PROGRAM BOOKLET
OF THE 14TH
INTERNATIONAL SOCIETY FOR
MUSIC INFORMATION RETRIEVAL CONFERENCE

November 4-8, 2013
Curitiba, Brazil
Organizations and companies supporting this conference in various ways are listed below. Their help in bringing the conference together is gratefully acknowledged.

**GOLD SPONSORS**

![CNPq](image1.png)  
*Conselho Nacional de Desenvolvimento Científico e Tecnológico*

![CAPES](image2.png)

**SILVER SPONSOR**

**PANDORA**

**BRONZE SPONSOR**

![Google](image3.png)

**SUPPORT**

![PUCPR](image4.png)  
*Grupo Marista*

![UFPR](image5.png)  
*Universidade Federal do Paraná*

![UTFPR](image6.png)  
*Universidade Tecnológica Federal do Paraná*
TABLE OF CONTENTS

Welcome Message ..................................................................................................................................................... 1
Committees ................................................................................................................................................................. 1
Venue .......................................................................................................................................................................... 2
Registration .................................................................................................................................................................. 2
Documentation .......................................................................................................................................................... 3
Registration and Help Desk ....................................................................................................................................... 3
Meeting Room .......................................................................................................................................................... 3
Internet Access .......................................................................................................................................................... 3
Lunch ......................................................................................................................................................................... 3
Hotels (see the map inside the back cover) ................................................................................................................ 3
Transportation from/to the Airport ........................................................................................................................ 4
Useful Telephone Numbers ....................................................................................................................................... 4
Location of Conference Events ............................................................................................................................... 4
Social Program .......................................................................................................................................................... 5
  Welcome Reception and Invited Concert I .................................................................................................................. 5
  Conference Dinner .................................................................................................................................................... 5
Tutorials ..................................................................................................................................................................... 5
  Tutorial 1 - Why is Brazilian Guitar Interesting? ....................................................................................................... 5
  Tutorial 2 - Music Autotagging .................................................................................................................................. 6
  Tutorial 3 - Deep Learning in MIR - Demystifying The Dark Art ............................................................................. 7
  Tutorial 4 - Conditional Random Fields with Application to Music Analysis .......................................................... 8
Invited Talk ............................................................................................................................................................... 9
  Style Manipulation as a Creative Device .................................................................................................................... 9
Industrial Panel Session ............................................................................................................................................ 9
Music Program .......................................................................................................................................................... 10
ISMIR Business Meeting ........................................................................................................................................ 14
Demos & Late-Breaking News .................................................................................................................................. 14
Technical Program ................................................................................................................................................... 14
  Information for Session Chairs .................................................................................................................................. 14
  Information for Oral Sessions .................................................................................................................................... 14
  Information for Poster Sessions ................................................................................................................................ 14
Sessions .................................................................................................................................................................... 15
  Registration ............................................................................................................................................................ 15
  Welcome Reception and Invited Concert .................................................................................................................. 15
  Tutorial 1 ............................................................................................................................................................... 15
  Tutorial 2 ............................................................................................................................................................... 15
  Tutorial 3 ............................................................................................................................................................... 16
  Tutorial 4 ............................................................................................................................................................... 16
  OS1: Representation Learning .................................................................................................................................... 16
  Poster Craze (Tuesday) ............................................................................................................................................... 16
  PS1: Poster Session 1 ................................................................................................................................................ 16
  Invited Talk ........................................................................................................................................................... 18
  OS2: Musical Cultures ............................................................................................................................................... 18
  PS1: Poster Session 1 Continuation .......................................................................................................................... 18
  Concert II (Selected Works) .................................................................................................................................... 19
  OS3: Text Processing ................................................................................................................................................ 19
  Poster Craze – (Wednesday) .................................................................................................................................... 19
  PS2: Poster Session 2 ................................................................................................................................................ 19
  OS4: Music Signal Analysis ....................................................................................................................................... 21
  PS2: Poster Session 2 Continuation ........................................................................................................................ 21
  OS5: Source Identification and Separation ............................................................................................................... 21
  Industrial Panel ........................................................................................................................................................ 22
  OS6: Listeners .......................................................................................................................................................... 22
  Poster Craze (Thursday) .......................................................................................................................................... 22
  PS3: Poster Session 3 ................................................................................................................................................ 22
  OS7: Symbolic Data Processing ............................................................................................................................... 24
  PS3: Poster Session 3 Continuation ........................................................................................................................ 24
  OS8: Music Similarity ................................................................................................................................................. 25
  Conference Dinner ..................................................................................................................................................... 25
  OS9: Structure and Form ......................................................................................................................................... 25
  MIREX ....................................................................................................................................................................... 25
  ISMIR Business Meeting ....................................................................................................................................... 26
  Demos & Late-breaking News ............................................................................................................................... 26
WELCOME MESSAGE

On behalf of the conference committee for ISMIR 2013, it is our pleasure to welcome you to Curitiba, Brazil for the 14th International Society for Music Information Retrieval Conference. This is the first time that this conference is being held in the South Hemisphere. The conference is jointly organized by the Pontifical Catholic University of Paraná (PUCPR), Federal University of Paraná (UFPR) and the Federal Technological University of Paraná (UTFPR).

ISMIR is the world’s leading research forum on processing, searching, organizing and accessing music-related data. The revolution in music distribution and storage brought about by digital technology has fuelled tremendous research activities and interests in academia as well as in industry. The ISMIR Conference reflects this rapid development by providing a meeting place for the discussion of MIR-related research, developments, methods, tools and experimental results. Its main goal is to foster multidisciplinary exchange by bringing together researchers and developers, educators and librarians, as well as students and professional users. We hope that this conference provides a very rewarding and valuable technical meeting.

The conference would not have been possible if not for the efforts of many people. Thanks are due to the Program Chairs – Dr. Alceu de Souza Britto Jr., Dr. Fabien Gouyon, Dr. Simon Dixon, and their PC members and reviewers for producing a high quality technical program, to the Music Chair Dr. Jônatas Manzolli and his PC members for producing an exciting music program. Thanks also to the efforts of the Workshop Chair Dr. Carlos Nascimento Silla Jr., the Local Arrangement Chair Dr. Luiz Eduardo Soares de Oliveira, and the Demo & Late-Breaking News Chair Dr. Mohamed Sordo.

Last but not least, our sincere thanks go to the authors of the papers, the speakers, and all the participants of ISMIR 2013 who have made this conference a resounding success.

We sincerely hope that all the participants will benefit from the technical contents of this conference, and enjoy the stay in Brazil!

Alessandro Lameiras Koerich (Pontificia Universidade Católica do Paraná, Brazil)
George Tzanetakis (University of Victoria, Canada)

Conference Chairs

COMMITTEES

Conference Chairs
Alessandro Lameiras Koerich (Pontificia Universidade Católica do Paraná, Brazil)
George Tzanetakis (University of Victoria, Canada)

Program Chairs
Alceu de Souza Britto Jr. (Pontificia Universidade Católica do Paraná, Brazil)
Fabien Gouyon (Instituto de Engenharia de Sistemas e Computação do Porto, Portugal)
Simon Dixon (Queen Mary University of London, UK)

Music Chairs
Jônatas Manzolli (Universidade de Campinas, Brazil)

Financial and Local Arrangements Chair
Luiz Eduardo Soares de Oliveira (Universidade Federal do Paraná, Brazil)

Tutorial Chair
Carlos Nascimento Silla Jr. (Universidade Tecnológica Federal do Paraná, Brazil)

Late-Breaking News/Demos Chair
Mohamed Sordo (Universitat Pompeu Fabra, Spain)

Program Committee
Jean-Julien Aucouturier (Institut de Recherche et Coordination Acoustique/Musique, France)
Stephan Baumann (German Research Center for Artificial Intelligence, Germany)
Juan Pablo Bello (New York University, USA)
Darrell Conklin (Universidad del País Vasco, Spain)
Sally Jo Cunningham (University of Waikato, New Zealand)
Matthew Davies (Institute for Systems and Computer Engineering of Porto, Portugal)
J. Stephen Downie (University of Illinois, USA)
Dan Ellis (Columbia University, USA)
Rebecca Fiebrink (Princeton University, USA)
Arthur Flexer (Austrian Research Institute for Artificial Intelligence, Austria)
José Tuti Fornari (University of Campinas, Brazil)
Masataka Goto (National Institute of Advanced Industrial Science and Technology, Japan)
Emilia Gómez (Universitat Pompeu Fabra, Spain)
Perfecto Herrera (Univertsitat Pompeu Fabra, Spain)
André Holzapfel (Bogazici University, Turkey)
Ozgur Izmirli (Connecticut College, USA)
Anssi Klapuri (Tampere University of Technology, Finland)
Peter Knees (Johannes Kepler University, Austria)
Paul Lamere (Echonest, USA)
Luis Gustavo Martins (Catholic University of Porto, Portugal)
Meinard Mueller (Max-Planck-Institut für Informatik, Germany)
Teresa Nakra (The College of New Jersey, USA)
Nicola Orio (University of Padova, Italy)
Geoffroy Peeters (Institut de Recherche et Coordination Acoustique/Musique, France)
Marcelo Queiroz (University of São Paulo, Brazil)
Andreas Rauber (Vienna University of Technology, Austria)
Robert Rowe (New York University, USA)
Markus Schedl (Johannes Kepler University, Austria)
Erik Schmidt (Pandora Internet Radio, USA)
Xavier Serra (Universitat Pompeu Fabra, Spain)
Joan Serrà (Artificial Intelligence Research Institute, Spain)
Douglas Turnbull (Ithaca College, USA)
Emmanuel Vincent (Institut National de Recherche en Informatique et en Automatique, France)
Anja Volk (Utrecht University, The Netherlands)
Ye Wang (National University of Singapore, Singapore)
Gerhard Widmer (Johannes Kepler University, Austria)
Geraint Wiggins (Queen Mary University of London, UK)

Music Committee
Carlos Guedes (New York University Abu Dhabi, UAE)
Mikhail Malt (Institut de Recherche et Coordination Acoustique/Musique, France)
Silvio Ferraz (University of Campinas, Brazil)

Venue

The conference will take place in the Bourbon Curitiba Convention Hotel. The hotel is located in the downtown area with easy access to major sights and it is just 22km from the Afonso Pena airport.

Bourbon is the most traditional hotel in Curitiba. It has been awarded 14 consecutive times as the Top of Mind and has at its restaurant the Best Feijoada of Curitiba according to some national magazines such as Veja and Gula.

Bourbon Curitiba Convention Hotel (1)
(http://www.bourbon.com.br/hoteis-e-resorts/#Curitiba-PR)
Rua Cândido Lopes 102 - Curitiba - PR
Phone: +55 41 3221 4600 / 41 3221 4601

Registration

The registration fee covers:

- Your individual 2013-2014 ISMIR membership fee (i.e. USD 10)
- Attendance to all paper sessions, posters, invited speeches between 5th-8th November
- Attendance to all concerts
- Mid-morning and mid-afternoon coffee breaks between 5th-8th November
- 4 meals between 5th-8th November
- 1 ticket for the conference banquet on 7th November
• 1 ticket for the welcome reception on 3rd November
• A delegate bag
• An electronic version of the conference proceedings.

**1-day registration includes:**
• Your individual 2013-2014 ISMIR membership fee (i.e. USD 10)
• Attendance to all paper sessions, posters, and invited speech of that day
• Attendance to that day’s concert
• Mid-morning and mid-afternoon coffee breaks of that day (2 in total)
• That day’s meal
• A delegate bag
• An electronic version of the conference proceedings

**Documentation**
• badge(s)*;
• tutorial tickets (if you have registered);
• 4 tickets for lunch
• one additional ticket for lunch, if you have registered for two tutorials;
• 1 ticket for the conference dinner;
• 1 ticket for the welcome reception.
*your badge must be worn at all times during the conference and Social Program.

**Registration and Help Desk**
The registration and help desk will be open over the periods below in the Bourbon Entrance Hotel Hall.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sun. Nov. 3</td>
<td>14:00-18:00</td>
</tr>
<tr>
<td>Mon. Nov. 4</td>
<td>08:00-17:00</td>
</tr>
<tr>
<td>Tue. Nov. 5</td>
<td>08:00-17:00</td>
</tr>
<tr>
<td>Wed. Nov. 6</td>
<td>08:00-17:00</td>
</tr>
<tr>
<td>Thy. Nov. 7</td>
<td>08:00-17:00</td>
</tr>
<tr>
<td>Fri. Nov. 8</td>
<td>08:00-12:00</td>
</tr>
</tbody>
</table>

**Meeting Room**
Information is available at the registration desk.

**Internet Access**
A wireless network is provided in the conference hotel. Login and password are available at the registration desk.

**Lunch**
Free lunches will be served to all participants, coffee and refreshments will be available during the coffee breaks. All lunches will be served in the 99 Brasserie Café at the Bourbon Curitiba Convention Hotel. Please notice that beverages are not included.

**Hotels (see the map inside the back cover)**

**Bourbon Curitiba Convention Hotel (1)**
(http://www.bourbon.com.br/hoteis-e-resorts/#Curitiba-PR)
Rua Cândido Lopes 102 - Curitiba - PR
Phone: +55 41 3221 4600 / 41 3221 4601

**Trevi Hotel and Business (2)**
(http://trevihotel.com.br/)
Rua Ébano Pereira, 139 - Centro - Curitiba - PR
Phone: +55 41 3224 0111

**Hotel Del Rey (3)**
(http://www.hoteldelrey.com.br/)
Rua Desembargador Ermelino de Leão, 18
Centro – Curitiba – PR

---

14th International Society for Music Information Retrieval Conference
Transportation from/to the Airport

The Curitiba International Airport (Afonso Pena International Airport - CWB) is located 20 km from downtown. Once you leave the baggage hall you can find several ATM Machines at the airport lobby as well as some Exchange Bureaus.

The transportation services from the Curitiba International Airport to downtown are:

- **Shuttle Bus:** A convenient bus service with air conditioning and TV set from the airport to the downtown. The ones who will take this line are able to ask the bus driver to stop in front of Bourbon Curitiba Convention Hotel (close to Biblioteca Pública). The ticket of this line costs R$12 (~US$6) and can be purchased at the airport or with the bus driver. It is scheduled to leave on each 30 minutes.
- **Taxi:** From the airport to downtown. It costs about R$60 (~US$30). Taxi drivers and bus personnel at Curitiba only accept Brazilian currency in cash.
- **Public Transportation:** From the airport to downtown from each 25 min there is a Bus called "Ligeirinho", a grey bus which costs about R$3 (~US1.5).

Useful Telephone Numbers

- Bourbon Hotel: +55 41 3221 4600
- PPGIa (PUCPR): +55 (41) 3271-1669
- General Chair: +55 (41) 8812-0878
- Local Arrangements Chair: +55 41 8859-0004

<table>
<thead>
<tr>
<th>Day</th>
<th>Event</th>
<th>Place</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Nov</td>
<td>Welcome Reception</td>
<td>Sociedade Garibaldi</td>
<td></td>
</tr>
<tr>
<td>3 Nov</td>
<td>Concert I</td>
<td>Sociedade Garibaldi</td>
<td></td>
</tr>
<tr>
<td>4 Nov</td>
<td>Tutorial 1</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>Bourbon Auditorium</td>
</tr>
<tr>
<td>4 Nov</td>
<td>Tutorial 2</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>All Seasons Hall</td>
</tr>
<tr>
<td>4 Nov</td>
<td>Tutorial 3</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>Bourbon Auditorium</td>
</tr>
<tr>
<td>4 Nov</td>
<td>Tutorial 4</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>All Seasons Hall</td>
</tr>
<tr>
<td>3-8 Nov</td>
<td>Paper Sessions</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>Bourbon Auditorium</td>
</tr>
<tr>
<td>3-8 Nov</td>
<td>Poster Sessions</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>All Seasons Hall</td>
</tr>
<tr>
<td>4-8 Nov</td>
<td>Lunch</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>99 Brasserie Café</td>
</tr>
<tr>
<td>5 Nov</td>
<td>Concert II</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>Bourbon Auditorium</td>
</tr>
<tr>
<td>5 Nov</td>
<td>Invited Talk</td>
<td>Bourbon Curitiba Convention Hotel</td>
<td>Bourbon Auditorium</td>
</tr>
</tbody>
</table>
Day | Event | Place | Room
--- | --- | --- | ---
6 Nov | Industrial Panel | Bourbon Curitiba Convention Hotel | Bourbon Auditorium
6 Nov | Concert II | Bourbon Curitiba Convention Hotel | Bourbon Auditorium
7 Nov | Banquet | Restaurante Madalosso
7 Nov | MIREX | Bourbon Curitiba Convention Hotel | Bourbon Auditorium
7 Nov | MIREX Posters | Bourbon Curitiba Convention Hotel | Bourbon Auditorium
7 Nov | Demos & Late-Breaking News | Bourbon Curitiba Convention Hotel | All Seasons Hall
8 Nov | ISMIR Business Meeting | Bourbon Curitiba Convention Hotel | Bourbon Auditorium

**SOCIAL PROGRAM**

**Welcome Reception and Invited Concert I**
Date: & Time: Sunday, November 3 – starting at 19:30
Place: Sociedade Garibaldi (number 7 in Map)
Praça Garibaldi, 12 (just three blocks from Bourbon Hotel).
Alto São Francisco
Fee: it is included in the conference fee.

**Conference Dinner**
Date: & Time: Thursday, November 7 – starting at 20:30
Place: Restaurante Madalosso
Av. Manoel Ribas, 5875 - Santa Felicidade
Fee: extra tickets can be purchased for U$ 50 per ticket (cash only).

Transportation: The buses will leave the Bourbon Curitiba Convention Hotel at 20:00.

Madalosso’s family new generation. The restaurant’s traditional menu, which was created 30 years ago, has the fries and crisps 'polenta' - the Italian version of cornmeal mush - as the main dish, pioneering specialty in Brazil, followed of more than 15 plates options - served in the rotation form - among pastas, chicken, salads and delicious desserts with a large variety of drinks. The ability to serve several customers at once such as families, tourists and events participants - makes the Madalosso one of the most versatile restaurants of the World. Preserving its essence, Madalosso remains strong and active in its customer's life. This is its vocation and its true pride. The Madalosso Restaurant, with its 4.645 places, is considered the biggest restaurant in the whole American Continent and one of the biggest in the world, according to the Guinness Book of Records.

**TUTORIALS**

**Tutorial 1 - Why is Brazilian Guitar Interesting?**

**François Pachet**
Sony Computer Science Lab
Paris, France

**Giordano Cabral**
Daccord Music Software and the MusiGames Studio
Recife, Brazil

**Abstract:** Following the ISMIR 2012 tutorial "Why jazz is interesting?" this tutorial will give an overview of the wonderful facets of "Brazilian guitar" for a MIR audience. Both presenters are accomplished Brazilian guitar players, and the tutorial will include many live demonstrations of the concepts addressed. Brazilian guitar is not a...
genre per se, nor a style, not even a specific instrument. But almost every Brazilian knows how to play guitar in a certain way: rich chords, complex rhythms, harmonious melodies. Almost every Brazilian also knows hundreds of songs and this shared repertoire plays a big role in shaping Brazilian culture in general. Consequently, Brazilian guitar is a key instrument in many genres of so-called "MPB" (Música Popular Brasileira for Brazilian Popular Music), including choros, bossa nova (of course), samba, and all the developments of an incredibly lively musical country. However, it is still a hard task to learn how to play Brazilian guitar and understand its basic principles. Its intrinsic rules are still ill studied, and poorly formalized. This tutorial will attempt to explain why Brazilian guitar is so fascinating. Like the preceding tutorial on jazz, it will be delivered from a "musician" viewpoint, but targeted at a scientifically advanced audience of MIR people. The main assumption of this tutorial (hopefully to become a series) is that in-depth knowledge of specific musical genres is a prerequisite to build the next generation of MIR systems.

**Biographies**

**François Pachet** was trained in engineering, computer science and artificial intelligence (University of Paris 6) and is also a jazz musician. His research addresses issues in music interaction and production. He recently developed several jazz generation systems including Virtuoso (a system that generates virtuoso bebop improvisations) and VirtualBand (a system that generates adaptive jazz accompaniments). He recently obtained an ERC Advanced Grant to develop a new generation of music and text generation tools (and is looking for motivated, talented people to join his team in Paris). He was also trained in classical guitar (Ecole Normale de Musique de Paris), Baroque harmony (Conservatoire de Paris X) and jazz (Berklee school). He plays jazz guitar and composes jazz and pop music. He has 2 albums in progress. He learned to play Brazilian guitar by studying with Roland Dyens, and by listening endlessly to albums by Baden Powell.

**Giordano Cabral** is the founder of Daccord Music Software and the MusiGames Studio. Daccord was recently acknowledged by FINEP as one of the most innovative companies in Brazil. The company has released a dozen game titles and musical apps, including some on the Top Charts of Apple's App Store. Giordano was also nominated by INFO Exame magazine for the entrepreneur of the year 2011 award. He is a computer music researcher, with PhD from the Université Pierre et Marie Curie (Paris VI). He is an associate professor at UFRPE, integrates the Special Committee of Computer Music of the Brazilian Computer Science Society and coordinates the Research Group of Music, Technology, Interaction and Creativity (MUSTIC). He is also an accomplished musician (guitar, drums, singing) and performs regularly in Brazil.

**Tutorial 2 - Music Autotagging**

**Mohamed Sordo**  
Music Technology Group  
Universitat Pompeu Fabra  
Barcelona, Spain

**Emanuele Coviello**  
Dept. of Electrical and Computer Engineering  
University of California, San Diego  
USA

**Abstract:** Technology is revolutionizing the way in which music is distributed and consumed. As a result, millions of songs are instantly available to millions of people, on the Internet. This has created the need for novel music search and discovery technologies, to help users find a "mellow Beatles song" on a nostalgic night, "scary Halloween music" on October 31st, or address a sudden desire for "romantic jazz with saxophone and deep male vocals", without knowing an appropriate artist or song title. One important task in the realization of a music search engine is the automatic annotation of music with descriptive keywords, or tags, based on the audio content of the song. Music annotations can be used for a variety of purposes, such as searching for songs exhibiting specific qualities (e.g., jazz songs with female vocals and saxophone), or retrieval of semantically similar songs (e.g., for generating playlists). In this tutorial we look at the current state-of-the-art in content-based automatic music tagging. We cover the challenges in building an automatic music tagger, ranging from ground truth collection, statistical modeling, inference, and evaluation. We examine past and recent work, and discuss advantages and disadvantages of the various solutions. We finally put emphasis on the most recent discoveries.
Biographies

Dr. Mohamed Sordo is a Post-doctoral researcher at the Music Technology Group of the Universitat Pompeu Fabra in Barcelona, Spain. He obtained his PhD at the Music Technology Group in 2012, with a thesis entitled "Semantic annotation of music collections: a computational approach" [5], under the supervision of Dr. Xavier Serra and Dr. Oscar Celma, including a research stay at INESC Porto under the supervision of Dr. Fabien Gouyon. His thesis is mainly devoted to the topic of automatic music tagging. Mohamed's research areas involve music text/web mining, music information retrieval and machine learning. Mohamed has participated in a number of European funded projects, including Variation, Pharos and CompMusic, where he is currently involved, developing systems to extract semantically and musically meaningful information from web data.

Emanuele Coviello is Candidate in Philosophy in Electrical and Computer Engineering, at the University of California at San Diego (UCSD). Emanuele is part of Prof. Gert Lanckriet's Computer Audition Laboratory (CALab), where he researches about machine learning and applies his discoveries to music information retrieval. Emanuele received the "Premio Guglielmo Marconi Junior 2009" award, from the Guglielmo Marconi Foundation (Italy), and won the "2010 Yahoo! Key Scientific Challenge Program, sponsored by Yahoo!, and during Summer 2012 was an intern at Microsoft Research in Silicon Valley. Emanuele received the "Laurea Triennale" degree in information engineering and the "Laurea Specialistica" degree in telecommunication Engineering from the Università degli Studi di Padova, Italy, in 2006 and 2008, respectively.

Tutorial 3 - Deep Learning in MIR - Demystifying The Dark Art

November 4 (Monday) / 14:00 – 17:20
Bourbon Auditorium

Philippe Hamel
National Institute of Advanced Industrial Science and Technology
Japan

Eric J. Humphrey
Music and Audio Research Lab
New York University
USA

Erik M. Schmidt
MET-lab
Drexel University
USA

Abstract: Following recent developments both within and beyond the music information retrieval (Music-IR) community, the popularity of deep learning as an approach to solving machine perception problems is noticeably growing. Despite this increasing interest, the prevailing sentiment seems to be that these methods are not well understood, uninterpretable, and generally impractical. As three successful practitioners of deep learning in Music-IR, we would like to offer a comprehensive tutorial featuring three complementary perspectives in an effort to begin addressing these issues.

Biographies:

Philippe Hamel obtained his Ph.D. in computer science at Université de Montreal in 2012. His main research interests are machine learning and its applications to music information retrieval. One of his goals is to find ways to obtain better and richer representations of music audio. His recent work has been focused on artificial neural networks, deep learning and signal processing. He is interested in music information retrieval problems such as automatic tagging, music classification, music similarity and music recommendation. Prior to his work in computer science, Philippe studied physics at Université de Montreal where he obtained his masters degree in theoretical physics (2006) and his bachelor degree in mathematics and physics (2004). He is currently working at AIST, Japan as a postdoctoral researcher.

Eric J. Humphrey is a Ph.D candidate (ABD) in music technology at New York University, with an expected graduation in 2014. In the broadest sense, his research is ultimately motivated by the hunt for better artificial intelligence; currently, this takes the form of exploring machine learning, and particularly data-driven methods, in the context of music signal processing. Parallel to this ongoing work, he is also an advocate of feature learning and deep architectures in music informatics, both of which can be viewed as extensions to traditional approaches in the field. Though interested in general approaches more than specific applications, his research has focused on
deep learning in the areas of timbre similarity and chord recognition. Before attending NYU, Eric earned a masters of science in Music Engineering Technology at the University of Miami (2009) and bachelors of Science in Electrical Engineering at Syracuse University (2007). His masters thesis explored the application of signal processing in music therapy by developing systems to produce improved playlists for motor entrainment during recreational running. In addition to his academic pursuits, he has also held multiple independent consulting positions, is named as an inventor in several patent applications, and serves as student member on the ISMIR Board.

Erik M. Schmidt is a Post-Doctoral Researcher in the Music and Entertainment Technology Laboratory (MET-lab) at Drexel University in Philadelphia, PA. He received his Ph.D. in Electrical Engineering from Drexel University in 2012, and also holds an MSEE from Drexel University and BSEE from Temple University. During his undergraduate career, Erik also worked for Aviom, Inc., a company in the market of digital audio networking technologies. Eriks research focuses on the automatic prediction of emotional content in musical signals. In seeking to understand the complex relationship between acoustic data and emotion space representations, his work focuses on the development of graphical models and deep learning techniques for identifying these relationships, and how they evolve over time in synchrony with one another. Using deep learning approaches, his work has developed multiple methods for identifying deep structured connections between the affective and acoustic domains. These networks can be used for emotion prediction, feature extraction, and perhaps even for providing a new understanding of human emotion in general.

Tutorial 4 - Conditional Random Fields with Application to Music Analysis

November 4 (Monday) / 14:00 – 17:20
All Seasons Hall

Slim Essid
Telecom ParisTech
France

Abstract: Conditional Random Fields (CRF) (Lafferty, 2001) are a powerful class of discriminative classifiers for structured input - structured output data prediction, which have proven successful in a variety of real-world classification tasks. While they have been receiving a booming interest from researchers in text and natural language processing (Taskar, 2002; Settles, 2004; Lavergne, 2010), computer vision (He, 2004, Wang, 2006; Liu, 2008; Chang, 2009; Mori, 2009; Gao, 2012) and speech analysis (Gunawardana, 2005; Reiter, 2007; Morris, 2008; Hong, 2010), they remain to date rarely used in the MIR community despite a few remarkable contributions (Corey, 2007; Joder, 2011; Schmidt, 2011; Joder, 2013). Hence, this tutorial aims at introducing the CRF framework to MIR researchers, providing the theoretical foundations, methods and algorithms for CRF-based modeling, training and inference; while focusing on the aspects that are particularly relevant to music analysis applications and discussing concrete case-studies.

Biography: Slim Essid is an Associate Professor at the Department of Image and Signal Processing of Telecom ParisTech with the Audio & Waves group. He received the state engineering degree from the École Nationale d'Ingénieurs de Tunis in 2001; the M.Sc. (D.E.A.) degree in digital communication systems from the École Nationale Supérieure des Télécommunications, Paris, France, in 2002; and the Ph.D. degree from the Université Pierre et Marie Curie (Paris 6), in 2005, after completing a thesis on automatic audio classification. His research interests are in machine learning for multimodal signal analysis with applications to music information retrieval, audiovisual content analysis, and human behavior and activity analysis. He has been involved in various French and European research projects among which are Quaero, Infom@gic, Networks of Excellence Kspace and 3DLife, and collaborative projects REVERIE and VERVE. Over the past 3 years, he has graduated 3 PhD students and is currently supervising 4 other students and collaborating with 2 post-docs. He has published over 60 peer-reviewed conference and journal papers with more than 50 distinct co-authors. He serves on a regular basis as a reviewer for various audio and multimedia conferences and journals, for instance various IEEE transactions, and as an expert for research funding agencies. In 2013 he is co-chairing the 14th edition of the International Workshop on Image and Audio Analysis for Multimedia Interactive Services (WIAMIS). More information on http://www.telecom-paristech.fr/~essid.
Style Manipulation as a Creative Device

François Pachet
Sony Computer Science Lab
Paris, France

Abstract: Creative artifacts are often obtained by combining ideas, patterns, ways of doing - in a word, styles - to new configurations or situations. We describe a new approach to content authoring tools based on this idea. The approach is based on letting users explicitly manipulate style, as a computational object. In such a context, one key technical problem is to generate sequences that imitate a style, while satisfying arbitrary constraints, coming from the domain of study. We describe a novel sequence generation approach based on an old statistical tool: Markov chains. We show that it is possible to explore the complete set of sequences that a Markov model can generate, using combinatorial optimization techniques. We show that the addition of even simple constraints biases the initial Markov model in interesting ways, which are not fully understood. We describe some recent results in constrained Markov generation which pave the way for novel and exciting style manipulation applications, in music composition, improvisation and literary text writing, and give a few examples developed within the Flow Machines project.

Biography: François Pachet was trained in engineering, computer science and artificial intelligence (University of Paris 6) and is also a jazz musician. His research addresses issues in music interaction and production. He recently developed several jazz generation systems including Virtuoso (a system that generates virtuoso bebop improvisations) and VirtualBand (a system that generates adaptive jazz accompaniments). He recently obtained an ERC Advanced Grant to develop a new generation of music and text generation tools (and is looking for motivated, talented people to join his team in Paris). He was also trained in classical guitar (Ecole Normale de Musique de Paris), Baroque harmony (Conservatoire de Paris X) and jazz (Berklee school). He plays jazz guitar and composes jazz and pop music. He has 2 albums in progress. He learned to play Brazilian guitar by studying with Roland Dyens, and by listening endlessly to albums by Baden Powell.

INDUSTRIAL PANEL SESSION

November 6 (Wednesday) / 17:20 – 18:20
Bourbon Auditorium

Chair
George Tzanetakis (University of Victoria, Canada)

Panelists
Mickael Le Goff (Native Instruments)
Andreas Ehmann (Pandora)
Matthew Hoffman (Adobe)
Philippe Hamel (Google)

Description
The focus of this panel is to discuss the relationship between academic MIR research and industry practice. For this, we have invited key representative of some of the companies that have been actively utilizing MIR techniques in their business. The panelists will discuss how their companies have utilized MIR in the past, what MIR topics are they currently working on, and suggest directions for future research. The plan is to leave enough time for open ended discussion and questions.
Music Chair
Jônatas Manzolli (University of Campinas, Brazil)

Music Committee
Carlos Guedes (New York University Abu Dhabi, UAE)
Mikhail Malt (Institut de Recherche et Coordinations Acoustique/Musique, France)
Silvio Ferraz (University of Campinas, Brazil)

Concert I (Invited Ensemble)

In the first musical concert, we welcome ISMIR2013 delegates with Brazilian music performed by the CARCOARCO ensemble. The Brazilian music has been widely acclaimed in the musical world scenery mainly through bossa nova, and dances such as samba and derived rhythms. These genres are a typical byproduct of the post-WWII urban culture, a period that witnessed an acceleration of the processes of urbanization and industrialization. Recently, it has been realized, however, that the richness of the Brazilian music is much larger than it was thought to be a few decades ago. Easier access to information and more exposure through the media have played a major role in this process. Besides the musical pearls cultivated in the cities, already familiar to most ears through the media and the phonographic industry, a hidden treasure awaited to be uncovered in rural Brazil. Five centuries of racial crossing between Portuguese settlers, African slaves and native Brazilians, became a melting pot where cultural values simmered to produce an exquisite musical meal seasoned with an assortment of rhythms, dances and instruments. The vast Brazilian musical diversity has remained untouched, in a way, as many of the country’s tropical forests. Today, public awareness and preservation are essential for this cultural heritage to remain alive.

The rabecas, Brazilian fiddles used in this concert, come from the streets, public plazas, rural and fishermen communities of distant regions in Brazil. These instruments, despite their decades long anonymity, begun more recently to climb into important stages in Brazil and the world. Along this history, many and different hands have helped them with a little push, from “authentic” rabeca players to new generations of musicians, like Siba, in Mestre Ambrósio, Antonio Nóbrega and José Gramani. With their personal baggage, these musicians have been creating a new Brazilian rabeca, which far away from its origins, is now treading new aesthetic grounds.

CARCOARCO visits the Brazilian popular music repertory, exploring a refined language most common to chamber music. Having cultural diversity as the basis for the musical creation, CARCOARCO makes use of instruments, musical genres and rhythms deep-rooted in the Brazilian music. The rare Brazilian rabecas and the several percussion instruments, such as pandeiro, zabumba, alfaia, congas and ceramic vases, well exemplify this aesthetic principle that combines research and musical outcome. All these instruments are in constant dialogue, in a much-elaborated discourse, in which the frontiers between classical and popular, tradition and modernity are constantly being trespassed. However, without losing the characteristic spontaneity of non-written and improvised music.

Concert Program

01- Choro de Gafeira – Pixinguinha
02- Folhas de Outono - Esdras Rodrigues
03-Tem Carrêgo - Roberto Peres
04-Carinhosa - José Gramani
05- Dobradinho - José Gramani
06- Ouvirudum - Fantasia sobre o Hino Nacional - Esdras Rodrigue
07- Tico-tango no Fubá - Esdras Rodrigues
08- Lento - José Gramani
09- 03 de Outubro - Hermeto Pascoal
10- Goldberg - Tema e Variação - J. S. Bach
11- Manaíra - José Gramani

Musicians

Esdras Rodrigues
Owes much of his musical training, either in education or as a professional musician, to Campinas, where he obtained his Bachelor in violin at the University of Campinas (UNICAMP) and also worked for many years in the Campinas Symphony Orchestra. He studied violin with Luis de Tulio, Gualberto Estades (UNICAMP), Nathan Schwartzman (UNICAMP) and Paulo Bosisio (RI) and received many prizes in chamber music competitions and as a
Fábio dos Santos
He obtained his Bachelor of Music from the University of Campinas – Unicamp (2003) with major in violin under the guidance of Esdras Rodrigues. He taught in the Festival de Música de Londrina (2004) and Festival Beltrão Francisco (PR). Since 1998, he is a member of the “Oficina de Cordas” orchestra. He has participated in several productions such as “Pra que Seream as Estrelas”, Micrants Dance Company; “Tempo da Delicadeza” des Consíligia Latorre (2005); “Saudade: Video Cartas para Cuba” by Coraci Ruiz e Julio Matos (2005); “Era uma Vez?” directed by Alexandre Caetano (2006); “O que seria de nós sem as coisas que não existem?” with LUME Theatre Group. He was awarded by Campinas City with “Carlos Gomes” Medal for artistic merit. In 2006, he obtained his Master degree in Music at UNICAMP under the guidance of Prof. Dr. Jose Roberto Zan. He works for almost eleven years with Professor Shinobu Saito, developing the Suzuki Method in Brazil. He keeps music activities as popular musician and scholar, presenting, arranging, composing and teaching in São Paulo and Campinas.

Mauro Braga Campos
He is a cellist graduated at UNICAMP under the guidance of Dimos Goudarouilis (Greece/USA). He is member of the “Oficina de Cordas” Orchestra, founded by the researcher Jose Gramani and now directed by Tibo Delor (France/U.S.) with whom he recorded the CDs "Retratos em vários compassos", “Tempo de Delicadeza” and “Para Cordas Brasileiras”. He has participated in several orchestras and chamber groups such as “Orquestra Jovem de Campinas” (UNICAMP), “Orquestra Sinfônica de Piracicaba”, Trio “Mas Non Troppo”, CARCOARCO, among others. He has performed with the LUME Theatre Group in the production “O que seria de nós sem as coisas que não existem”, directed by Norberto Presta (Italy). He integrates the Theatre Cia. "ParaladosanjoS" with which he has participated in the following plots: “Crossroad”, “Contos Urbanos” and “ParaladiBom”; composer and interpreter of the soundtrack of “Euteheia, um Eloqio a Loucura”. Along his education he attended to several master classes, among them: chamber music with pianist Maria Teresa Madeira, cellist Raiff Dantas, Baroque Music with Manfredo Kraemer (ARG), cellist Robert Suetholz (USA/BR), and with Baroque Music Trio “Musica Ad Rhenum” (Netherlands), and others.

“Magrão” Roberto Peres
He was born in Campinas, an autodidact musician who teaches percussion exploring different Brazilian rhythms. He began his career as a percussionist in 1979, since then he has performed extensively in the Campinas region, and numerous cities. Acted in concert and recordings with many groups, especially with: Concilia Latorre and “Oficina de Cordas”, “Grupo Cuidado que Mancha”, “Grupo Mandinga”, “Orquestra Brasileira de Guitarras”, Raoul de Souza, Provena, Elba Ramalho, Nelson Gonçalves, “Big Band” of University of Campinas (Unicamp), “Grupo Aquarela Musical and Rafael dos Santos, Badi Assad, Arthur Maia, Levi Ramiro, Paisagens (Ivan Vilela), Trio Azeviche, Paulo Cesar Pinheiro. He researched with the artist Rosa Morena (Campinas) the development of unique ceramic instruments to be use in the vast repertoire of Brazilian popular music. Musicians such as Nana Vasconcelos, Robby Silva, Toninho Horta, Billy Higgins and Gary Peacock have already acclaimed this work. Currently integrates “Trio Azeviche” and CARCOARCO, with which made presentations in Brazil and abroad. He works as a luthier of percussion instruments, specializing in the constructions of Brazilian “tamborins”. He participated on several CD recordings such as Levi Ramiro (Bauru), and music groups such as “Batuque de Cordas” (Porto Alegre), “Bafafá” (Campinas), Paulo Freire (Campinas), “Quarteto de Cordas Vocais” (Campinas), Trio Azeviche (Campinas) e Grupo "Ultimo Tipo" (Campinas), and several soundtracks for television.

Concert II (Selected Works) November 5 (Tuesday), 18:00-20:00 Bourbon Auditorium

01 - Sen no Kioku (2013) - Ayako Sato

“Sen no Kioku” means the recollections of a line. The composer traveled to get in touch with a certain “sen” (a line). This piece is the reminiscence of my private memories and a trace of my journey by the sound materials, which picked up daily noises on a destination. Noises were abstracted, or told some anecdotes.
**Biography: Ayako Sato**, born in Japan, is currently a master’s student at the Graduate School of Music, Tokyo University of the Arts. She received her Master of Music from Senzoku Gakuen College of Music. Her electroacoustic works have been selected for performances at international conferences and festivals including CCMC (Japan, 2006, 2008, 2011, 2012 and 2013), FUTURA (France, 2012), WOCMAT (Taiwan, 2012), NYCEMF (USA, 2013), SMC (Sweden, 2013), ICMC (Australia, 2013) and ISSTC (Ireland, 2013). She was awarded the International Electroacoustic Music Young Composers Awards at WOCMAT (Taiwan, 2012), the honorary mention of CCMC (Japan, 2012) and the honorary mention of Destellos Competition (Argentine, 2013).

02 - Figer – Sever Tipei

figer(fr.), vb. to clot, coagulate, congeal. Realized with software for computer-assisted (algorithmic) composition and sound design, the work suggests a preoccupation with continuity and narrative in music. Four sections, three interludes, and a coda exploit three types of materials: points, lines, and chords or sound mass textures. They could either coalesce in a tale or prevail as an abstract game.

**Biography: Sever Tipei** was born in Bucharest, Romania, and immigrated to the United States in 1972. He holds degrees in composition and piano performance from the University of Michigan and Bucharest Conservatory. Tipei has been teaching since 1978 at the University of Illinois at Urbana-Champaign School of Music where he also manages the Computer Music Project of the UIUC Experimental Music Studios. Most of his compositions were produced with software he designed: MP1 - a computer-assisted composition program first used in 1973, DIASS and DISCO - programs for sound synthesis, and MACAVE - software for the visualization of music in an immersive virtual environment. More recently, Tipei and his collaborators have developed DISSCO, software that unifies computer-assisted (algorithmic) composition and (additive) sound synthesis into a seamless process. Between 1993 and 2003 Tipei was also a visiting scientist at Argonne National Laboratory where he worked on the sonification of complex scientific data. Tipei regards the computer as a collaborator whose skills and abilities complement those of the human artist. He sees the composition of music both as an experimental and a speculative endeavor that delivers a particular worldview.

03 - Lignes et Pointes – Antonio D’amato

Étude Pour La Décomposition en Deux Parties D’une Oeuvre de Joan Miró

“Lignes et Pointes” is an acousmatic piece in two parts, intended as an etude on simple elements, grouped in two basic categories. Long and slow elements are exclusively dominant in the first part, while impulsive sounds build up the second part. These elements are selected and extensively overlapped in order to develop an abstract study on basic elements of a music vocabulary. Synthesized and acoustically derived sounds are both used, but the focus here is mainly on the overall shape of each element. The work is inspired by a gouache included in the first set of “Constellations”.

**Biography: Antonio D’amato** is intoxicated by music. In fact he graduated at conservatory in Piano, Harpsichord, Music for multimedia, Instrumental music teaching and Electronic music. He also studied composition for eight years, bassoon for three years, baroque organ and audio engineering. In 2010 he was “Ondes Martenot” student in Strasbourg and Paris. At university he was student in Media and Communication. At the moment his main interest is joining traditional composition procedures and the wide opportunities of computer-based music. Some of his instrumental works are published by Forton Music, U.K. His first electronic composition was selected for a performance during the ICMC 2012 Conference.

04 - Gesmi: Generative Electronic Statistical Modelling Instrument - Arne Eigenfeldt

GESMI is a fully autonomous computationally creative system that generates style-specific electronic dance music based upon a machine-analysed corpus. The corpus consists of 24 break beat tracks that have been transcribed by human experts. Aspects of transcription include musical details, timbral descriptions, signal processing, and descriptions of overall musical form. This information is then compiled in a database, and machine-analysed to produce data for generative purposes. GESMI began producing complete break beat tracks in March 2013.

**Biography: Arne Eigenfeldt** is a composer of live electroacoustic music, and a researcher into intelligent real-time music systems. His music has been performed around the world, and his collaborations range from Persian Tar masters to contemporary dance companies to musical robots. His research has been presented at conferences
such as ICMC, NIME, ICCC, ISEA, ISMIR, and SMC. He is an associate professor of music and technology at Simon Fraser University, Canada, and is the co-director of the Metacreation research group, which aims to endow computers with creative behavior, http://www.metacreation.net/

05 - Elvis by Elvis - Ryan Groves & Thor Kell

Elvis by Elvis is a piece for singer and computer. It asks questions about the source and control of music and about authenticity of performance. It also investigates abstractions of computer control structures and lack of control on the part of the performer. The human singer performs two songs by Elvis Costello. Based on the singer’s voice, the computer picks accompanying chords. The audio for these chords is generated using small segments of 16 songs by Elvis Presley. The result is a hazy, pointillistic accompaniment that forces the singer to alter their phrasing, which in turns alters the accompaniment, and so on...

Biographies:
Thor Kell is an MA student in the Input Devices and Musical Interaction Lab at McGill University. He has written music for violin & heartbeat sensor, collaborated on percussion pieces at NIME, and is the current maintainer of the Echo Nest Remix API. He likes interfaces that are both novel and specific, cats, and the Internet. Find him at tidepool.ca.

Ryan Groves is an MA student in the Distributed Digital Archives and Libraries Lab in the Schulich School of Music at McGill University. His interests are in machine learning algorithms for music, and computational musicology. He has composed and produced two popular music albums, and works as a software developer at a musical game company. When not coding, he plays piano, guitar, sings, and is attempting to learn the drums. Find him at ryangroves.com

06 - O Azete, a Lua e o Rio – Ivan Simurra

Numa ilha rodeada de ouro, com água até o joelho

Welcome to this particular scenario! Using some Music Information Retrieval concepts and techniques, the formal structure of this work for Flute, Bb Clarinet/Bb Bass Clarinet and Violoncello, is based on the relationship between two particular audio descriptors which relate to the perception of sound intensity (loudness) and to the differences and similarities of the spectral behavior over time (spectral irregularity). This procedure aims to describe “jagged” and smooth spectra with loud and quiet sonorities, respectively. A virtual environment in Pure Data (PD) software enabled to analyze some potential orchestral settings called "Sound Marks". They were created through a sound database of several instrumental techniques. The formal structure of the work is built upon four Sound Marks: low spectral irregularity/low loudness; high spectral irregularity/low loudness; high spectral irregularity/high loudness and low spectral irregularity/high loudness. Therefore, be my guest to appreciate the moonlight and the river, tasting whatever you want with this olive oil!

Biographies:
Ivan Eiji Simurra (Composer) composer, researcher, performs electronic manipulations in Pop Music (DJ). BA in Music Composition and Master in Creative Processes at IA/UNICAMP with the funding of FAPESP and CAPES— FAPESP, respectively. Currently, he develops his doctoral research in Creative Processes at IA/UNICAMP and NICS/UNICAMP, with the FAPESP funding. He teaches Harmony, Theory and Music Composition. Also he develops projects relating instrumental music composition, science, technology and musical analysis with computer assistance. Participated in several Festivals, Master Classes and Music Workshops His works are being performed in Brazil, Argentina, Chile and United States.

Gabriel Rimoldi (Flute) flutist, he studied Music at Federal University of Uberlândia and currently he is a Master’s Degree Candidate at the State University of Campinas. His current research relates to interactive models applied to music creation, sound synthesis and spatialization in electroacoustic music. He produces electroacoustic works, especially mixed and audiovisual. He participated in several Master Classes, Courses and Music Festivals in Brazil and abroad. Current, he directs the “Quartet Cerrado”, chamber music group dedicated to the research and performance of contemporary music. Recently it was released the CD "Brazilian Music for Flutes" with works by many contemporary Brazilian composers.

Mauricio Carneiro (Bb Clarinet/Bb Bass Clarinet) began his studies in 1981, participating in several orchestras, such as the Sinfônica Jovem Estadual and the Sinfônica Jovem Municipal de São Paulo. He awarded the Concurso Jovens Solistas in 1985. In 1986, he joined the Orquestra Sinfônica do Paraná. He is a regular participant in Master
William Teixeira (Violoncello) was born in Rio Claro/SP where began his studies at the cello. After he had lessons at Instituto Baccarelli with Prof. Eduardo Bello he moved to Instituto Fukuda and since then he belongs to the class of Dr. André Micheletti. He has performed with several Brazilian orchestras and nowadays is cellist for Orquestra Filarmônica de São Caetano do Sul. He has completed his Bachelor's Degree at São Paulo State University (UNESP) and currently is a candidate for Master's Degree at Campinas University (UNICAMP).

### ISMIR BUSINESS MEETING

**November 8 (Friday) / 11:40 – 12:40**

**Bourbon Auditorium**

**Agenda**
- Annual Report from the ISMIR Board
- Election of ISMIR Board 2014-15
- Any other business
- Presentation from the hosts of ISMIR 2014

### DEMOS & LATE-BREAKING NEWS

**November 8 (Friday) / 14:00 – 18:00**

**Maragipoge Room/Catuaí Room/Sumatra Room/Bourbon Auditorium/All Seasons Hall**

The Demos/Late-breaking news (D&L) track has become a popular and integral part of ISMIR conferences. Like in the last ISMIR, the format of the D&L is following an “unconference” style: there will not be any formal submission nor peer-review. The D&L program is built by participants, both before the event on an open website (http://ismir2013.wikispaces.com/), and even during the conference. Instead of focusing on individuals reporting in a one-to-many way on their personal accomplished research, D&L focuses on capturing those informal yet often insightful and original ideas that typically emerge in collaborative settings at ISMIR (e.g. at coffee breaks, hallways, etc).

### TECHNICAL PROGRAM

#### Information for Session Chairs

The chair of each session is expected to arrive at the session room at least 15 minutes before the session begins, and to check the attendance of speakers in the session according to the schedule. Each speaker has strictly 15 minutes for presentation and 5 minutes for discussion and changeover. The chair may ask speakers who bring their own laptops to test them for compatibility before the session begins.

#### Information for Oral Sessions

Each speaker will have 20 minutes for presentation + Q&A with the audience. We encourage you to prepare your slides so that your presentation fits in 15 minutes, and to leave 5 minutes for questions from the audience. The chair will conduct the session and NO time extension will be granted beyond your 20 minutes. Please, be present in the room and introduce yourself to your session chair at least 15 minutes before the start of your session. The session room will be equipped with a desktop computer with Windows, and a LCD projector. Presenters who use this computer must load their presentations off their own CD-ROMs or USB Memory stick before the session begins to test that the slides, sound examples and/or videos all work.

#### Information for Poster Sessions

Each day, a different selection of posters will be hung in specific spaces at the venue for the whole day. On the specific day of display of their poster, presenters are expected to be near their poster at least during the two coffee breaks. Interactions around posters are also welcome during any time of that day.
The board sized 95cm (width) by 120cm (height) will be provided for each paper. Each paper’s code will be shown up on the board. Please mount your poster early in the morning before the first coffee break and remove it after the poster session. We encourage all presenters to stay close to their posters during coffee breaks for anticipated discussion with the participants.

During the conference, “poster-craze” sessions will be organized during regular plenary sessions, between 10.20am - 11.00am: on the specific day of their poster presentation, each poster presenter will have exactly 1 minute and 1 single slide (time will be controlled by the session chair) to introduce their poster and “tease” the audience, inviting them to a more personal scientific discussion later around their poster.

**Voting for best presentation award**

Two papers will be awarded with a best presentation award, one for oral presentation and one for poster presentation. They will be selected by votes collected during the conference. Please select one oral presentation and one poster presentation which you think are the worthiest of these awards, and write the paper titles and respective author names on the voting ballots you will find in your conference bag. Voting boxes (one for each category) will be placed on the registration desk.

---

**SESSIONS**

<table>
<thead>
<tr>
<th>Registration</th>
<th>Sunday Nov.3 – 14:00-18:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>The registration desk will be open daily at the Foyer (1&lt;sup&gt;st&lt;/sup&gt; floor) of Bourbon Curitiba Convention Hotel</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Welcome Reception and Invited Concert</th>
<th>Sunday Nov.3 – 19:30-22:00</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Garibaldi Palace</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tutorial 1</th>
<th>Monday Nov.4 – 9:00-12:40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why is Brazilian Guitar Interesting?</td>
<td>Bourbon Auditorium</td>
</tr>
<tr>
<td>François Pachet (Sony Computer Science Lab, France) and Giordano Cabral (Daccord Music Software and the MusiGames Studio, Brazil)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tutorial 2</th>
<th>Monday Nov.4 – 9:00-12:40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Music Autotagging</td>
<td>All Seasons Hall</td>
</tr>
<tr>
<td>Mohamed Sordo (Universitat Pompeu Fabra, Spain) and Emanuele Coviello (University of California at San Diego, USA)</td>
<td></td>
</tr>
</tbody>
</table>
Tutorial 3

Deep Learning in MIR – Demystifying the Dark Art
Philippe Hamel (National Institute of Advanced Industrial Science and Technology, Japan), Eric J. Humphrey (New York University, USA) and Erik M. Schmidt (Drexel University, USA)

Monday Nov.4 – 14:00-17:20
Bourbon Auditorium

Tutorial 4

Conditional Random Fields with Application to Music Analysis
Slim Essid (Telecom ParisTech, France)

Monday Nov.4 – 14:00-17:20
All Seasons Hall

OS1: Representation Learning
Session Chair: Juan Pablo Bello

Multiscale Approaches To Music Audio Feature Learning
Sander Dieleman and Benjamin Schrauwen
Ghent University, Belgium

Transfer Learning In MIR: Sharing Learned Latent Representations For Music Audio Classification And Similarity
Philippe Hamel, Matthew E. P. Davies, Kazuyoshi Yoshii and Masataka Goto
National Institute of Advanced Industrial Science and Technology, Japan

A Distributed Model For Multiple-Viewpoint Melodic Prediction
Srikanth Cherla, Tillman Weyde, Artur d’Avila Garcez and Marcus Pearce
City University London, UK | Queen Mary University of London, UK

Learning Rhythm And Melody Features With Deep Belief Networks
Erik Schmidt and Youngmoo Kim
Drexel University, USA

Tuesday Nov.5 – 9:00-10:20
Bourbon Auditorium

Poster Craze (Tuesday)

1 minute and 1 single slide to introduce your poster and "tease" the audience, inviting them to a more personal scientific discussion later around your poster

Tuesday Nov.5 – 10:20-11:00
Bourbon Auditorium

PS1: Poster Session 1

A Comparative Study Of Indian And Western Music Forms
Parul Agarwal, Harish Karnick and Bhiksha Raj
Indian Institute of Technology, India | Carnegie Mellon University, USA

Tuesday Nov.5 – 11:00-12:40 and 16:00-17:20
All Seasons Hall
Swara Histogram Based Structural Analysis And Identification Of Indian Classical Ragas
Pranay Dighe, Harish Karnick and Bhiksha Raj
Carnegie Mellon University, USA

Combining Modeling Of Singing Voice And Background Music For Automatic Separation Of Musical Mixtures
Zafar Rafii, Francois Germain, Dennis Sun and Gautham Mysore
Northwestern University, USA | Stanford University, USA | Adobe Research, USA

On Finding Symbolic Themes Directly From Audio Files Using Dynamic Programming
Antti Laaksonen and Kjell Lemström
University of Helsinki, Finland | Laurea University of Applied Sciences, Finland

Towards Light-Weight, Real-Time-Capable Singing Voice Detection
Bernhard Lehner, Reinhard Sonnleitner and Gerhard Widmer
Johannes Kepler University of Linz, Austria

The Use Of Melodic Scales In Bollywood Music: An Empirical Study
Monojit Choudhury, Ranjita Bhagwan and Kalika Bali
Microsoft Research Lab India

Bilevel Sparse Models for Polyphonic Music Transcription
Tal Ben Yakar, Pablo Sprechmann, Rœe Litman, Alex Bronstein and Guillermo Sapiro
Tel Aviv University, Israel | Duke University, USA

JProductionCritic: An Educational Tool for Detecting Technical Errors in Audio Mixes
Cory McKay
Marianopolis College and CIRM.MT, Canada

Combining Timbric and Rhythmic Features for Semantic Music Tagging
Nicola Orio and Roberto Piva
University of Padua, Italy

The Audio Degradation Toolbox and Its Application to Robustness Evaluation
Matthias Mauch and Sebastian Ewert
Queen Mary University of London, UK

Do Online Social Tags Predict Perceived or Induced Emotional Responses to Music?
Yading Song, Simon Dixon, Marcus Pearce and Andrea Halpern
Queen Mary University of London, UK | Bucknell University, USA

A Video Compression-Based Approach to Measure Music Structural Similarity
Diego Silva, Hélène Papadopoulos, Gustavo Batista and Daniel Ellis
Universidade de São Paulo, Brazil | CNRS, France | Columbia University, USA

Dunya: A System to Browse Audio Music Collections Exploiting Cultural Context
Alastair Porter, Mohamed Sordo and Xavier Serra
Universitat Pompeu Fabra, Spain

An Analysis of Chorus Features in Popular Song
Jan Van Balen, John Ashley Burgoyne, Frans Wiering and Remco Veltkamp
Utrecht University, The Netherlands | Universiteit van Amsterdam, The Netherlands

Visual Humdrum-Library for PWGL
Mika Kuuskankare and Craig Sapp
Sibelius Academy, Finland | Stanford University, USA

Source Separation of Polyphonic Music with Interactive User-Feedback on a Piano Roll Display
Nicholas J. Bryan, Gautham J. Mysore and Ge Wang
Stanford University, USA | Adobe Research, USA
Optical Measure Recognition in Common Music Notation
Gabriel Vigliensoni, Gregory Burlet and Ichiro Fujinaga
McGill University, Canada

Musicbrainz for The World: The Chilean Experience
Gabriel Vigliensoni, John Ashley Burgoyne and Ichiro Fujinaga
McGill University, Canada | University of Amsterdam, The Netherlands

Influences of ISMIR and MIREX Research on Technology Patents
Sally Jo Cunningham and Jin Ha Lee
University of Waikato, New Zealand | University of Washington, USA

Toward Understanding Expressive Percussion Through Content Based Analysis
Matthew Prockup, Erik Schmidt, Jeffrey Scott and Youngmoo Kim
Drexel University, USA

Data Driven and Discriminative Projections for Large-Scale Cover Song Identification
Eric J. Humphrey, Oriol Nieto and Juan P. Bello
New York University, USA

Simultaneous Unsupervised Learning of Flamenco Metrical Structure, Hypermetrical Structure, and Multipart Structural Relations
Dekai Wu
HKUST, Hong Kong

Tuesday Nov. 5 – 14:00-15:00
Bourbon Auditorium

Invited Talk

Style Manipulation as a Creative Device
François Pachet (Sony Computer Science Lab, France)

Tuesday Nov. 5 – 15:00-16:00
Bourbon Auditorium

OS2: Musical Cultures
Session Chair: George Tzanetakis

A Corpus-Based Study on Ragtime Syncopation
Anja Volk and W. Bas de Haas
Utrecht University, The Netherlands

A Computational Comparison of Theory And Practice of Scale Intonation in Byzantine Chant
Maria Panteli and Hendrik Purwins
University of Cyprus, Cyprus | Berlin Institute of Technology, Germany | Aalborg University Copenhagen, Denmark

Score Informed Tonic Identification for Makam Music of Turkey
Sertan Şentürk, Sankalp Gulati and Xavier Serra
Universitat Pompeu Fabra, Spain

Tuesday Nov. 5 – 16:00-17:20
All Seasons Hall

PS1: Poster Session 1 Continuation

The same posters displayed during the morning session
Concert II (Selected Works)

See page 11 for more details.

<table>
<thead>
<tr>
<th>OS3: Text Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Session Chair:</strong> Douglas Turnbull</td>
</tr>
</tbody>
</table>

**Placing Music Artists and Songs in Time Using Editorial Metadata and Web Mining Techniques**
Dimitrios Bountouridis, Remco C. Veltkamp and Jan Van Balen
Utrecht University, The Netherlands

**The Million Musical Tweet Dataset – What We Can Learn From Microblogs**
David Hauger, Markus Schedl, Andrej Košír and Marko Tkalič
Johannes Kepler University, Austria | University of Ljubljana, Slovenia

**Verifying Music Tag Annotation Via Association Analysis**
Tom Arjannikov, Chris Sanden and John Z. Zhang
University of Lethbridge, Canada

**The Role of Audio and Tags in Music Mood Prediction: A Study Using Semantic Layer Projection**
Pasi Saari, Tuomas Erola, György Fazekas, Mathieu Barthet, Olivier Lartillot and Mark Sandler
University of Jyvaskyla, Finland | Queen Mary University of London, UK

<table>
<thead>
<tr>
<th>Poster Craze – (Wednesday)</th>
</tr>
</thead>
</table>

1 minute and 1 single slide to introduce your poster and “tease” the audience, inviting them to a more personal scientific discussion later around your poster

<table>
<thead>
<tr>
<th>PS2: Poster Session 2</th>
</tr>
</thead>
</table>

**Converting Path Structures Into Block Structures Using Eigenvalue Decompositions of Self-Similarity Matrices**
Harald Grohganz, Michael Clausen, Nanzhu Jiang and Meinard Mueller
Bonn University, Germany | International Audio Laboratories Erlangen, Germany

**The Audio Effects Ontology**
Thomas Wilmering, György Fazekas and Mark B. Sandler
Queen Mary University of London, UK

**Exploration of Music Emotion Recognition Based on MIDI**
Yi Lin, Xiaou Chen and Deshun Yang
Peking University, China
Rhythmic Pattern Modeling for Beat and Downbeat Tracking in Musical Audio
Florian Krebs, Sebastian Böck and Gerhard Widmer
Johannes Kepler University, Austria

Large-Scale Cover Song Identification Using Chord Profiles
Maksim Khadkevich and Maurizio Omologo
Fondazione Bruno Kessler-irst, Italy

Automatically Identifying Vocal Expressions for Music Transcription
Sai Sumanth Miryala, Kalika Bali, Ranjita Bhagwan and Monojit Choudhury
Microsoft Research India

Hooked: A Game For Discovering What Makes Music Catchy
John Ashley Burgoyne, Dimitrios Bountouridis, Jan Van Balen and Henkjan Honing
Universiteit van Amsterdam, The Netherlands | Universiteit Utrecht, The Netherlands

Hierarchical Classification of Carnatic Music Forms
RanJani H. G. and T. V. Sreenivas
Indian Institute of Science, India

A Simple Fusion Method of State And Sequence Segmentation for Music Structure Discovery
Florian Kaiser and Geoffroy Peeters
STMS IRCAM-CNRS-UPMC, France

Evaluating The Quality of Generated Playlists Based on Hand-Crafted Samples
Geoffray Bonnin and Dietmar Jannach
TU Dortmund, Germany

Explicit Duration Hidden Markov Models for Multiple-Instrument Polyphonic Music Transcription
Emmanouil Benetos and Tillman Weyde
City University London, UK

A Comprehensive Online Database of Machine-Readable Lead-Sheets for Jazz Standards
Francois Pachet, Jeff Suzda and Dani Martinez
Sony CSL, France

MeUse: Recommending Internet Radio Stations
Maurice Grant, Adeesha Ekanayake and Douglas Turnbull
Ithaca College, USA

Improved Audio Classification Using a Novel Non-Linear Dimensionality Reduction Ensemble Approach
Stéphane Dupont and Thierry Ravet
University of Mons, Belgium

A Study of Ensemble Synchronisation Under Restricted Line of Sight
Bogdan Vera, Elaine Chew and Patrick G. T. Healey
Queen Mary University of London, UK

Groove Kernels as Rhythmic-Acoustic Motif Descriptors
Andy Sarroff and Michael Casey
Dartmouth College, USA

Instrument Identification Informed Multi-Track Mixing
Jeffrey Scott and Youngmoo E Kim
Drexel University, USA

Tempo Detection of Urban Music Using Tatum Grid Non Negative Matrix Factorization
Daniel Gärtner
Fraunhofer Institute for Media Technology, Germany
**A Study of Cultural Dependence of Perceived Mood in Greek Music**  
Katerina Kosta, Yading Song, Gyorgy Fazekas and Mark Sandler  
Queen Mary University of London, UK

**Evaluation on Feature Importance for Favorite Song Detection**  
Yajie Hu, Dingding Li and Mitsunori Ogihara  
University of Miami, USA

**QBT-Extended: An Annotated Dataset of Melodically Contoured Tapped Queries**  
Blair Kaneshiro, Hyung-Suk Kim, Jorge Herrera, Jieun Oh, Jonathan Berger and Malcolm Slaney  
Stanford University, USA | Microsoft Research, USA

**Audio Chord Recognition with Recurrent Neural Networks**  
Nicolas Boulanger-Lewandowski, Yoshua Bengio and Pascal Vincent  
University of Montreal, Canada

**Virtualband: Interacting with Stylistically Consistent Agents**  
Julian Moreira, Pierre Roy and François Pachet  
Sony CSL, France

**OS4: Music Signal Analysis**  
Session Chair: Masataka Goto

**Sparse Modeling for Artist Identification: Exploiting Phase Information and Vocal Separation**  
Li Su and Yi-Hsuan Yang  
Academia Sinica, Taiwan

**Automatic Transcription of Turkish Makam Music**  
Emmanouil Benetos and Andre Holzapfel  
City University London, UK | Bogazici University, Turkey

**Local Group Delay Based Vibrato and Tremolo Suppression for Onset Detection**  
Sebastian Böck and Gerhard Widmer  
Johannes Kepler University, Austria

**PS2: Poster Session 2 Continuation**

The same posters displayed during the morning session

**OS5: Source Identification and Separation**  
Session Chair: Slim Essid

**Beyond NMF: Time-Domain Audio Source Separation without Phase Reconstruction**  
Kazuyoshi Yoshii, Ryota Tomioka, Daichi Mochihashi and Masataka Goto  
National Institute of Advanced Industrial Science and Technology, Japan  
The University of Tokyo, Japan | The Institute of Statistical Mathematics, Japan
**Beta Process Sparse Nonnegative Matrix Factorization for Music**
Dawen Liang, Matthew D. Hoffman and Daniel P. W. Ellis
Columbia University, USA | Adobe Research, USA

**Semi-Supervised Polyphonic Source Identification using PLCA Based Graph Clustering**
Vipul Arora and Laxmidhar Behera
Indian Institute of Technology, India

**Industrial Panel**

See page 9 for more details.

**OS6: Listeners**
Session Chair: Stephen Downie

**An Experiment about Estimating the Number of Instruments in Polyphonic Music: A Comparison Between Internet and Laboratory Results**
Michael Schoeffler, Fabian-Robert Stöter, Harald Bayerlein, Bernd Edler and Jürgen Herre
International Audio Laboratories Erlangen, Germany

**Social-EQ: Crowdsourcing an Equalization Descriptor Map**
Mark Cartwright and Bryan Pardo
Northwestern University, USA

**Taste Over Time: The Temporal Dynamics of User Preferences**
Joshua Moore, Shuo Chen, Douglas Turnbull and Thorsten Joachims
Cornell University, USA | Ithaca College, USA

**Exploring the Relation Between Novelty Aspects and Preferences in Music Listening**
Andryw Marques Ramos, Nazareno Andrade and Leandro Balby Marinho
Federal University of Campina Grande, Brazil

**Poster Craze (Thursday)**

1 minute and 1 single slide to introduce your poster and "tease" the audience, inviting them to a more personal scientific discussion later around your poster

**PS3: Poster Session 3**

**Spectral Correlates in Emotion Labeling of Sustained Musical Instrument Tones**
Bin Wu, Simon Wun, Chung Lee and Andrew Horner
Hong Kong University of Science and Technology, Hong Kong
Singapore University of Technology and Design, Singapore
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Affiliations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design and Evaluation of Semantic Mood Models for Music Recommendation using Editorial Tags</td>
<td>Mathieu Barthet, David Marston, Chris Baume, Gyorgy Fazekas and Mark Sandler</td>
<td>Queen Mary University of London, UK</td>
</tr>
<tr>
<td>Low-Rank Representation of Both Singing Voice and Music Accompaniment Via Learned Dictionaries</td>
<td>Yi-Hsuan Yang</td>
<td>Academia Sinica, Taiwan</td>
</tr>
<tr>
<td>Incremental Visualization of Growing Music Collections</td>
<td>Sebastian Stober, Thomas Low, Tatiana Gossen and Andreas Nürnberg</td>
<td>University of Magdeburg, Germany</td>
</tr>
<tr>
<td>Evaluating OMR on the Early Music Online Collection</td>
<td>Laurent Pugin and Tim Crawford</td>
<td>Swiss RISM Office, Switzerland</td>
</tr>
<tr>
<td>Sparse Music Decomposition onto a MIDI Dictionary Driven by Statistical Music Knowledge</td>
<td>Boyang Gao, Emmanuel Dellandréa and Liming Chen</td>
<td>Université de Lyon, CNRS, France</td>
</tr>
<tr>
<td>Annotating Works for Music Education: Propositions for a Musical Forms and Structures Ontology and a Musical Performance Ontology</td>
<td>Véronique Sébastien, Didier Sébastien and Noël Conruyt</td>
<td>University of Reunion Island, Réunion</td>
</tr>
<tr>
<td>Chord-Sequence-Factory: A Chord Arrangement System Modifying Factorized Chord Sequence Probabilities</td>
<td>Satoru Fukayama, Kazuyoshi Yoshii and Masataka Goto</td>
<td>National Institute of Advanced Industrial Science and Technology, Japan</td>
</tr>
<tr>
<td>Music Cut and Paste: A Personalized Musical Medley Generating System</td>
<td>I-Ting Liu, Yin-Tzu Lin and Ja-Ling Wu</td>
<td>National Taiwan University, Taiwan</td>
</tr>
<tr>
<td>A Meta-Analysis of the MIREX Structural Segmentation Task</td>
<td>Jordan Smith and Elaine Chew</td>
<td>Queen Mary University of London, UK</td>
</tr>
<tr>
<td>A Deterministic Annealing EM Algorithm for Automatic Music Transcription</td>
<td>Tian Cheng, Simon Dixon and Matthias Mauch</td>
<td>Queen Mary University of London, UK</td>
</tr>
<tr>
<td>Modelling the Speed of Music using Features from Harmonic/Percussive Separated Audio</td>
<td>Anders Elowsson, Anders Friberg, Guy Madison and Johan Paulin</td>
<td>KTH Royal Institute of Technology, Sweden</td>
</tr>
<tr>
<td>Inter and Intra Item Segmentation of Continuous Audio Recordings of Carnatic Music for Archival</td>
<td>Padi Sarala and Hema A. Murthy</td>
<td>IIT Madras, India</td>
</tr>
<tr>
<td>Essential: An Audio Analysis Library for Music Information Retrieval</td>
<td>Dmitry Bogdanov, Nicolas Wack, Emilia Gómez, Sankalp Gulati, Perfecto Herrera, Oscar Mayor, Gerard Roma, Justin Salamon, José R. Zapata and Xavier Serra</td>
<td>Universitat Pompeu Fabra, Spain</td>
</tr>
<tr>
<td>Motif Spotting in an Alapana in Carnatic Music</td>
<td>Vignesh Ishwar, Shrey Dutta, Ashwin Bellur and Hema Murthy</td>
<td>IIT Madras, India</td>
</tr>
<tr>
<td>Empirical Analysis of Track Selection and Ordering in Electronic Dance Music using Audio Feature Extraction</td>
<td>Thor Kell and George Tzanetakis</td>
<td>McGill University, Canada</td>
</tr>
</tbody>
</table>
Improving the Reliability of Music Genre Classification using Rejection and Verification
Alessandro Koerich
Pontifical University Catholic of Parana, Brazil

Robotaba Guitar Tablature Transcription Framework
Gregory Burlet and Ichiro Fujinaga
McGill University, Canada

Comparing Onset Detection & Perceptual Attack Time
Richard Polfreman
University of Southampton, UK

K-­Pop Genres: A Cross-Cultural Exploration
Jin Ha Lee, Kahyun Choi, Xiao Hu and J. Stephen Downie
University of Washington, USA | University of Illinois, USA | University of Hong Kong, Hong Kong

Coupling Social Network Services and Support for Online Communities in Codes Environment
Felipe Mendonça Scheeren, Marcelo Soares Pimenta, Damián Keller and Victor Lazzarini
Federal University of Rio Grande do Sul, Brazil | Federal University of Acre, Brazil | National University of Ireland, Ireland

Basic Evaluation of Auditory Temporal Stability (Beats): A Novel Rationale and Implementation
Zhouhong Cai, Robert J. Ellis, Zhiyan Duan, Hong Lu and Ye Wang
National University of Singapore, Singapore
Fudan University, China

Thursday Nov.7 – 14:00:15:00
Bourbon Auditorium

OS7: Symbolic Data Processing
Session Chair: Anja Volk

SIARCT-­CFP: Improving Precision and the Discovery of Inexact Musical Patterns in Point-­Set Representations
Tom Collins, Andreas Arzt, Sebastian Flossmann and Gerhard Widmer
Johannes Kepler University, Austria

A Machine Learning Approach to Voice Separation in Lute Tablature
Reinier de Valk, Tillman Weyde and Emmanouil Benetos
City University London, UK

A Methodology for the Comparison of Melodic Generation Models Using Meta-Melo
Nicolas Gonzalez Thomas, Philippe Pasquier, Arne Eigenfeldt and James B. Maxwell
Simon Fraser University, Canada

Thursday Nov.7 – 15:00:16:20
All Seasons Hall

PS3: Poster Session 3 Continuation

The same posters displayed during the morning session
OS8: Music Similarity  
Session Chair: Cory McKay

**An Extended Audio Fingerprint Method with Capabilities for Similar Music Detection**  
Sébastien Fenet, Yves Grenier and Gaël Richard  
 Télécom ParisTech, France

**AutoMashUpper: An Automatic Multi-Song Mashup System**  
Matthew Davies, Philippe Hamel, Kazuyoshi Yoshii and Masataka Goto  
National Institute of Advanced Industrial Science and Technology, Japan

**Learning Binary Codes For Efficient Large-Scale Music Similarity Search**  
Jan Schlüter  
Austrian Research Institute for Artificial Intelligence, Austria

---

**Thursday Nov.7 – 16:20-17:20**  
Bourbon Auditorium

**Conference Dinner**

Buses will depart from the Bourbon Hotel at 20:00. See page 5 for more details.

---

OS9: Structure and Form  
Session Chair: Mathias Mauch

**Freischuetz Digital: A Case Study for Reference-Based Audio Segmentation for Operas**  
Thomas Praetzlich and Meinard Mueller  
International Audio Laboratories Erlangen, Germany

**Automated Methods for Analyzing Music Recordings in Sonata Form**  
Nanzhu Jiang and Meinard Mueller  
International Audio Laboratories Erlangen, Germany

**Combining Harmony-Based and Novelty-Based Approaches for Structural Segmentation**  
Johan Pauwels, Florian Kaiser and Geoffroy Peeters  
STMS IRCAM-CNRS-UPMC, France

**Automatic Alignment of Music Performances with Structural Differences**  
Maarten Grachten, Martin Gasser, Andreas Arzt and Gerhard Widmer  
Austrian Research Institute for Artificial Intelligence, Austria | Johannes Kepler Universitat, Austria

---

**Friday Nov.8 – 10:20-11:40**  
All Seasons Hall

**MIREX**

More details will be available on site.
**ISMI Business Meeting**

See page 14 for more details.

**Demos & Late-Breaking News**

More details will be available on site.
(1) Bourbon Curitiba Convention Hotel (Conference Venue)
(2) Trevi Hotel and Business
(3) Hotel Del Rey
(4) Hotel Tibagi Executive
(5) Hotel Slaviero Slim Centro
(6) L’Avenue Apart Hotel
(7) Garibaldi Palace (Welcome Reception & Invited Concert)
<table>
<thead>
<tr>
<th>Sunday 3 November</th>
<th>Monday 4 November</th>
<th>Tuesday 5 November</th>
<th>Wednesday 6 November</th>
<th>Thursday 7 November</th>
<th>Friday 8 November</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8:00-9:00</strong></td>
<td><strong>8:00-9:00</strong></td>
<td><strong>8:00-9:00</strong></td>
<td><strong>8:00-9:00</strong></td>
<td><strong>8:00-9:00</strong></td>
<td><strong>8:00-9:00</strong></td>
</tr>
<tr>
<td>Registration</td>
<td>Registration</td>
<td>Registration</td>
<td>Registration</td>
<td>Registration</td>
<td>Registration</td>
</tr>
<tr>
<td>Foyer 1st Floor</td>
<td>Foyer 1st Floor</td>
<td>Foyer 1st Floor</td>
<td>Foyer 1st Floor</td>
<td>Foyer 1st Floor</td>
<td>Foyer 1st Floor</td>
</tr>
<tr>
<td><strong>8:40-9:00</strong></td>
<td><strong>9:00-10:20</strong></td>
<td><strong>9:00-10:20</strong></td>
<td><strong>9:00-10:20</strong></td>
<td><strong>9:00-10:20</strong></td>
<td><strong>9:00-10:20</strong></td>
</tr>
<tr>
<td>Opening</td>
<td>OS1 Representation Learning</td>
<td>OS3 Text Processing</td>
<td>OS6 Listeners</td>
<td>OS9 Structure and Form</td>
<td></td>
</tr>
<tr>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td></td>
</tr>
<tr>
<td><strong>9:00-12:40</strong></td>
<td><strong>10:20-11:00</strong></td>
<td><strong>10:20-11:00</strong></td>
<td><strong>10:20-11:00</strong></td>
<td><strong>10:20-11:00</strong></td>
<td><strong>10:20-11:40</strong></td>
</tr>
<tr>
<td>Tutorial 1</td>
<td>Poster Craze</td>
<td>Poster Craze</td>
<td>Poster Craze</td>
<td>Poster Craze</td>
<td>MIREX Coffee Break</td>
</tr>
<tr>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>All Seasons Hall</td>
</tr>
<tr>
<td><strong>11:00-12:40</strong></td>
<td><strong>11:00-12:40</strong></td>
<td><strong>11:00-12:40</strong></td>
<td><strong>11:00-12:40</strong></td>
<td><strong>11:00-12:40</strong></td>
<td></td>
</tr>
<tr>
<td>PS1 Coffee Break</td>
<td>PS2 Coffee Break</td>
<td>PS3 Coffee Break</td>
<td>Coffee Break</td>
<td>Coffee Break</td>
<td></td>
</tr>
<tr>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td></td>
</tr>
<tr>
<td><strong>12:40-14:00</strong></td>
<td><strong>12:40-14:00</strong></td>
<td><strong>12:40-14:00</strong></td>
<td><strong>12:40-14:00</strong></td>
<td><strong>12:40-14:00</strong></td>
<td><strong>12:40-14:00</strong></td>
</tr>
<tr>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
<td>Lunch</td>
</tr>
<tr>
<td>99 Brasserie Café</td>
<td>99 Brasserie Café</td>
<td>99 Brasserie Café</td>
<td>99 Brasserie Café</td>
<td>99 Brasserie Café</td>
<td>99 Brasserie Café</td>
</tr>
<tr>
<td><strong>14:00-18:00</strong></td>
<td><strong>14:00-17:20</strong></td>
<td><strong>14:00-15:00</strong></td>
<td><strong>14:00-15:00</strong></td>
<td><strong>14:00-15:00</strong></td>
<td><strong>14:00-18:00</strong></td>
</tr>
<tr>
<td>Tutorial 3</td>
<td>Invited Talk</td>
<td>Invited Talk</td>
<td>Invited Talk</td>
<td>Invited Talk</td>
<td>Demos &amp; Late-Breaking News</td>
</tr>
<tr>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Maragopipe Room</td>
</tr>
<tr>
<td>Tutorial 4</td>
<td>Musical Cultures</td>
<td>Music Signal Analysis</td>
<td>Symbolic Data Process</td>
<td>PS3 Coffee Break</td>
<td>Catual Room</td>
</tr>
<tr>
<td>All Seasons Hall</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>Bourbon Auditorium</td>
<td>All Seasons Hall</td>
<td>Sumatra Room</td>
</tr>
<tr>
<td>Coffee Break</td>
<td>Coffee Break</td>
<td>Coffee Break</td>
<td>Coffee Break</td>
<td>Coffee Break</td>
<td>Bourbon Auditorium</td>
</tr>
<tr>
<td>(15:30-16:00)</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
</tr>
<tr>
<td><strong>16:00-17:20</strong></td>
<td><strong>16:20-17:20</strong></td>
<td><strong>16:00-17:20</strong></td>
<td><strong>16:20-17:20</strong></td>
<td><strong>16:20-17:20</strong></td>
<td></td>
</tr>
<tr>
<td>PS1 Coffee Break</td>
<td>OS5 Source Ident. &amp; Separ.</td>
<td>Coffee Break</td>
<td>OS8 Music Similarity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>All Seasons Hall</td>
<td>Bourbon Auditorium</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17:20-18:20</strong></td>
<td><strong>18:00-20:00</strong></td>
<td><strong>18:00-20:00</strong></td>
<td><strong>18:00-20:00</strong></td>
<td><strong>20:30-23:00</strong></td>
<td></td>
</tr>
<tr>
<td>Industrial Panel</td>
<td>Concert II</td>
<td>Concert II</td>
<td>Conference Dinner</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bourbon Auditorium</td>
<td>Selected Works</td>
<td>Garibaldi Palace</td>
<td>Madaosso Restaurant</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>20:30-23:00</strong></td>
<td><strong>20:30-23:00</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14th International Society for Music Information Retrieval Conference