1135-60-1273 **Rajeshwari Majumdar*** (rajeshwari.majumdar@uconn.edu), **Phanuel Mariano**, **Hugo Panzo**, **Lowen Peng** and **Anthony Sisti**. *Applications of Multiplicative LLN and CLT for Random Matrices.*

The Lyapunov exponent measures the exponential growth rate of the operator norm of the partial product of an independent and identically distributed sequence of random matrices. It usually cannot be computed from the distribution of the matrices. Furstenberg and Kesten (1960) and Le Page (1982) found analogues to the Law of Large Numbers and Central Limit Theorem, respectively, for the norm of the partial product sequence of such random matrices. We use these analogues to efficiently compute the Lyapunov exponent for a selection of random matrix models and numerically estimate the corresponding variances. For random matrices of order 2, with independent components distributed as ξBernoulli($\frac{1}{2}$), where $\xi \in \mathbb{R}$, we obtain analytic estimates for the Lyapunov exponent in terms of a limit involving Fibonacci-like sequences. (Received September 20, 2017)