

8<sup>th</sup> INTERNATIONAL CONFERENCE  
ON AUDITORIUM ACOUSTICS

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# **Auditorium Acoustics, Dublin 2011**

20 -22 May 2011 | The Dublin Convention Centre



# Auditorium Acoustics 2011

FRIDAY 20 MAY 2011

08:30	Registration	13:10	The relationship between audience engagement and the ability to perceive pitch, timbre, azimuth and envelopment of multiple sources <i>David Griesinger, David Griesinger Acoustics, USA</i>
09:00	L'Aquila: a post-earthquake cardboard concert hall <i>Daniel Commins, Commins Acoustics Workshop, France</i>	13:30	Subjective acoustic evaluations in live jazz concerts; employing subject groups of different cultural backgrounds <i>Alexandra Sotiropoulou, John Karayannis, John Tzouvadakis, University of Athens, Greece, Anastasia Savopoulou, University College London, UK</i>
09:20	The acoustic design of Wexford Opera House <i>Jeremy Newton, Arup Acoustics, UK</i>	13:50	More combs <i>Tor Halmrast, Statsbygg, Norway</i>
09:40	Acoustic 1/10th model test on concert hall in Taiwan <i>Albert Xu &amp; Nicholas Gallaud, Xu-Acoustique, France</i>	14:10	The effect of scattering surfaces in rectangular concert halls: a scale model analysis <i>Evan Green, Soundscape design, Mike Barron, University of Bath, David Thompson, ISVR, University of Southampton, UK</i>
10:00	Uncertainties of room acoustic measurements – influence of the exact source/receiver position <i>Ingo Witew &amp; Michael Vorländer, RWTH Aachen, Germany</i>	14:30	Introduction to Posters
10:20	Coffee	15:10	Tea & Posters
10:50	Towards the understanding of acoustics of auditoria in true in-use conditions- a review and outlook of techniques for occupied acoustic measurements <i>Francis F Li, University of Salford, UK</i>	16:00	Perception of scattered sounds in concert halls <i>Jin Y Jeon, Yong H Kim, Hyo J Yoo, Hanyang University, Korea</i>
11:10	Small changes in opera house – results in the acoustical parameters <i>Jose Augusto Nepomuceno, Acustica &amp; Sonica, Brasil</i>	16:20	Diffusion in concert halls analysed as a function of time during the decay process <i>Claus Lyngge Christensen &amp; Jens Holger Rindel, Odeon A/S, Denmark</i>
11:30	Concert hall acoustics assessment with sensory evaluation – tools and practices <i>Tapio Lokki, Aalto University, Finland &amp; Nick Zacharov, Senselab, Denmark</i>	16:40	Dublin National Conference Centre <i>Richard Muir, Sandy Brown Associates, UK</i>
11:50	The acoustic requirements of the Irish Chamber Orchestra <i>Stephen Smyth &amp; Chris Dilworth, AWN Consulting, UK</i>	17:00	Visit the Auditorium followed by welcome drinks on the 5th Floor
12:10	Lunch		



**SATURDAY 21 MAY 2011**

09:00	The acoustic design of Grand Canal Theatre, Dublin <i>Tour and Talk – Jeremy Newton, Arup Acoustics, UK</i>	14:40	Multi-slope room impulse responses: an automated analysis method <i>Paul Luizard &amp; Brian Katz, LIMSI-CNRS, France</i>
		15:00	Tea
10:30	Coffee	15:30	The benefit of a CARMEN electroacoustic system in the Aylesbury theatre <i>Isabelle Schmich, Christophe Rougier, CSTB, France &amp; Helen Butcher, Arup Acoustics, UK</i>
11:00	Guangzhou Opera House <i>Peter Exton, Marshall Day, Australia</i>	15:50	Acoustic enhancement systems for classical concerts – examples and experiences <i>Gunter Engel, Mueller BBM, Germany</i>
11:20	Acoustic control in octagonal geometry: a case study of the "Torri dell'Acqua" auditorium <i>Dario D'Orazio, Massimo Garai, Bologna University, Italy</i>	16:10	The Penderecki concert hall in Radom, Poland: acoustic design and performance <i>Andrzej Klosak, Krakow University of Technology, Poland &amp; Anders Christian Gade, Gade &amp; Mortensen Akustik, Denmark</i>
11:40	An acoustics miracle of Tonhalle St Gallen has been produced, but the criterion of Gade on stage has failed before and after the refurbishment of the hall <i>Higini Arau, Arau Acustica, Spain</i>	16:30	Wagner and the cinema: a cognitive approach to the acoustics of the Bayreuth Festival Theatre <i>Jean-Dominique Polack &amp; Michel Retbi, Université Pierre et Marie Curie, France</i>
12:00	Rayleigh Medal lecture Using room acoustics measures to understand a large room and its complex sound reinforcement system <i>John Bradley, NRC, Ottawa, Canada</i>	16:50	Close
13:00	Lunch	19:00	Reception and Conference Dinner – The Guinness Storehouse Located in the heart of the St James's Gate Brewery, Guinness Storehouse is the home of Guinness, where you will discover what goes into the making of each pint. The building is in the shape of a giant pint of Guinness, that if full would hold 14.3 million pints! At the head of the pint is the Gravity bar where you can enjoy the 360° view of Dublin before we return to a lower level for dinner. Sláinte!
14:00	Non-linear decays in simple spaces and their possible exploitation <i>Mike Barron, Fleming &amp; Barron, UK</i>		
14:20	Investigations on the development of the frequency response with time in concert halls <i>Jukka Patynen, Sakari Tervo, Tapio Lokki, Aalto University, Finland</i>		

# Auditorium Acoustics 2011

SUNDAY 22 MAY 2011

09:00 The acoustic design of the O2

*Tour and Talk, Daryl Prasad, Marshall Day, UK*



10:30 Coffee

11:00 Queen Elizabeth Theatre, Vancouver: acoustic design responding to financial realities

*John O'Keefe & Daniel Ruvalcaba, Aercoustics, Canada*

11:20 University of Exeter "The Forum" – use of auralisation techniques to influence the design, a case study

*Serafina Di Rosario, Alistair Meachin, Buro Happold, UK*

11:40 Non-linear 3D auralisation in the acoustic design of opera houses

*Lamberto Tronchin, University of Bologna, Italy*

12:00 The New York State Theatre renovation

*Eckard Mommertz, Gunter Engel, Kh Mueller, Mueller-BBM, Germany*

12:20 Lunch and Close

## POSTERS

Real-time walkthrough auralisation of the acoustics of Christ Church Cathedral, Dublin

*Gavin Kearney, Marcin Gorzel, Fiona Smyth, Frank Boland, Henry Rice, University of Dublin, Donal Lennon, University College Dublin, Ireland*

Impulse response measurement with chirp-lets and masked noise stimuli

*Massimo Serafini & Francis FLi, University of Salford, UK*

Acoustic design of the Royal Welsh College of Music and Drama, Cardiff

*Ned Crowe & Ian Knowles, Arup Acoustics, UK*

Integrated room acoustics and electroacoustic design – the concert venue at Rockheim, Norway

*Bård Støfingsdal, COWI, Norway*

ITDG calculation with a non linear iterative algorithm

*Simona De Cesaris, Dario D'Orazio, Massimo Gari, Bologna University, Italy*

Concert Studio for the BBC Philharmonic Orchestra at MediaCityUK, Salford

*Mark Howarth, Sandy Brown Associates, UK*

Acoustic design of the tower theatre at the Irish World Academy of Music and Dance

*Alistair Meachin, Serafina Di Rosario, Buro Happold, UK*

In-situ measurements of diffuse reflections from lateral walls in concert halls

*Yong H Kim, Hyung S Jang, Jin Y Jeon, Hanyang University, Seoul, Korea, Christophe Rougier, Isabelle Schmich, CSTB, France*

A ceiling case study inspired by an historical scale model

*Brian Katz, Olivier Delaazière, Paul Luizard, LIMSI-CNRS, France*

On the struggle to find a set of room acoustical parameters that explains and predicts subjective ranking of concert halls

*Magne Skalevik, Brekke & Strand Akustikk, Norway*

Acoustic evaluation of typical errors in the design of modern lecture theatres

*Alexandra Sotiropoulou, George Poulakos, George Cambourakis, University of Athens, Greece*

Acoustic study of Madrid Auditorio Nacional de Música

*Gonzalo Vallejo Ortega & José Ignacio Sánchez Rivera, Valladolid University, Spain*

From architectural design to acoustical remedies

*Hassan Azad, University of Tehran, Iran*