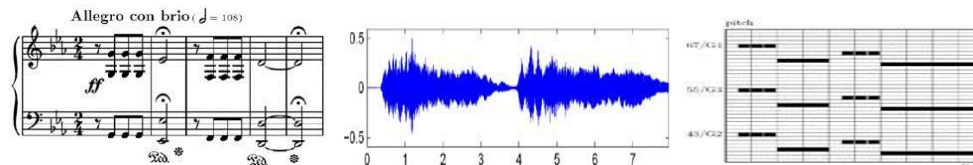


Music Processing



Dozent/in

Prof. Dr. Meinard Müller

Angaben

Vorlesung, 2 SWS, benoteter Schein

Kredit: 2/2, ECTS-Studium, ECTS-Credits: 2,5

Für Gasthörer zugelassen, Unterrichtssprache Englisch

Zeit: Tu 16:15 - 19:15

Remark: 8 sessions per term with each session covering
1,5 lectures = 90 + 45 minutes

Ort: Room [3R4.04](#), Am Wolfsmantel 33, Erlangen-Tennenlohe

Studienfächer / Studienrichtungen

WF SIM-DH 6-10 (ECTS-Credits: 2,5)

WF WING-MA 1-4 (ECTS-Credits: 2,5)

WF EEI-DH 6-10 (ECTS-Credits: 2,5)

WF EEI-MA 1-4 (ECTS-Credits: 2,5)

WF WING-DH 6-10 (ECTS-Credits: 2,5)

WF SIM-MA 1-4 (ECTS-Credits: 2,5)

WF IuK-MA 1-4 (ECTS-Credits: 2,5)

WF IuK-MA-MMS-EEI 1-4 (ECTS-Credits: 2,5)

WF CME-MA ab 2 (ECTS-Credits: 2,5)

Voraussetzungen / Organisatorisches

In this course, we discuss a number of current research problems in music processing or music information retrieval (MIR) covering aspects from information science and digital signal processing. We provide the necessary background information and give numerous motivating examples so that no specialized knowledge is required. However, the students should have a solid mathematical background and some background in digital signal processing. The lecture is accompanied by readings from textbooks or the research literature. Furthermore, the students are required to experiment with the presented algorithms using MATLAB.

Inhalt

Music signals possess specific acoustic and structural characteristics that are not shared by spoken language or audio signals from other domains. In fact, many music analysis tasks only become feasible by exploiting suitable music-specific assumptions. In this course, we study feature design principles that have been applied to music signals to account for the music-specific aspects. In particular, we discuss various musically expressive feature representations that refer to musical dimensions such as harmony, rhythm, timbre, or melody. Furthermore, we highlight the practical and musical relevance of these feature representations in the context of current music analysis and retrieval tasks. Here, our general goal is to show how the development of music-specific signal processing techniques is of fundamental importance for tackling otherwise infeasible music analysis problems.

The following video gives a brief impression about this course:
<http://www.youtube.com/watch?v=iY243jku0UA>

ECTS-Informationen:

Title:

Music Processing

Credits: 2,5

Prerequisites

- Foundations in Mathematics
- Digital Signal Processing
- Interest in Music

Zusätzliche Informationen

Erwartete Teilnehmerzahl: 15, Maximale Teilnehmerzahl: 30

Verwendung in folgenden UnivIS-Modulen

Startsemester WS 2012/2013