1116-00-2606 **Christina G Knox*** (stinasargent@gmail.com). *The Box Zeta Counting Functions and Complex Dimensions of Self-Similar Sets Under Certain Separation Conditions.*

Under certain separation conditions we can determine the properties of the box counting zeta function and box counting complex dimensions of self-similar sets. We will first briefly introduce the theory of box counting fractal strings, zeta functions and complex dimensions as done by Lapidus, Rock, and Zubrinic. We then use results by Lalley and Lapidus to see how the box counting zeta function and complex dimensions of self-similar sets satisfying open set condition and delta disjoint behave, with a closed form for the box counting zeta function give under the second condition. We will then use this to calculate the box counting zeta function and box counting dimensions of some particular self-similar sets. Then we will highlight how these results fit in the lattice/nonlattice dichotomy. (Received September 22, 2015)