1067-91-1884   **Emmanuel Kengni Ncheuguim*** (`emmanou@nmsu.edu`), 509 Sweet Ave, Las Cruces, NM 88001, and **Maria Mariani**. *Options pricing with transaction costs and stochastic volatility.* Preliminary report.

Option pricing with transaction coasts and stochastic volatility leads to a nonlinear Black-Scholes type equation where the nonlinear term reflects the presence of transaction costs. We derive the model with transaction costs and and extend it to the case where the volatility is stochastic. Under suitable conditions, we prove the existence of strong solutions of the problem. (Received September 22, 2010)