Meeting: 1000, Albuquerque, New Mexico, SS 7A, Special Session on Spectral Geometry

1000-58-35   **Michel L. Lapidus*** (`lapidus@math.ucr.edu`), Department of Mathematics, Surge Bdg.,
University of California, Riverside, CA 92521-0135, and **Ben Hambly**. *Topics in Spectral and Fractal Geometry.*

We will give a brief survey of results of the presenter and his collaborators involving aspects of spectral and fractal geometry in relation to the vibration of fractal drums (either for Laplacians on open sets with fractal boudary or on fractals themselves).

If time allows, we will also present recent results (Trans. Amer. Math. Soc., in press), joint with Ben Hambly, on 'random fractal strings' and their applications to complex dimensions and the spectral asymptotics of (one-dimensional) fractals (e.g., random self-similar sets, random Cantor sets, and zero sets of Brownian motion and of other Levy processes). (Received August 01, 2004)