

1145-81-2492

George Androulakis and **Duncan Wright*** (dw7@email.sc.edu). *Dynamical Entropy of Quantum Walks*. Preliminary report.

Variants of quantum dynamical entropy will be introduced and applied to unitary quantum random walks. In particular, we will show that the quantum dynamical entropy is nonlinear in the time interval between successive measurements of a quantum dynamical system, in contrast to Kolmogorov-Sinai dynamical entropy for classical dynamical systems. Applications to quantum computing will also be discussed. (Received September 25, 2018)