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**William A. Sethares\*** ([sethares@ece.wisc.edu](mailto:sethares@ece.wisc.edu)), Dept. Electrical and Computer Engineering,  
University of Wisconsin, 1415 Engineering Drive, Madison, 53706. *Topology of Musical Data*.

Techniques for discovering topological structures in large data sets are now becoming practical. This presentation argues why the musical realm is a particularly promising arena in which to expect to find nontrivial topological features. The analysis is able to recover three important topological features in music: the circle of notes, the circle of fifths, and the rhythmic repetition of timelines, often pictured in the necklace notation. Applications to folk music (in the form of standard MIDI files) are presented, and the bar codes show a variety of interesting features, some of which can be easily interpreted. (Received August 21, 2010)