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**Harrison Potter\*** (hdp002@marietta.edu), Marietta College Box 1059, 215 Fifth Street, Marietta, OH 45750, and **Vinh Xuan Dang**, **Scott Glasgow** and **Stephen Taylor**. *Pricing the Asian Call Option*.

Stochastic calculus is applied to pricing a specific option, known as the Asian call option, that arises in financial applications of probability theory. By modeling the asset price as a geometric Brownian motion, the risk-neutral conditional expectation representation of the option price is simplified to a double integral involving an implicitly defined joint density function. An approximation is then made that enables the exact price of a closely related option to be calculated more explicitly. This latter result is strikingly similar to the Black-Scholes-Merton formula. Robert Merton and Myron Scholes won the 1997 Nobel Prize in Economics for this work, which serves as a model for our approach to pricing the Asian call option. (Received September 12, 2007)