1054-41-70 **Machiel van Frankenhuijsen*** (vanframa@uvu.edu), Utah Valley University, Department of Mathematics, 800 West University Parkway, Orem, UT 84058-5999. *Complex dimensions of nonlattice self-similar strings.*

By the work of the presenter and Michel Lapidus, nonlattice fractal strings have complex dimensions in an almost periodic pattern. In this talk, we will give very precise information about the distribution of the complex dimensions inside the critical strip. We will give examples of fractal strings where the set of real parts has a gap, and of strings close to the point of transition in this phenomenon. (Received September 02, 2009)