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K. M. Kinnaird* (katherine.m.kinnaird.gr@dartmouth.edu), 27 N. Main Street, 6188
Kemeny Hall, Hanover, NH 03755. *Multiscale Representations of High-Dimensional Data in Music
Comparison Tasks*. Preliminary report.

We propose a novel multiscale representation of high-dimensional and noisy data that encodes relevant and size-appropriate information, while also being of a manageable dimension. We apply this representation to Music Information Retrieval (MIR) classification tasks by building a signature of each song in our data set that captures repetitive structure at several scales. Given a specific MIR comparison task, such as finding cover songs or remixes of a given song, we apply the appropriate metric to this representation space allowing for a fine-tuned comparison between songs. This multiscale approach differs from those in the literature that largely consider single-scale, single-feature representations. (Received September 25, 2012)