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**Lisa E Marano\*** ([lem2@lehigh.edu](mailto:lem2@lehigh.edu)), Department of Mathematics, 14 E. Packer Ave., Bethlehem, PA 18015. *A unified method for proving the modulus of continuity and the law of the iterated logarithm for Brownian motion with applications to mathematical finance.* Preliminary report.

We present a unified proof for the modulus of continuity and the law of the iterated logarithm for Brownian motion. Moreover, we are able to establish the rate of convergence for each. The proof provides intuition to the existency of the log term in the modulus of continuity and the log log term in the law of the iterated logarithm. Finally we present an application to mathematical finance. (Received September 25, 2000)