1078-28-335   **Rolando De Santiago**, **Michel L Lapidus**, **Scott Roby*** (`sroby001@ucr.edu`) and **John A Rock**. *Lattice self-similar strings and self-similar multifractals.*

A self-similar measure is lattice in regularity α if the fractal string associated with the coarse Holder regularity α is lattice in the sense of classic fractal strings. The multifractal spectrum stemming from the abscissa of convergence function of the measure with regard to its partition zeta functions can be extended, in the cases of the values of α for which the measure is lattice, to a partial tapestry of complex dimensions. Employing the theory of complex dimensions of fractal strings allows one to determine counting functions associated with these regularity values and the corresponding partition zeta functions. (Received December 12, 2011)

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