

# Contents

## Sound, Motion and Gesture

Comparing the Timing of Movement Events for Air-Drumming Gestures. . . .	3
<i>Luke Dahl</i>	
Assessing the Influence of Constraints on Cellists' Postural Displacements and Musical Expressivity . . . . .	22
<i>Jocelyn Rozé, Mitsuko Aramaki, Richard Kronland-Martinet, Thierry Voinier, Christophe Bourdin, Delphine Chadeaux, Marvin Dufrenne, and Sølvi Ystad</i>	
Musical Meter, Rhythm and the Moving Body: Designing Methods for the Analysis of Unconstrained Body Movements . . . . .	42
<i>Luiz Naveda, Isabel C. Martínez, Javier Damesón, Alejandro Pereira Ghiena, Romina Herrera, and Manuel Alejandro Ordás</i>	
Evaluating Input Devices for Dance Research. . . . .	58
<i>Mari Romarheim Haugen and Kristian Nymoen</i>	
Estimation of Guitar Fingering and Plucking Controls Based on Multimodal Analysis of Motion, Audio and Musical Score . . . . .	71
<i>Alfonso Perez-Carrillo, Josep-Lluís Arcos, and Marcelo Wanderley</i>	
Analysis of Mimed Violin Performance Movements of Neophytes: Patterns, Periodicities, Commonalities and Individualities . . . . .	88
<i>Federico Visi, Esther Coorevits, Rodrigo Schramm, and Eduardo R. Miranda</i>	

## Digital Musical Instruments, Embodiment and Performance

Skill Development and Stabilisation of Expertise for Electronic Music Performance . . . . .	111
<i>Jan C. Schacher and Patrick Neff</i>	
The Hybrid Brain Computer Music Interface - Integrating Brainwave Detection Methods for Extended Control in Musical Performance Systems. . .	132
<i>Joel Eaton and Eduardo R. Miranda</i>	
Feeling Sound: Exploring a Haptic-Audio Relationship . . . . .	146
<i>Joanne Armitage and Kia Ng</i>	

BOEUF: A Unified Framework for Modeling and Designing Digital Orchestras . . . . .	153
<i>Florent Berthaut and Luke Dahl</i>	
Decomposing a Composition: On the Multi-layered Analysis of Expressive Music Performance . . . . .	167
<i>Esther Coorevits, Dirk Moelants, Stefan Östersjö, David Gorton, and Marc Leman</i>	
3CMS: An Interactive Decision System for Live Performance . . . . .	190
<i>Rodrigo Schramm, Helena de Souza Nunes, Leonardo de Assis Nunes, Federico Visi, and Eduardo R. Miranda</i>	
<b>Composition Tools</b>	
A Viewpoint Approach to Symbolic Music Transformation . . . . .	213
<i>Louis Bigo and Darrell Conklin</i>	
Balancing Audio: Towards a Cognitive Structure of Sound Interaction in Music Production . . . . .	228
<i>Mads Walther-Hansen</i>	
Conchord: An Application for Generating Musical Harmony by Navigating in the Tonal Interval Space. . . . .	243
<i>Gilberto Bernardes, Diogo Cocharro, Carlos Guedes, and Matthew E.P. Davies</i>	
Musical Variation and Improvisation Based on Multi-resolution Representations. . . . .	261
<i>Johan Loeckx</i>	
Music with Unconventional Computing: Granular Synthesis with the Biological Computing Substrate <i>Physarum Polycephalum</i> . . . . .	271
<i>Edward Braund and Eduardo R. Miranda</i>	
<b>Data Mining, Music Information Retrieval and Artificial Intelligence</b>	
Evaluation and Prediction of Harmonic Complexity Across 76 Years of Billboard 100 Hits. . . . .	283
<i>Kristoffer Jensen and David G. Hebert</i>	
Information Rate for Fast Time-Domain Instrument Classification . . . . .	297
<i>Jordan Ubbens and David Gerhard</i>	
Escaping from the Abyss of Manual Annotation: New Methodology of Building Polyphonic Datasets for Automatic Music Transcription . . . . .	309
<i>Li Su and Yi-Hsuan Yang</i>	

The Clustering of Expressive Timing Within a Phrase in Classical Piano Performances by Gaussian Mixture Models . . . . .	322
<i>Shengchen Li, Dawn A.A. Black, and Mark D. Plumbley</i>	
Modeling Affective Responses to Music Using Audio Signal Analysis and Physiology . . . . .	346
<i>Konstantinos Trochidis and Simon Lui</i>	
A New Look at Musical Expectancy: The Veridical Versus the General in the Mental Organization of Music . . . . .	358
<i>Emery Schubert and Marcus Pearce</i>	
<b>Music Analysis, Music Generation and Emotion</b>	
Emotional Experiences of Ascending Melodic Lines . . . . .	373
<i>Hans T. Zeiner-Henriksen</i>	
$\sigma$ GTTM III: Learning-Based Time-Span Tree Generator Based on PCFG. . . . .	387
<i>Masatoshi Hamanaka, Keiji Hirata, and Satoshi Tojo</i>	
<i>BioComputer Music</i> : Generating Musical Responses with <i>Physarum polycephalum</i> -Based Memristors . . . . .	405
<i>Edward Braund and Eduardo R. Miranda</i>	
‘Understood at Last’?: A Memetic Analysis of Beethoven’s ‘Bloody Fist’ . . . . .	420
<i>Steven Jan</i>	
Music and Dementia: Two Case-Studies . . . . .	438
<i>Alexis Kirke, Belinda Dixon, and Eduardo R. Miranda</i>	
Strictly Rhythm: Exploring the Effects of Identical Regions and Meter Induction in Rhythmic Similarity Perception. . . . .	449
<i>Daniel Gómez-Marín, Sergi Jordà, and Perfecto Herrera</i>	
Cross-Cultural Comparisons of Unconstrained Body Responses to Argentinian and Afro-Brazilian Music . . . . .	464
<i>Luiz Naveda, Isabel C. Martínez, Javier Damesón, Alejandro Pereira Ghiena, Romina Herrera, and Manuel Alejandro Ordás</i>	
<b>Author Index</b> . . . . .	483

Music, Mind, and Embodiment

11th International Symposium, CMMR 2015, Plymouth,

UK, June 16-19, 2015, Revised Selected Papers

Kronland-Martinet, R.; Aramaki, M.; Ystad, S. (Eds.)

2016, XIII, 483 p. 287 illus., 100 illus. in color., Softcover

ISBN: 978-3-319-46281-3