2nd International Symposium on Ambisonics and Spherical Acoustics, IRCAM, Paris, May 6-7, 2010 **Symposium Program** (version 05/05/10)

May 6, 2010				
Opening				
08:00 - 11:00	Welcome and	d Registration		
09:00 - 09:20	Opening	Hugues Vinet, Scier	ntific Director, IRCAM	
			ical acoustics theory	
Session Chair:	Markus Nois			
09:20 - 10:00	Keynote 1	Philip A. Nelson	Inverse Problems and Sound Reproduction	
10:00 - 10:20	Paper 1	Filippo Fazi	Nonuniqueness of the Solution of the Sound Field Reproduction Problem	
10:20 - 10:40	Paper 2	Dylan Menzies	Calculation of Driving Functions for General Enclosures	
10:40 - 11:00	Paper 3	Jens Ahrens	Applying the Ambisonics Approach to Planar and Linear Arrays of Loudspeakers	
Poster Session				
11:00 - 11:40	Poster 1	Jan Schacher	Seven years of ICST ambisonics tools for MaxMSP - A Report	
	Poster 2	David Alon	Efficient sampling for scanning spherical array	
	Poster 3	Dima Khaykin	Spherical loudspeaker array modeling and control using different basis function repesentations	
	Poster 4	Bruno Masiero	Compressive Sampling in the perspective of spherical acoustics	
	Poster 5	Takuma Okamoto	Improving sound field reproduction in a small room based on higher-order Ambisonics with a 157-loudspeaker array	
	Poster 6	Enzo De Sena	Perceptual Optimisation of a Circularly Symmetric Microphone Array for Panoramic Recording of Audio	
	Poster 7	Barry Watson	Real-time ambisonic replication of auditoria acoustics within a digital audio workstation environment	
	Demo 1	Etienne Corteel	Compact loudspeaker arrays for enhanced stereo reproduction	
	Demo 2	Richard Furse	The Rapture3D OpenAL advanced audio game engine (Studio 4)	
Paper Session: Theoretical considerations on comparative subjective and objective studies				
Session Chair:	Nicolas Misdariis			
11:40 - 12:00	Paper 4	Sylvain Favrot	Impact of regularization of near field coding filters for 2D and 3D higher-order Ambisonics on distance cues	
12:00 - 12:20	Paper 5	Amir Avni	Sound localization in a sound field represented by spherical harmonics	
12:20 - 12:40	Paper 6	Gavin Kearney	Depth Perception in Interactive Virtual Acoustic Environments using Higher Order Ambisonic Soundfields	
12:40 - 13:00	Paper 7		Paper withdrawn by the author	

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Lunch Break			
13:00 - 14:30	Lunch Break		
Session	Spherical m	nicrophone array sys	tems and signal processing
Session Chair:	Rozenn Nicol	1	
14:40 - 15:20	Keynote 2	Ramani Duraiswami	Spherical Sound Scene Analysis
15:20 - 15:40	Paper 8	Etan Fisher	Near-Field Spherical Microphone Array for Speech
15:40 - 16:00	Paper 9	Simeon Delikaris- Manias	Does capsule quality matter? A comparison study between spherical microphone arrays using different types of omnidirectional capsules.
16:00 - 16:20	Paper 10	Craig Jin	Blind source separation using independent component analysis in the spherical harmonic domain.
Poster Session	II + Demos /	Coffee Break	
16:20 - 17:00		SEE PROGRAM OF PO	STER SESSION I
			ems and signal processing
Session Chair:	Franz Zotter		
17:00 - 17:20	Paper 11	Alexander Pasqual	A comparative study of Platonic solid loudspeakers as directivity controlled sound sources
17:20 - 17:40	Paper 12	Tomer Peleg	Quiet zones for active control of sound using spherical loudspeaker array
17:40 - 18:00	Paper 13	Andrew Schmeder	Dynamic Directivity Synthesis on the Sphere using Sparse Additive Models with Applications in Spatial Auditory Scene Rendering
18:15 - 19:15		Cocktail	Grande Galerie (level -2)
Atelier concert			
19:30 - 21:00	10 min	PyoungRyang Ko	"medium" an interdisciplinary work on the poem "medium" by Kerstin Preiwuß
15.30 21.00	15 min	Natasha Barrett	Kernel Expansion: a three-dimensional spatial composition combining different ambisonics spatialisation techniques.
	26 min	Joseph Anderson	Pacific Slope
	15 min	Daniel Courville	Les fruits du hasard
	10 min	Marco Antonio Suarez Cifuentes	Multi-Channel Audio Installation based on extracts from the piece "Caméléon Kaléidoscope"

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09:00 - 11:00 Registration

Paper Session: Ambisonic for sound scene reproduction and virtual acoustic environments (1)

Session Chair:	r: Alois Sontacchi			
09:20 - 10:00	Keynote 3	Franz Zotter	Ambisonic Decoding with and without Mode-Matching: Case Study Using the Hemisphere	
10:00 - 10:20	Paper 14	Johann-Markus Batke	Using VBAP-derived Panning Functions for 3D Ambisonics Decoding	
10:20 - 10:40 10:40 - 11:00	Paper 16 Paper 15	Svein Berge Richard Furse	High Angular Resolution Planewave Expansion The Rapture3D OpenAL advanced audio game engine	

Coffee Break

11:00 - 11:20 Coffee Break

Technical Audio Demo Session

Session Chair:			
11:20 - 11:40	Demo 1	Svein Berge	Technical demo - HARPEX decoder
11:40 - 12:00	Demo 2	Markus Noisternig	Streaming directional instruments over the Internet
12:00 - 12:20	Demo 3	Christian Nachbar	Listening to the direct sound of musical instruments in freely adjustable surrounding
			directions

Paper Session: Ambisonics and music composition

Session Chair:			
12:20 - 12:40	Paper 17	Natasha Barrett	Kernel Expansion: a three-dimensional spatial composition combining different
			ambisonics spatialisation techniques.
12:40 - 13:00	Paper 18	Marlon Schumacher	Compositional Control of Periphonic Sound Spatialization

Lunch Break

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Paper Session: Ambisonic for sound scene reproduction and virtual acoustic environments (2)				
Session Chair:	Olivier Warusfel			
14:40 - 15:20	Keynote 4	Rozenn Nicol	Sound spatialization by Higher Order Ambisonics: encoding and decoding a sound scene in practice from a theoretical point of view	
15:20 - 15:40	Paper 19	Chris Baume	Scaling New Heights in Broadcasting Using Ambisonics	
15:40 - 16:00	Paper 20	Jörn Nettingsmeier	Virtual loudspeaker rigs for electro-acoustic concerts	
Paper Session: Capture and analysis of radiation patterns				
16:00 - 16:20	Paper 21	Daniel Deboy	Acoustic center and orientation analysis of sound-radiation recorded with a surrounding spherical microphone array	

Coffee Break

16:20 - 16:40 Coffee Break

raper Session: Tikit Prodeing using Spherical Acoustics				
Session Chair:	Ramani Duraiswami			
16:40 - 17:00	Paper 22	Martin Pollow	Applying extra- and interpolation methods to measured and simulated HRTF data	
			using spherical harmonic decomposition	
17:00 - 17:20	Paper 23	Khoa-Van Nguyen	Computation of near-field HRTF applying spherical harmonics decomposition:	

Khoa-Van Nguyen Paper 23 Computation of near-field HRTF applying spherical harmonics decomposition:

measurement and evaluation

Session Standardization, exchange, implementation and hardware issues

17:20 - 18:00 Podium Discussion

Closing and Summary

18:00 - 18:20 Summary of the symposium and closing remarks

Paper Session: HDTF Modeling using Spherical Acquetics

Symposium Banquet

20:00 - 23:30 Chez Jenny, 23 Boulevard du Temple, 75003 Paris

http://www.chez-jenny.com/