

# Table of Contents

## Pitch, Melody Detection

Separating Voices in Polyphonic Music: A Contig Mapping Approach . . . .	1
<i>Elaine Chew, Xiaodan Wu (University of Southern California, USA)</i>	
An Auditory Model Based Approach for Melody Detection in Polyphonic Musical Recordings . . . . .	21
<i>Rui Pedro Paiva, Teresa Mendes, Amílcar Cardoso (University of Coimbra, Portugal)</i>	
A New Probabilistic Spectral Pitch Estimator: Exact and MCMC-approximate Strategies . . . . .	41
<i>Harvey D. Thornburg, Randal J. Leistikow (Stanford University, USA)</i>	

## Rhythm, Tempo, Beat

Determination of Perceptual Tempo of Music . . . . .	61
<i>Bee Yong Chua, Guojun Lu (Monash University, Churchill, Victoria, Australia)</i>	
Source Separation and Beat Tracking: A System Approach to the Development of a Robust Audio-to-Score System . . . . .	71
<i>Mario Malcangi (University of Milan, Italy)</i>	
A Causal Rhythm Grouping . . . . .	83
<i>Kristoffer Jensen (University of Copenhagen, Denmark)</i>	

## Music Generation, Knowledge

Fugue Composition with Counterpoint Melody Generation Using Genetic Algorithms . . . . .	96
<i>Andres Garay Acevedo (Georgetown University, Washington DC, USA)</i>	
Harmonizations of Time with Non Periodic Ordered Structures in Discrete Geometry and Astronomy . . . . .	107
<i>Juan García Escudero (University of Oviedo, Spain)</i>	
A Self-Organizing Map Based Knowledge Discovery for Music Recommendation Systems . . . . .	119
<i>Shankar Vembu (Technical University of Hamburg, Germany), Stephan Baumann (German Research Center for Artificial Intelligence, Kaiserslautern, Germany)</i>	

## Music Performance, Rendering, Interface

Internet Archive of Electronic Music IAEM – internet Audio Rendering System iARS .....	130
<i>Christopher Frauenberger, Winfried Ritsch (University of Music and Dramatic Arts, Graz, Austria)</i>	
Handel, a <i>Free-Hands</i> Gesture Recognition System .....	139
<i>Leonello Tarabella (CNR, Pisa, Italy)</i>	
Open and Closed Form in Interactive Music .....	149
<i>Lars Graugaard</i>	
Collaborative Computer-Aided Parameter Exploration for Music and Animation .....	158
<i>Daryl H. Hepting, David Gerhard (University of Regina, Saskatchewan, Canada)</i>	

## Music Scores, Synchronization

Comparing Pitch Spelling Algorithms on a Large Corpus of Tonal Music .....	173
<i>David Meredith (City University, London, United Kingdom)</i>	
Score-PCM Music Synchronization Based on Extracted Score Parameters .....	193
<i>Vlora Arifi, Michael Clausen, Frank Kurth, Meinard Müller (University of Bonn, Germany)</i>	
Towards an Intelligent Score Following System: Handling of Mistakes and Jumps Encountered During Piano Practicing .....	211
<i>Mevlut Evren Tekin, Christina Anagnostopoulou, Yo Tomita (Queen's University of Belfast, United Kingdom)</i>	

## Synthesis, Timbre, Musical Playing

Aspects of the Topology of Interactions on Loop Dynamics in One and Two Dimensions .....	220
<i>Georg Essl (Media Lab Europe, Dublin, Ireland)</i>	
Perceptive and Cognitive Evaluation of a Piano Synthesis Model .....	232
<i>Julien Bensa, Danièle Dubois (Pierre and Marie Curie University, Paris, France), Richard Kronland-Martinet, Sølvi Ystad (LMA, CNRS, Marseille, France)</i>	
The Clarinet Timbre as an Attribute of Expressiveness .....	246
<i>Philippe Guillemain, Robin T. Helland, Richard Kronland-Martinet, Sølvi Ystad (LMA, CNRS, Marseille, France)</i>	

## Music Representation, Retrieval

A Graph Theoretic Approach to Melodic Similarity .....	260
<i>Goffredo Haus, Alberto Pinto (University of Milan, Italy)</i>	
A Content-Based Music Retrieval System Using Representative Melody Index from Music Databases .....	280
<i>Jae-Yong Won, Jae-Heon Lee, KyongI Ku, Jaehyun Park, Yoo-Sung Kim (Inha University, Incheon, Korea)</i>	
Methods for Combining Statistical Models of Music .....	295
<i>Marcus Pearce, Darrell Conklin, Geraint Wiggins (City University, London, United Kingdom)</i>	
Constraint-Based Melody Representation .....	313
<i>Ningyan Zhong (University of Waterloo, Ontario, Canada), Yi Zheng (University of Toronto, Ontario, Canada)</i>	

## Music Analysis

Music Segmentation: An XML-oriented Approach .....	330
<i>Goffredo Haus, Luca A. Ludovico (University of Milan, Italy)</i>	
Evolutionary Optimization of Music Performance Annotation .....	347
<i>Maarten Grachten, Josep Lluís Arcos, Ramon López de Mántaras (Artificial Intelligence Research Institute, Bellaterra, Spain)</i>	
Parichaykrama – An Exploratory Interface of Indian Classical Music Using Experiential Framework .....	359
<i>Debopam Roy, Nagaraju Pappu, T.V. Prabhakar (IIT Kanpur, India)</i>	
Author Index .....	371

<http://www.springer.com/978-3-540-24458-5>

Computer Music Modeling and Retrieval  
Second International Symposium, CMMR 2004, Esbjerg,  
Denmark, May 26-29, 2004, Revised Papers  
Wiil, U. (Ed.)  
2005, XI, 371 p. With CD-ROM., Softcover  
ISBN: 978-3-540-24458-5