Annotated Bibliography

Timbre Similarity

J. Aucouturier, F. Pachet, and Mark Sandler. 2004. The way it sounds: Timbre models for analysis and retrieval of music signals. *IEEE Transaction on multimedia.*

> This paper describes an effective way to model the textures found in a given music signal, and show that such timbre models provide new solutions to many issues traditionally encountered in music signal processing and music information retrieval.

J. Aucouturier, and F. Pachet. 2004. Improving timbre similarity : How high is the sky ? *Proceedings of the International Conference on Music Information Retrieval.*

> This paper presents some attempt to improve the performance of a music similarity measure. This paper contributes in two ways to the current state of the art. It reports on extensive tests over very many parameters and algorithmic variants, either already envisioned in the literature or not.

J. Aucouturier, and F. Pachet. 2002. Music similarity measures: What is the use ? *Proceedings of the International Conference on Music Information Retrieval.*

> This paper introduces a timbral similarity measures for comparing music titles. This measure is based on a Gaussian model of cepstrum coefficients.

C. Liu, and C. Huang. 2002. A singer identification technique for content-based classification of mp3 music object. *Proceeding of the Conference on Information and Knowledge Management.*

> This paper proposes an approach to automatically classify MP3 music objects according to their singers. The segmentation of the signal is done in relation with phonemes.

B. Logan, and A. Salomon. 2001. A music similarity function based on signal analysis. *Proceeding of the International Conference on Multimedia and Expo.*

> This paper presents a method to compare songs based solely on their audio content. The technique explored forms a signature for each song based on K-means clustering of spectral features. The signatures can then be compared using the Earth MoverÕs Distance.

S. Baumann and T. Pohle. 2003. A comparison of music similarity measures for a P2P application. *Proceedings of the International Conference on Digital Audio Effects.*

> This paper compares different methods to compute music similarity between songs. The authors make use of the Mel-Frequency Cepstrum Coefficient which is widely use in timbre similarity algorithms.

E. Pampalk, S. Dixon, and G. Widmer. 2004. Exploring music collection by browsing different views. *Computer Music Journal.*

> This demonstrates a novel approach to explore a small collection using a meta-information-based view and two views generated from audio analysis, namely, beat periodicity as an aspect of rhythm and spectral information as an aspect of timbre.

E. Allamanche, J. Herre, O. Hellmuth, T. Kaster, and C. Ertel. 2003. A multiple feature model for musical similarity retrieval. *Proceedings of the International Conference on Music Information Retrieval.*

> This paper presents a system which combines a set of acoustic features for the task of retrieving similar sounding songs. The methodology for optimum feature selection and combination is explained, and the system of performance is assessed by means of a subjective listening test.

S. Baumann and T. Pohle. 2003. A comparison of music similarity measures for a P2P application. *Proceedings of the International Conference on Digital Audio Effects.*

> This paper compares different methods to compute music similarity between songs. The authors make use of the Mel-Frequency Cepstrum Coefficient which is widely use in timbre similarity algorithms.

A. Berenzweig, D. Ellis, and S. Lawrence. 2003. Anchor space for classification and similarity measure of music. *Proceedings of the International Conference on Multimedia and Expo.*

> This paper describes a method of mapping music into a semantic space that can be used for similarity measurement, classification, and music information retrieval. In anchor space, distributions that represent objects such as artists or songs are modeled with Gaussian Mixture Models, and several similarity measures are defined by computing approximations to the Kullback-Leibler divergence between distributions.