1035-00-1476   **John A. Rock*** (`jrock@csustan.edu`), Department of Mathematics, California State University, Stanislaus, One University Circle, Turlock, CA 95382. *Zeta Functions of Multifractals.* Preliminary report.

The goal of this talk is to shine some light on new approaches to the study of multifractal objects such as the binomial measure. In particular, progress has been made by extending and redefining certain zeta functions and their poles (the complex dimensions), which are used in the study of the geometry, spectra and dynamics of fractal strings, to a variety of new approaches to multifractal analysis. Results vary from extending current results on fractal strings from a topological perspective to rediscovering some ideas and results from current approaches to multifractal analysis. This progress has led to a healthy variety of natural and interesting questions that deserve further investigation. (Received September 19, 2007)