1053-60-175 **Xiaoping Shen*** (shen@math.ohiou.edu), Department of Mathematics, 1 Ohio University, Athens, OH 45701. *Characterize long-range dependency of piecewise 1/f noise.*

1/f noise is random process which has been observed as fluctuations in many artificial or natural systems such as stock prices, the frequency of quartz crystal oscillators, annual amount of rainfall to name a few. Many numerical methods have been developed to synthesize and analyze such type of noise. In this talk, we will introduce local Holder exponent based algorithms for modeling long-range dependency of piecewise 1/f noise and illustrate the method via numerical examples. (Received September 02, 2009)