find the fair price of a (European) call option. Starting from a simple linear stochastic differential equation, they derived the BMS equation, a PDE for the (fair) price function u(t,x) of the option; here t is time and x is a positive parameter ranging over all possible stock prices. This work received a Nobel Prize in Economics. We use semigroups of operators to derive an explicit formula for the solution of the BMS equation. (Received September 25, 2006)