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The Fractal Inverse Problem For Audio Compression

In this talk we present the iterated function system (IFS) approach for generating fractals -objects that exhibit self-similarity and scale-free complexity- and its application in data compression. The local IFS method is introduced for image compression in order to motivate an extension to one-dimensional audio signals. A frequency domain analysis of preliminary compression results is then discussed, with emphasis on the comparison between images and audio for fractal applications. Finally, earlier work and further directions toward fractal-wavelet methods are considered.