



Tutorial

Automatisierte Methoden der Musikverarbeitung 47. Jahrestagung der Gesellschaft für Informatik

Overview

Meinard Müller, Christof Weiss, Stefan Balke

International Audio Laboratories Erlangen

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Meinard Müller

- 2007 Habilitation
Bonn University
- 2007 – 2012
Senior Researcher
Saarland University & MPI Informatik
- Since 2012
Professor: Semantic Audio Processing
Erlangen-Nürnberg University



Christof Weiß

- 2006 – 2012 Physics Diploma
Würzburg University
- 2006 – 2012 Composition Diploma
Würzburg University of Music
- 2012 – 2015 PhD studies
Ilmenau, Fraunhofer IDMT
- Since 2015
AudioLabs Erlangen
- 2017 PhD
- Freelancing composer



Stefan Balke



- 2008-2013 Electrical Engineering
Leibniz Universität Hannover
- Since 2014
Working towards my PhD
AudioLabs Erlangen
- Hobbies: Trumpet playing!
- Further infos:
<https://www.audiolabs-erlangen.de/fau/assistant/balke>



Group Members

- Christof Weiß
- Frank Zalkow
- Stefan Balke
- Christian Dittmar
- Patricio López-Serrano
- Sebastian Rosenzweig

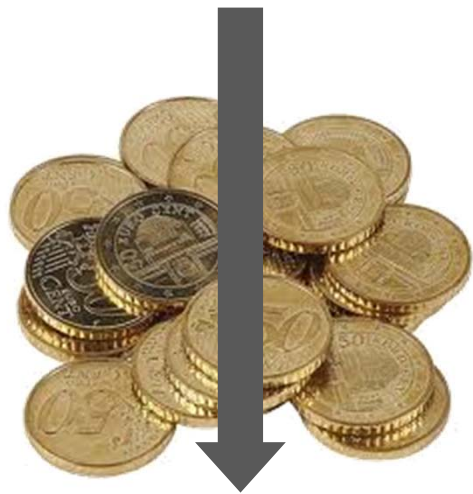


International Audio Laboratories Erlangen

 **Fraunhofer**
IIS




FAU FRIEDRICH-ALEXANDER
UNIVERSITÄT
ERLANGEN-NÜRNBERG



AUDIO
LABS

International Audio Laboratories Erlangen



Audio

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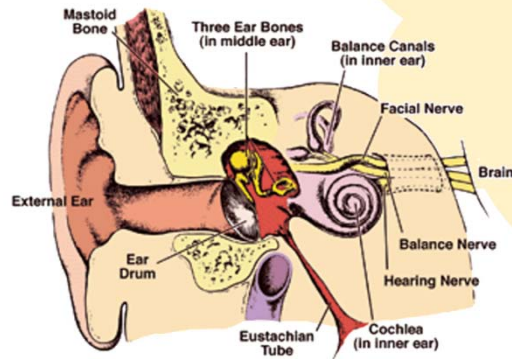
Audio Coding



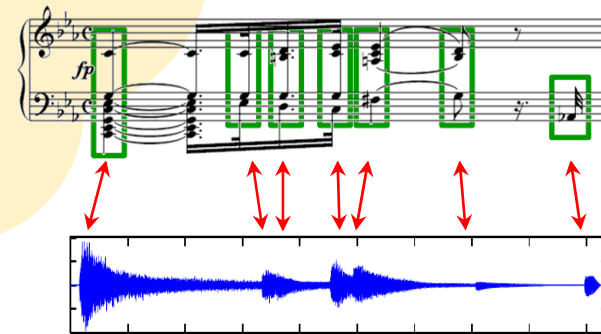
3D Audio



Audio

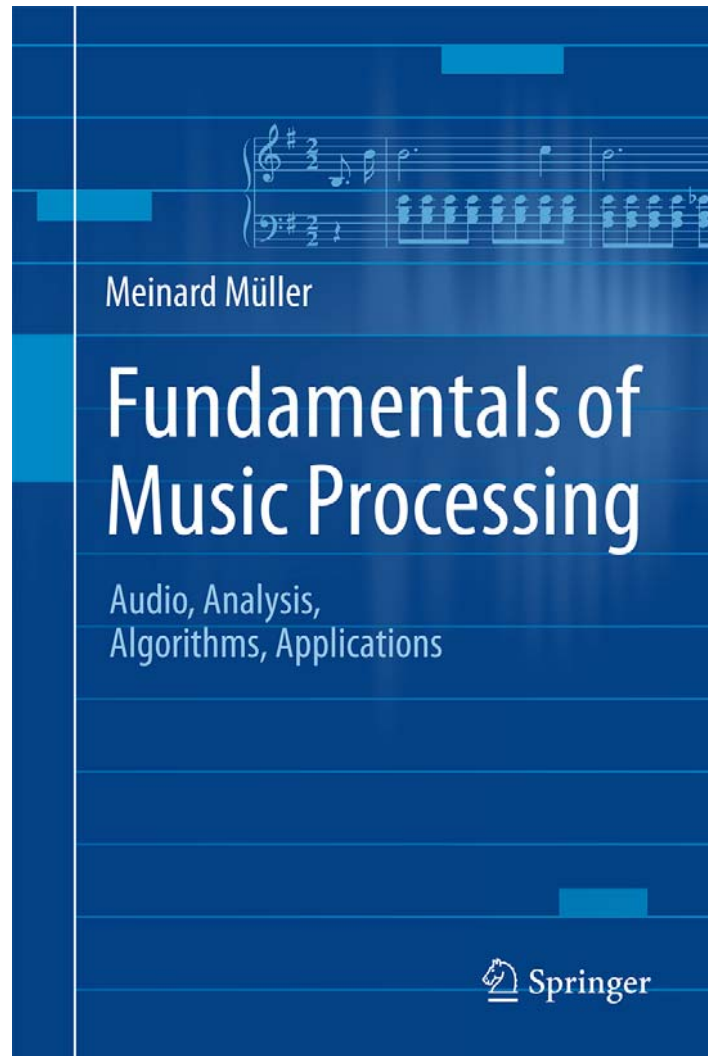


Psychoacoustics



Music Processing

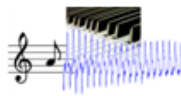

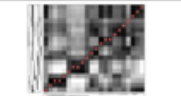
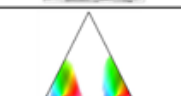

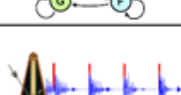


Book: Fundamentals of Music Processing



Meinard Müller
Fundamentals of Music Processing
Audio, Analysis, Algorithms, Applications
483 p., 249 illus., hardcover
ISBN: 978-3-319-21944-8
Springer, 2015

Accompanying website:
www.music-processing.de

Book: Fundamentals of Music Processing

Chapter		Music Processing Scenario
1		Music Representations
2		Fourier Analysis of Signals
3		Music Synchronization
4		Music Structure Analysis
5		Chord Recognition
6		Tempo and Beat Tracking
7		Content-Based Audio Retrieval
8		Musically Informed Audio Decomposition

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Overview of Tutorial

- 09:00 – 09:10 Overview
- 09:10 – 09:45 Introduction to MIR (Meinard Müller)
- 09:45 – 10:30 Audio Features (Meinard Müller)

10:30 – 11:00 Kaffeepause

- 11:00 – 11:45 Harmony Analysis (Christof Weiß)
- 11:45 – 12:30 Style Classification (Christof Weiß)

12:30 – 14:00 Mittagspause

- 14:00 – 14:45 Music Structure Analysis (Stefan Balke)
- 14:45 – 15:30 Deep Learning in MIR (Stefan Balke)

15:30 – 16:00 Kaffeepause

- 16:00 – 16:45 Tempo and Beat Tracking (Meinard Müller)
- 16:45 – 17:30 Further Topics in MIR (Meinard Müller)

Folien:

<https://www.audiolabs-erlangen.de/resources/MIR/2017-GI-Tutorial-Musik/>

MIR-Related Events

GI Jahrestagung
Workshop: Musik trifft Informatik
26. September 2017

Gesellschaft
für Informatik



International Society for
Music Information Retrieval
ISMIR 2017
23. – 27. Oktober 2017



ISMIR
2017, SUZHOU, CHINA