

1077-A0-3

**Carolyn Gordon\***, Dartmouth College, Hanover, NH. *The sound of geometry.*

We will explore the relationship between spectral data and the geometry of an object in various interrelated settings: combinatorial graphs with their adjacency spectra; strings and drumheads (i.e. real intervals, planar domains or, more generally, Riemannian manifolds) with their frequency spectra; and metric graphs, which combine the features of strings and combinatorial graphs. Most of the talk will be accessible to advanced undergraduate students. (Received March 09, 2011)