# Scientific programme

<b>Monday</b> 25/9	<b>Tuesday</b> 26/9		<b>Wednesday</b> 27/9		Thursday 28/9
8:40 - 9:20 Registration	8:40 - 9:20 Registration		8:40 - 9:20 Registration		8:40 - 9:20 Registration
09:20 - 10:20 Keynote 1 Amílcar Cardoso Salão Nobre	09:20 - 10:20 Keynote 2 Margaret Schedel Salão Nobre		09:20 - 10:20 Keynote 3 Peter Vuust Salão Nobre		09:20 - 10:20 Keynote 4 Carlos Guedes Salão Nobre
10:20 - 10:50 Coffee Break	10:20 - 10:50 Coffee Break		10:20 - 10:50 Coffee Break		10:20 - 10:50 Coffee Break
10:50 - 12:30 Oral Session 1 MIR, automatic recognition, estimation and classification Salão Nobre	10:50 - 12:30 <b>Oral Session 2</b> Computational Musicology <i>Salão Nobre</i>		10:50 - 12:30 Special Session 3 Research and creation: spaces and modalities Salão Nobre		10:50 - 12:30  Oral Session 4  Cooperative music networks and musical HCIs Salão Nobre
12:30 - 14:00 <b>Lunch</b> <i>CMM Entrance</i>	12:30 - 13:30 Lunch CMM Entrance  13:30 - 14:30 Concert 2 String Quartet & electronics Salão Nobre  14:30 - 16:30 Special Session 2 Sound in practice: Auditory guidance and feedback in the context of motor learning and motor adaptation Salão Nobre		12:30 - 14:00 Lunch CMM Entrance		12:30 - 14:00 Lunch CMM Entrance
14:00 - 15:40  Special Session 1  Electronic Dance Music and Rhythm  Salão Nobre			14:00 - 15:40  Oral Session 3  Human Perception in multimodal context  Salāo Nobre		14:00 - 15:40 Special Session 4 Virtual and augmented reality Salão Nobre
15:40 - 17:00 Poster Coffee Session 1 Break CMM Entrance			15:40 - 17:00 Demo Session CMM Entrance	Coffee Break	15:40 - 16:00 Closing Remarks
	16:30 - 18:00 Poster Session 2 CMM Entrance	Coffee Break			
17:30 - 19:00 Concert 1 Octophony / Video CARA - Real Vinícola	18:30 - 19:30  Concert 3  Ensemble and electronics  CARA - Real Vinicola		17:30 - 21:30 Visit Matosinhos Banquet		
19:00 - 21:00 Reception CARA - Real Vinicola					

# Monday 25th September 9:20 - 10:20 Keynote 1

"Autonomous composition as search in a conceptual space: a Computational Creativity view," Amílcar Cardoso
Salão Nobre

# Monday 25th September 10:50 - 12:30 Oral Session 1

Music Information Retrieval, automatic recognition, estimation and classification

(Session Chair: Alan Marsden)

Salão Nobre

"Automatic recognition of sound categories from their vocal imitation using audio primitives automatically derived by SI-PLCA and HMM," Enrico Marchetto and Geoffroy Peeters

"Automatic estimation of harmonic tension by distributed representation of chords," Ali Nikrang, David Sears and Gerhard Widmer

"<u>Automatic Music Genre Classification in Small and Ethnic Datasets</u>," Tiago Fernandes Tavares and Juliano Henrique Foleiss

"Music Genre Classification Revisited: An In-Depth Examination Guided by Music Experts," Haukur Pálmason, Björn Þór Jónsson, Markus Schedl and Peter Knees

"Computational Ethnomusicology for Exploring Trends in Trinidad Steelband Music Through History," Elio Quinton, Florabelle Spielmann and Bob L. Sturm

# Monday 25th September 14:00 – 15:40 Special Session 1

Electronic Dance Music and Rhythm

(Session Chair: Jason Hockman)

Salão Nobre

"<u>Finding Drum Breaks in Digital Music Recordings</u>," Patricio López-Serrano, Christian Dittmar and Meinard Müller

"<u>Drum rhythm spaces: from global models to style-specific maps</u>," Daniel Gómez-Marín, Sergi Jordà and Perfecto Herrera

"Swinging with FM: Synthesis of Swing by Means of Frequency Modulation," Carl Haakon Waadeland and Sigurd Saue

"A Perceptually-Motivated Harmonic Compatibility Method for Music Mixing," Gilberto Bernardes, Matthew Davies and Carlos Guedes

"Games Without Frontiers: Audio Games for Music Production and Performance," Jason Hockman and Joseph Thibodeau

# Monday 25th September 15:40 – 17:00 Poster Session 1

(Session Chair: Marcelo Caetano)

**CMM** Entrance

"Adaptive Specialisation and Music Games on Networks," Stefano Kalonaris

"<u>A Dataset and Baseline System for Singing Voice Assessment</u>," Bariş Bozkurt, Ozan Baysal and Deniz Yüret

"Investigation of a Computational Unit Model for Mode and Rhythm Based on Deviations from and Realizations of Musical Expectations," Hidefumi Ohmura, Keiji Hirata, Satoshi Tojo and Takuro Shibayama

"An Interactive Tool for the Synthesis of Consonant Timbres Based on

Dissonance Models," Micael Antunes Da Silva, Regis Faria and Rebeca Bayeh

"A Sensor-Augmented Saxophone Mouthpiece for Unveiling the Mechanics of Saxophone Tone Formation," Gustavo Caetano, Gilberto Bernardes, Henk van Twillert, Miguel Pais Clemente and Joaquim Gabriel

"Identifying Raga Similarity in Hindustani Classical Music through Distributed Representation of Raga Names," Joe Cheri Ross, Rudra Murthy, Kaustuv Kanti Ganguli and Pushpak Bhattacharyya

Tuesday 26th September 9:20 - 10:20 Keynote 2

"Inscribing Bodies," Margaret Schedel Salão Nobre

Tuesday 26th September 10:50 – 12:30 Oral Session 2

Computational musicology

(Session Chair: Elio Quinton)

Salão Nobre

"On Linear Algebraic Representation of Time-span and Prolongational Trees," Satoshi Tojo, Alan Marsden and Keiji Hirata

"<u>Four-part Harmonization: Comparison of a Bayesian Network and a Recurrent Neural Network</u>," Tatsuro Yamada, Tetsuro Kitahara, Hiroaki Arie and Tetsuya Ogata

"<u>On Hierarchical Clustering of Spectrogram</u>," Shun Sawada, Yoshinari Takegawa and Keiji Hirata

"deepGTTM-III: Simultaneous Learning of Grouping and Metrical Structures," Masatoshi Hamanaka, Keiji Hirata and Satoshi Tojo

"Analyzing Music to Music Perceptual Contagion of Emotion using a novel Contagion Interface: A case study of Hindustani Classical Music," Sanga Chaki, Sourangshu Bhattacharya, Raju Mullick, Priyadarshi Patnaik

# Tuesday 26th September 14:30 - 16:30 Special Session 2

Sound in practice: Auditory guidance and feedback in the context of motor learning and motor adaptation

(Session Chairs: Marta Bieńkiewicz, Christophe Bourdin, Lionel Bringoux)
Salão Nobre

"<u>Auditory Modulation of Multisensory Representations</u>," Alfred Effenberg, Shashank Ghai, Tonghun Hwang and Gerd Schmitz.

"Adding dance to the sound of music: The role of embodiment in audiovisual rhythmic stimulation," Yi-Huang Su

"Moving to the beat in Parkinson's disease: Towards an individualized approach," Simone Dalla Bella

"When the pen shapes and reshapes music: Effects of music and musical sonification on Parkinsonian dysgraphia," Lauriane Véron-Delor, Serge Pinto, Alexandre Eusebio, Jean-Luc Velay and Jérémy Danna

"Investigating the role of auditory feedback in a multimodal biking experience," Jon Pedersen, Francesco Grani and Stefania Serafin

"The pitfalls of being a copycat: Learning the golf putting action through the use of acoustic and visual guidance," Marta Bieńkiewicz, Laurent Pruvost, Cathy Craig, Matthew Rodger, Stuart Ferguson, Frank Buloup, Lionel Bringoux, Christophe Bourdin, Richard Kronland-Martinet

Tuesday 26th September 16:30 – 18:00 Poster Session 2

(Session Chair: Marcelo Caetano)

#### **CMM** Entrance

"Applying Psychoacoustics to Key Detection and Root Note Extraction in EDM,"
Roman B. Gebhardt and Jonas Margraf

"<u>Automatic Annotation of Timbre Variation for Musical Instruments</u>," Goffredo Haus, Luca Andrea Ludovico, and Giorgio Presti

"<u>A Sensory Dissonance Tracing Software</u>," Anna Terzaroli (This poster could not be presented at CMMR, but a video presentation is available here)

"k-Best Hidden Markov Model Decoding for Unit Selection in Concatenative Sound Synthesis," Cárthach Ó Nuanáin, Sergi Jordà and Perfecto Herrera

"Music Generation with Variational Recurrent Autoencoder Supported by History," Aleksey Tikhonov and Ivan Yamshchikov

"Envisioning Smart Musical Haptic Wearables to Enhance Performers' Creative Communication," Luca Turchet and Mathieu Barthet

"The Harmony of Noise: Constructing a Unified System for Representation of Pitch, Noise and Spatialization," Mattias Sköld

# Wednesday 27th September 9:20 - 10:20 Keynote 3

"Groove on the brain: Rhythmic complexity and predictive coding," Peter Vuust Salão Nobre

# Wednesday 27/09 10:50 - 12:30 Special Session 3

Research and creation: spaces and modalities (Session Chairs: Christine Esclapez, Nicolas Darbon, Julien Ferrando)

Salão Nobre

"Reflections on the Use of Musical Software in Compositional Processes for Light Art," Charlotte Beaufort

"Selfhood: an evolutionary and interactive installation using particle systems to synthesize images and sounds," Jônatas Manzolli, Guilherme Valarini and Artemis Moroni

"Music, Musicology, and Sciences: towards an Interscience Network," Christine Esclapez

"Reading Early Music Today: Between Reenactment and New Technologies,"
Julien Ferrando

"<u>ArtDoc – an Experimental Archive and a Tool for Artistic Research</u>," Henrik Frisk

Wednesday 27/09 14:00 - 15:40 Oral Session 3

Human perception in multimodal context

(Session Chair: Sølvi Ystad)

Salão Nobre

"Feel It in My Bones: Composing Multimodal Experience through Tissue Conduction," Peter Lennox, Ian Mckenzie and Michael Brown

"Enriching Musical Interaction on Tactile Feedback Surfaces with

Programmable Friction," Farzan Kalantari, Florent Berthaut and Laurent
Grisoni

"Assessing sound perception through vocal imitations of sounds that evoke movements and materials," Thomas Bordonné, Manuel Dias-Alves, Mitsuko Aramaki, Sølvi Ystad and Richard Kronland-Martinet

"Sonification strategies for dynamic guidance tasks: example with a driving game," Gaëtan Parseihian, Mitsuko Aramaki, Sølvi Ystad and Richard

### Kronland-Martinet

"DIGIT: An Assistive System for the Generation of Footstep Sounds in Audio Post Production," Luís Aly, Rui Penha and Gilberto Bernardes

Wednesday 27/09 15:40 - 17:00 Demos

(Session Chairs: Luís Aly, Antóno Sá Pinto) CMM Entrance

"<u>Samsara – a virtual interactive soundscape</u>," Manaswi Mishra, Kushagra Sharma and Siddharth Bhardwaj

"<u>HarT: Smart Tool for Harmonic Content Transformations</u>," Diogo Cocharro and Gilberto Bernardes

"MyJazzBand – an interactive virtual jazz band," Rui Dias

"Automatic Transcription of Vocalised Percussion," António Ramires\*

"MusikVerb: a novel musically-informed digital audio reverberation," João Paulo Caetano Pereira\*

"Not Alone: an interactive exploration of Post-Tonal Harmony," Alonso Torres\*

Demos marked \* are not included in the CMMR proceedings, but are invited contributions from students in the Sound and Music Computing Group at INESC TEC

Thursday 28th September 9:20 - 10:20 Keynote 4

"Composing and improvising. In real time," Carlos Guedes Salão Nobre

# Thursday 28th September 10:50 – 12:30 Oral Session 4

Cooperative music networks and musical HCIs

(Session Chair: Luca Turchet)

Salão Nobre

"bf-pd: Enabling Mediated Communication and Cooperation in Improvised

<u>Digital Orchestras</u>," Luke Dahl, Florent Berthaut, Antoine Nau and Patricia

Plenacoste

"Visual Representations for Music Understanding Improvement," Leandro Cruz, Vitor Rolla, Juliano Kestenberg and Luiz Velho

"<u>Melody transformation with semiotic patterns</u>," Izaro Goienetxea and Darrell Conklin

"The Comprovisador's Real-Time Notation Interface," Pedro Louzeiro

"JamSketch: Improvisation Support System with GA-based Melody Creation from User's Drawing," Tetsuro Kitahara, Sergio Giraldo and Rafael Ramírez

# Thursday 28/09 14:00 - 15:40 Special Session 4

Virtual and augmented reality

(Session Chair: Stefania Serafin)

Salão Nobre

"Mobile Devices as Musical Instruments – State of the Art and Future Prospects," Georg Essl and Sang Won Lee

"<u>Mixed Reality MIDI Keyboard</u>," John Desnoyers-Stewart, David Gerhard and Megan Smith

"Toward Augmented Familiarity of the Audience with Digital Musical Instruments," Olivier Capra, Florent Berthaut and Laurent Grisoni

"<u>Use the Force: Incorporating Touch Force Sensors into Mobile Music</u>
<u>Interaction</u>," Edward Jangwon Lee, Sangeon Yong, Soonbeom Choi, Liwei
Chan, Roshan Peiris and Juhan Nam

"<u>Sonifying Twitter's emotions through music</u>," Mariana Seiça, Rui Buga Lopes, Pedro Martins and F. Amílcar Cardoso

Thursday 28/09 15:40 – 16:00 Closing Remarks *Salão Nobre* 

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