Day 3 Wednesday, Sept. 20, 2006

08:00 Registrations

09:00 Keynote 3:
A Meta-Analysis of Acoustic Correlates of Timbre Dimensions
▷ Stephen McAdams (CIRMMT, McGill University)
[in collaboration with Bruno Giordano (CIRMMT), Patrick Susini, Geoffroy Peeters (IRCAM), and Vincent Rioux (Confluences, Maison des Arts Urbains)]

Session 9 - Source Separation
▷ Session chair: Robert Hoeldrich

10:00 Improved Cocktail-Party Processing
▷ Alexis Favrot, Markus Erne and Christof Faller

10:20 A Source Localization/Separation/Respatialization System Based on Unsupervised Classification of Interaural Cues
▷ Joan Mouba and Sylvain Marchand

10:40 DAFx-07 in Bordeaux, France
▷ Sylvain Marchand

11:00 Coffee/Tea Break

Session 10 - Audio Analysis and Low Level Features 2
▷ Session chair: Geoffroy Peeters

11:20 Assessing the Quality of the Extraction and Tracking of Sinusoidal Components: Towards an Evaluation Methodology
▷ Mathieu Lagrange and Sylvain Marchand

11:40 Sinusoidal Extraction Using an Efficient Implementation of a Multi-Resolution FFT
▷ Karin Dressler

12:00 High Accuracy Frame-by-Frame Non-Stationary Sinusoidal Modelling
▷ Jeremy J. Wells and Damian T. Murphy

12:20 Lunch & Poster Session 3
P.1 Granular Resynthesis for Sound Unmixing
▷ Gunnar Eisenberg and Thomas Sikora

P.2 Extraction and Removal of Percussive Sounds from Musical Recordings
▷ John Usher

P.3 Representations of Audio Signals in Overcomplete Dictionaries: What is the Link Between Redundancy Factor and Coding Properties?

13:40 Parametric Coding of Stereo Audio Based on Principal Component Analysis
▷ Manuel Briand, David Virette and Nadine Martin

14:40 Exact Discrete-Time Realization of a Dolby B Encoding/Decoding Architecture
▷ Federico Avanzini and Federico Fontana

15:00 Real-Time Bayesian GSM Buzz Removal
▷ Han Lin and Simon Godsill

15:20 Application of Raster Scanning Method to Image Sonification, Sound Visualization, Sound Analysis and Synthesis
▷ Woon Seung Yeo and Jonathan Berger

15:40 Coffee/Tea Break

Session 11 - Audio Coding & Audio for Multimedia
▷ Session chair: Caroline Traube

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15:40 Coffee/Tea Break

Session 12 - Software Implementation
▷ Session chair: Sean Ferguson

16:00 Cecilia and TclCsound
▷ Jean Piché and Victor Lazzarini

16:20 A New Paradigm for Sound Design
▷ Ananya Misra, Perry R. Cook and Ge Wang

16:40 Sound Processing in OpenMusic
▷ Jean Bresson

Non-DAFx Related Free Events
- Mid-autumn Harvest Moon Festival III, Sept. 20–22, 2006 (Concordia University).
- CONSONNES Talk: On the role of the vocal tract in clarinet breath attacks: Natural sounds analysis and model-based synthesis, Philippe Guillemin, Sept. 21, 11:00–12:00 (Music Tech, Room 521, Suite 500, 5th Floor, East Tower, 550 Sherbrooke St. W).
- CIRMMT Distinguished Lecture: Dimensional Analysis and Psychomechanics, Antoine Chainger, Sept. 21, 2006, 16:30–18:00 (Clara Lichtenstein, Room C-209, 555 Sherbrooke St. W).
Day 1 Monday, Sept. 18, 2006

07:30 Registrations

08:40 Welcome!

09:00 Keynote 1:
   Bruno Torrésani (LATP Université de Provence, Marseille)
   "Sparse Time-Frequency Transforms and Applications"

12:20 Lunch & Poster Session 1

12:00 Using Visual Textures for Sonic Textures Production and Control

11:40 Real-Time Detection of Finger Picking Musical Structures

11:20 Discretization of the ’59 Fender Bassman Tone Stack

10:40 Robust Design of Very High-Order Allpass Dispersion Filters

10:00 Discretization of the ’59 Fender Bassman Tone Stack

17:30 Visit of CIRMMT and Music Tech

19:00 Concert

Day 2 Tuesday, Sept. 19, 2006

08:40 Welcome!

09:00 Keynote 2:
   Georg Essl
   "A New Analysis Method for Sinusoids+Noise Spectral Models"

11:40 A New Analysis Method for Sinusoids+Noise Spectral Models

11:20 Onset Detection Revisited

11:00 Adaptive Noise Level Estimation

12:00 Coffee/Tea Break

12:20 Lunch & Poster Session 2

12:00 Adaptive Noise Level Estimation

11:40 X-Micks - Interactive Real-Time Content Based Audio Processing

11:20 Onset Detection Revisited

11:00 Coffee/Tea Break

12:00 Coffee/Tea Break

P.1 Parameterized Morphing as a Mapping Technique for Sound Synthesis
   ⟨Jonathan S. Abel and Julius O. Smith⟩

P.2 Performance-Driven Control for Sample-Based Singing Voice Synthesis
   ⟨Martin Houlters and Udo Zölzer⟩

P.3 Identifying and Analyzing Relevant Characteristics of Dynamic Range Compression
   ⟨Andrés Cabrera⟩

P.4 Frequency-Dependent Boundary Condition for the 3-D Digital Waveguide Resonator
   ⟨Philipp Guillemain and John Stenfelt⟩

P.5 Table Lookup Oscillators Using Generic Integrated Wavetables
   ⟨Gary Scavone and Julius O. Smith⟩

P.6 Digital Synthesis Models of Clarinet-Like Instruments Including Nonlinear Losses in the Resonator
   ⟨Georg Essl⟩

P.7 Error Compensation in Modeling Time-Varying Sinusoids
   ⟨Antti Kelloniemi⟩

P.8 X-Micks - Interactive Real-Time Content Based Audio Processing
   ⟨Norbert Schnell, Diemo Schwarz and Remy Müller⟩

Session 1 - Filter Design for Audio

Session chair: Udo Zölzer

10:00 Discretization of the ’59 Fender Bassman Tone Stack
   ⟨David T. Yeh and Julius O. Smith⟩

10:20 On the Use of Volterra Series for Efficient Real-Time Simulations of Weakly Nonlinear Analog Audio Devices: Application to the Moog Ladder Filter
   ⟨Thomas Hélée⟩

10:40 Robust Design of Very High-Order Allpass Dispersion Filters
   ⟨Jonathan S. Abel and Julius O. Smith⟩

11:00 Coffee/Tea Break

Session 2 - Performance and Gestural Control

Session chair: Jan Tro

11:20 Consistency of Timbre Patterns in Expressive Music Performance
   ⟨Mathieu Barthet, Richard Kronland-Martinet and Selvi Ystad⟩

11:40 Real-Time Detection of Finger Picking Musical Structures
   ⟨Dale E. Parson⟩

12:00 Using Visual Textures for Sonic Textures Production and Control
   ⟨Jehan-Julien Filatriau, Daniel Arfib and Jean-Michel Couturier⟩

12:20 Lunch & Poster Session 1

P.1 Graphic Equalizer Design Using Higher-Order Recursive Filters
   ⟨Martin Houlters and Udo Zölzer⟩

P.2 Performance-Driven Control for Sample-Based Singing Voice Synthesis
   ⟨Jordi Janer, Jordi Bonada and Merlijn Blauw⟩

P.3 Parameterized Morphing as a Mapping Technique for Sound Synthesis
   ⟨Chinmay Pendharkar, Michael Gurevich and Lorcan Wyse⟩

P.4 Examining Design Goals of Digital Musical Instruments
   ⟨Joseph Malloch, David Birnbaum, Elliot Sinyor and Marcelo M. Wanderley⟩

P.5 The Modified Chamberlin and Zölzer Filter Structures
   ⟨Duane K. Wise⟩

P.6 Smooth and Safe Parameter Interpolation of Biquadratic Filters in Audio Applications
   ⟨Víctor Kalinichenko⟩

P.7 Identifying and Analyzing Relevant Characteristics of Dynamic Range Compression
   ⟨Andrés Cabrera⟩

P.8 X-Micks - Interactive Real-Time Content Based Audio Processing
   ⟨Norbert Schnell, Diemo Schwarz and Remy Müller⟩

Session 3 - Sound Synthesis 1

Session chair: Georg Essl

14:20 Dispersion Modeling in Waveguide Piano Synthesis Using Tunable Allpass Filters
   ⟨Jukka Rauhala and Vesa Välimäki⟩

14:40 Prepared Piano Sound Synthesis
   ⟨Stefan Bilbao and John flitch⟩

15:00 Digital Synthesis Models of Clarinet-Like Instruments Including Nonlinear Losses in the Resonator
   ⟨Philippe Guillemain and Jonathan Terroir⟩

15:20 A Stable Acoustic Impedance Model of the Clarinet using Digital Waveguides
   ⟨Gary Scavone and Julius O. Smith⟩

15:40 Coffee/Tea Break

Session 4 - Audio Effects

Session chair: Sylvain Marchand

16:00 The Mellin Pizzicato
   ⟨Antonio De Sena and Davide Rocchesso⟩

16:20 Fractal Modulation Effects
   ⟨Giampaolo Evangelista⟩

16:40 An Interdisciplinary Approach to Audio Effect Classification
   ⟨Vincent Verfaille, Catherine Guastavino and Caroline Traube⟩

17:00 Session Chair: Jan Tro

Session 5 - Perceptual Issues and Psychoacoustics

Session chair: Catherine Guastavino

16:20 Joint Acoustic Source Location and Orientation Estimation Using Derivative-based Cross-Correlation
   ⟨Sinan Bökesoy⟩

16:40 An Interdisciplinary Approach to Audio Effect Classification
   ⟨Vincent Verfaille, Catherine Guastavino and Caroline Traube⟩

17:00 Session Chair: Jan Tro

Session 6 - Audio Analysis and Low Level Features 1

Session chair: Gianpaolo Evangelista

18:00 Digital Synthesis Models of Clarinet-Like Instruments Including Nonlinear Losses in the Resonator
   ⟨Georg Essl⟩

18:20 Musical Key Estimation of Audio Signal Based on Hidden Markov Models
   ⟨Jan ˘St˘epánek⟩

18:40 Feedback Implementation Within a Complex Event Generation System
   ⟨Sinan Bökesoy⟩

19:00 Session Chair: Jan Tro

Session 7 - Sound Synthesis 2

Session chair: Gary Scavone

19:00 Digression: Onset Detection
   ⟨Matthias Robin, Robert Strandh and Sylvain Marchand⟩

19:20 Onset Detection Revisited
   ⟨Philipp Guillemain and John Stenfelt⟩

19:40 Onset Detection Revisited
   ⟨Antti Kelloniemi⟩

20:00 Concert