

Tutorial I (not found)

Music IR 101: A Survey Tutorial

Presenters: Joe Futrelle and Stephen Downie

Tutorial II

Music Information Retrieval for Audio Signals

Presenter: George Tzanetakis

Keynote Address - Anthony Seeger

"I Found It, How Can I Use It? - Dealing With the Ethical and Legal Constraints of Information Access"

Paper Session - Evaluation 1: Methods & Techniques

- J. Stephen Downie - *Toward the scientific evaluation of music information retrieval systems* (found)

A benchmark for Music Information Retrieval (MIR) System is essential. This paper discussed the challenges and gave some recommends for establishing a TREC-like evaluation paradigm for MIR.

- Jonah Shifrin & William P. Birmingham - *Effectiveness of HMM-based retrieval on large databases* (found)

A system, giving many experimental results

- Roger B. Dannenberg, William P. Birmingham, George Tzanetakis, Colin Meek, Ning Hu & Bryan Pardo - *The MUSART testbed for query-by-humming evaluation* (found)

This paper created a database and a software testbed for systematic evaluation of various query-by-humming(QBH) search systems, and found some trends from the experimental results.

Paper Session - "Evaluation 2: Query-By-Voice"

- Colin Meek & William P. Birmingham - *The dangers of parsimony in query-by-humming applications* (found)

This paper presents a unifying view of existing models, illuminating the assumptions underlying their respective designs, and demonstrating where such assumptions succeed and fail, through analysis and real-world experiments.

- Steffen Pauws - How good do you sing and know a song when you sing a song?
- Micheline Lesaffre, Koen Tanghe, Gaëtan Martens, Dirk Moelants, Marc Leman, Bernard De Baets, Hans De Meyer & Jean-Pierre Martens - The MAMI query-by-voice experiment: collecting and annotating vocal queries for music information retrieval (found)

<http://www.ipem.ugent.be/MAMI>

a query database with melodies that represent all possible vocal query methods

Paper Session - "Music Perception and Cognition"

- Alexandra L. Uitdenbogerd & Yaw Wah Yap - Was Parsons right? An experiment in usability of music representations for melody-based music retrieval (found)

This paper did experiments to test whether people of various levels of musical skill could indeed make use of a text representation to describe a simple melody query.

- Dan Liu, Lie Lu & Hong-Jiang Zhang - Automatic mood detection from acoustic music data (found slides)

This paper selected effective features to do mood detection of music.

- Olivier Lartillot - Discovering musical pattern through perceptual heuristics (found)

This paper proposed a new approach of musical pattern discovery based on a modeling of cognitive mechanisms of musical perception.

Paper Session - "Music Similarity"

- Adam Berenzweig, Beth Logan, Daniel P.W. Ellis & Brian Whitman - A large-scale evaluation of acoustic and subjective music similarity measures (found)

This paper performed a lot of different (acoustic and subjective) approaches on different data sets to find music similarity.

- Rainer Typke, Panos Giannopoulos, Remco C. Veltkamp, Frans Wiering, and René van Oostrum - Using transportation distances for measuring melodic similarity (found)

This paper views notes as weighted points in a two-dimensional space, and use the Earth Mover's Distance(EMD) and the Proportional Transportation Distance(PTD) to measure similarity.

Paper Session - "Music Analysis 1: Transcription & Instrument Recognition"

- Olivier K. Gillet & Gaël Richard - Automatic labeling of tabla signals (found)

This paper presents an automatic music transcription system dedicated to tabla – a North Indian percussion instrument.

- Jana Eggink & Guy J. Brown - Application of missing feature theory to the recognition of musical instruments in polyphonic audio (found)

To enable instrument recognition when more than one sound is present at the same time, frequency regions that are dominated by energy from an interfering tone are marked as unreliable and excluded from the classification process.

Paper Session - "Music/Score Alignment"

- Robert J. Turetsky & Daniel P.W. Ellis Force - Aligning MIDI Synthesis for Polyphonic Music Transcription Generation
- Ferréol Soulez, Xavier Rodet & Diemo Schwarz - Improving polyphonic and poly-instrumental music to score alignment (found)

Automatic alignment based on a dynamic time warping method.

Paper Session - "Music Classification"

- Martin F. McKinney & Jeroen Breebaart - Features for audio and music classification (found)

Four audio feature sets are evaluated in their ability to classify five general audio classes and seven popular music genres. Results show that the temporal behavior of features is important for both music and audio classification.

(gave out the feature extraction method)

- Simon Dixon, Elias Pampalk & Gerhard Widmer - Classification of dance music by periodicity patterns (found)

The slides give the definitions of pluse, beat, meter, metrical level etc.

This paper did classification for standard and Latin ballroom dance music, using a classification method based only on timing information. It compared two classification methods: IOI and Autocorrelation.

(gave out the preprocessing method of music)

- Wei-Ho Tsai, Hsin-Min Wang, Dwight Rodgers, Shi-Sian Cheng & Hung-Ming Yu - Blind clustering of popular music recordings based on singer voice characteristics (found slides)

This paper seperated vocal from non-vocal segments of music, isolated singer's vocal characteristics from background music, and clustered music according to singers.

Paper Session - "Music Analysis 2: Harmonic Analysis"

- Christopher Raphael & Josh Stoddard - Harmonic analysis with probabilistic graphical models (found)

The definition of harmonic analysis

The method: use Markov model

- Alexander Sheh & Daniel P.W. Ellis - Chord segmentation and recognition using EM-trained hidden markov models (found)

This paper built a system for automatic chord transcription using speech recognition tools

Paper Session - "MIR Systems and Techniques"

- Esko Ukkonen, Kjell Lemström & Veli Mäkinen - Geometric algorithms for transposition invariant content based music retrieval (found)

This paper represents music as sets of points or horizontal lines in the Euclidean planes. Via this, music retrieval problems can be transformed into matching sets of points or lines. Two algorithms are developed for it.

- Elias Pampalk, Simon Dixon & Gerhard Widmer - Exploring music collections by browsing different views (found)

This paper presents a new approach which combines descriptors derived from audio analysis with meta-information to create different views of a collection.

- George Tzanetakis, Jun Gao & Peter Steenkiste - A scalable peer-to-peer system for music content and information retrieval (found)

This paper describes a scalable P2P system that uses Rendezvous Points for music metadata registration and query resolution, that support attribute-value search semantics as well as content-based retrieval.