

20th
anniversary

Hong Kong
Institute
of
Acoustics



24 May 2013
(Friday)
8:45am - 6:00 pm
Regal Ball
Room B1
Regal Hotel HK
Causeway Bay

THE JOINT HKIOA-PolyU
ONE-DAY SYMPOSIUM
*RESEARCH, ASSESSMENT AND
DEVELOPMENT OF APPLYING
INNOVATIVE BUILDING DESIGNS FOR
NOISE MITIGATION- THE LATEST TRENDS*

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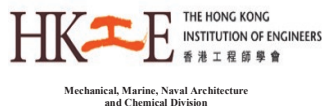


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RESEARCH, ASSESSMENT AND DEVELOPMENT OF APPLYING INNOVATIVE BUILDING DESIGNS FOR NOISE MITIGATION – THE LATEST TRENDS

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INTRODUCTION

Hong Kong is facing severe and pervasive road traffic noise problems. In our dense metropolitan environment, many residential developments are built in close proximity to heavily trafficked expressways and roads which resulting that some 1 million people are exposed to high level of traffic noise.

From general noise control perspective, mitigation could be applied at source, through transmission and at receiver end to reduce noise impact. Among these mitigation approaches, noise barriers or enclosures are usually perceived as the most effective in reducing noise to acceptable level so far as direct line of sight of traffic is screened from the residential flats. The cityscape of Hong Kong is basically high-rise in nature and blocks and blocks of tall buildings can be found on both sides of roads. This means that very tall barrier or even enclosures are needed in order to bring noise down to acceptable level. However, in many cases site constraints render erection of noise barriers or enclosure impracticable; or only relatively small noise barrier or enclosure could be erected and residents are still subject to high level of road traffic noise. To a large extent, noise barriers or enclosures are being seen as causing visual intrusion and they are very costly. Besides, some of the residents affected by barriers objected to its erection because of reasons like blocking of view, affecting rents and values etc. On this front, building designs such as building setback, balcony, podium and special window would be adopted for noise mitigation purpose.

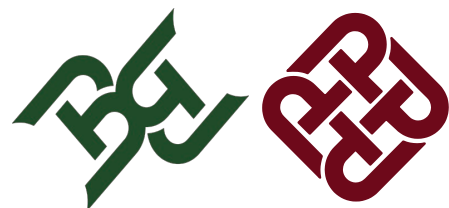
In this symposium, world-renowned experts from United Kingdom, United States of America, People Republic of China, Australia and Hong Kong will share their views and experiences in this important issue. The fundamental theory of noise reduction, performance assessment and prediction of innovative building designs would be covered. The latest state-of-the-art designs of acoustic window and balcony for noise mitigation would be updated. Key issues for their applications and the related issues would also be addressed.

This symposium is regarded as

- meeting part of the CPD requirements of the Hong Kong Institute of Acoustics (HKIOA) and the Hong Kong Institution of Engineers (HKIE).
- General CPD Event for BEAM Pro.

A certificate of attendance will be awarded to participants.

You are cordially invited to participate and share your views on the topic.



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SYMPOSIUM VENUE, DATE AND TIME

Venue: Regal Ball Room, B1,
Regal Hong Kong Hotel,
88 Yee Wo Street, Causeway Bay,
Hong Kong
Date: Friday , 24 May 2013
Time: 8:45 am – 6:00 pm

HOST ORGANISATIONS

- The Hong Kong Institute of Acoustics
- Department of Building Services Engineering,
The Hong Kong Polytechnic University

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- Environmental Protection Department, The Government of the Hong Kong Special Administrative Region
- Housing Department, The Government of the Hong Kong Special Administrative Region
- Hong Kong Green Building Council
- BEAM Society Limited

CO-ORGANISERS

- American Society of Mechanical Engineers, HK Section
- Mechanical, Marine, Naval Architecture and Chemical Division, The Hong Kong Institution of Engineers
- Environmental Division, The Hong Kong Institution of Engineers
- The Hong Kong Institute of Environmental Impact Assessment

SYMPOSIUM ORGANIZING COMMITTEE

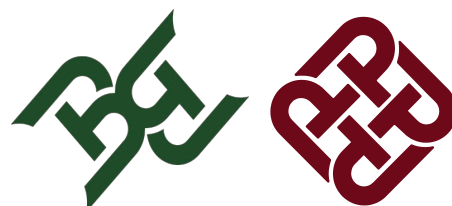
Mr Maurice Yeung (HKIOA) (Chairman)
Ms Grace Kwok (HKIOA) (Hon. Secretary)
Mr Tom Ho (HKIOA)
Dr Chi-Wing Law (HKIOA)
Prof Shui-Keung Tang (PolyU)

REGISTRATION FEE

The registration fee is

- HK\$ 1,500 for general participants
- HK\$ 1,350 for MHKIOA, MHKIEIA, MHKIE, HKGBC Members and BEAM Pro
- HK\$ 750 for full time registered students

Please make cheque payable to
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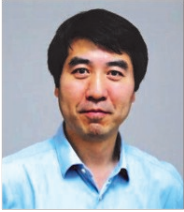
THE JOINT HKIOA–PolyU ONE-DAY SYMPOSIUM

THE SYMPOSIUM PROGRAMME (TENTATIVE)

Time	Programme/ Topic/ Activities
08:45 - 09:30	Registration
09:30 - 09:35	Welcome Notes Dr Kin Cheng, Chairman of HKIOA
09:30 - 09:45	Opening Speech Mr Kin-Fai Tang, Assistant Director (Environmental Assessment), EPD, HKSAR Government, PRC
09:45 – 10:30	“Research, Development and Application of Ventilated Windows for Noise Mitigation” Prof Jian Kang, Sheffield University, UK
10:30 – 10:45	Coffee break
10:45 – 11:30	“Applying Building Façade Device for Noise Mitigation – Theory and Assessment” Prof Yiu-Wai Lam, Salford University, UK
11:30 – 12:15	“Benefits and Design of Balcony Acoustic Treatments” Mr Daniel Naish, Principal Engineer, Dept of Transport and Main Roads, Queensland, Australia
12:15 – 14:00	Complimentary Luncheon
14:15 – 15:00	“Applying Laboratory and In-situ Tests to Facilitate Development of Acoustic Windows” Prof Shui-Keung Tang, Hong Kong Polytechnic University, Hong Kong, PRC
15:00 – 15:45	“A Hybrid Computational Approach to Investigate Ventilated Windows” Dr Eddie Siu-kit Lau, University of Nebraska-Lincoln, USA
15:45 – 16:00	Coffee Break
16:00 – 16:45	“Theory and Application of Active Noise Control in Windows for Noise Mitigation” Prof Xiaojun Qiu, Nanning University, PRC
16:45 – 17:15	Panel discussion Mr Maurice Yeung, Principal Environmental Protection Officer (Assessment & Noise), EPD, HKSAR Government, PRC
17:15 – 17:25	Closing Speech Ms Ada Fung, Deputy Director (Construction & Development), Housing Authority, HKSAR Government, PRC
17:25 – 17:45	Presentation of Souvenirs, photos taking

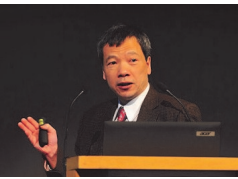
RESEARCH, ASSESSMENT AND DEVELOPMENT OF APPLYING INNOVATIVE BUILDING DESIGNS FOR NOISE MITIGATION – THE LATEST TRENDS

THE JOINT HKIOA–PolyU ONE-DAY SYMPOSIUM [SPEAKERS]^A



Professor Jian Kang obtained his first degree and MSc from Tsinghua University in Beijing, and his PhD from the University of Cambridge. His research field is architectural/environmental acoustics and noise control. He has published 3 books, over 200 refereed journal papers and book chapters, and over 300 conference papers. He has been the principal investigator for over 60 research projects and has been a consultant for over 70 acoustics and noise control projects worldwide.

He is a chartered engineer (CEng); a Fellow of the UK Institute of Acoustics (IOA); a Fellow of the Acoustical Society of America (ASA); a Chang-Jiang Chair Visiting Professor for the Chinese Ministry of Education. He is the Editor in Environmental Noise for Acta Acustica united with Acustica - European Journal of Acoustics. He is the chair of the EU funded COST Network on Soundscape of European Cities and Landscapes, and a member of the ISO Working Group 54 of ISO/TC 43/SC 1 on soundscape.



Professor Yiu-wai Lam is Professor of Acoustics and Associate Dean (Research & Innovation) of the College of Science and Technology in the University of Salford. Professor Lam has over 30 year's experience of working in building and environmental acoustics. He is known particularly for his expertise in the development and application of computer modelling techniques in these areas. He has a long track record of successful EPSRC (6 as PI and 5 as CI), European, and industrial funded research projects, leading to computer software widely used in the metal cladding manufacturing industry and noise reduction devices used in commercial noise barriers. He also worked closely with industrial partner (QinetiQ) to develop applications from his research on sound propagation in complex outdoor atmosphere for environmental noise applications.

He is interested in the interfacing of acoustics in multi-disciplinary research on modelling and simulation, previously worked in Salford's multi-disciplinary Platform Grant (GR/R28508) to develop the concept of nD Modelling for the built environment. Currently he is the PI of an EPSRC grant (EP/J022071) to develop enhanced acoustic modelling using hybrid boundary integral methods, and the PI of an EPSRC iCASE grant with the BBC investigating periphony for broadcast. He also leads an internally funded project to develop an interactive soundscape simulator for heritage and urban regeneration research.

Prof. Lam has over 100 publications in journals, conferences, and book chapters. He was awarded the Institute of Acoustics' Tyndall Medal in 2000, and the Institute's most prestigious Rayleigh Medal in 2012 for his contribution to acoustics. He was awarded fellowship of the Acoustical Society of America in 2008 for his work in building acoustics. He is the Editor-in-Chief of the international journal of Applied Acoustics and a member of several international and national standards committees and working groups. He co-chairs the Conseil International du Bâtiment (CIB) W051 Commission on Acoustics. He is also a Board member of the International Commission for Acoustics.

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Dr Siu-kit Lau received his PhD in Acoustics and BEng (1st Hon) from the Hong Kong Polytechnic University in 2003 and 1997, respectively. Prior to joining the University of Nebraska, he was an Assistant Professor in the Department of Building Services Engineering at the Hong Kong Polytechnic University. His primary research interest is in noise control, particularly active and passive control methods.

Dr. Lau has much practical hands-on real-world expertise from being an industry engineer and manager. He has worked in the building services engineering industry as a consultant engineer, prior his PhD study.

Since 2009, Dr. Lau has been an assistant professor at The Charles W. Durham School of Architectural Engineering and Construction of the University of Nebraska-Lincoln in Omaha, Nebraska. He has demonstrated his expertise in research, heading numerous researches, including Preliminary Study of Bias and Reproducibility of Sound Power Test Methods within the HVACR Industry; and Poro-elastic Meta-materials for Noise Reduction: Research and Education. His research works have garnered unanimous approval and support. Dr. Lau is a Chartered Engineer (CEng) and a Registered Professional Engineer (RPE) in UK and Hong Kong, respectively.



Mr Daniel Naish is employed as Principal Engineer (Road Engineering Standards) at the Queensland Government Department of Transport and Main Roads in Australia. He has over 14 years experience in architectural acoustics and road traffic noise management. In recent years, Daniel has undertaken research through the Queensland University of Technology (QUT) into the benefits and design of balcony acoustic treatments to attenuate road traffic noise and has produced a number of publications on this topic. He also lectures Industrial Noise Engineering for mechanical engineering students at QUT.

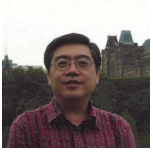


Professor Xiaojun Qiu graduated in electronics from Peking University, China, in 1989 and received his PhD degree from Nanjing University, China, in 1995 for a dissertation on active noise control. He worked in the University of Adelaide, Australia, as a Research Fellow from 1997 to 2002. He has been working in the Institute of Acoustics, Nanjing University, as a professor on Acoustics and Signal processing since 2002 and now is the head of the Institute.

He visited Germany as a Humboldt Research Fellow in 2008. His main research areas include noise and vibration control, room acoustics, electro-acoustics and audio signal processing. He is a member of Audio Engineering Society and International Institute of Acoustics and Vibration. He has authored and co-authored more than 250 technique papers and held more than 70 patents on audio acoustics and audio signal processing.

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Professor Shui-keung Tang obtained his BSc(Eng) from the Mechanical Engineering Department of The University of Hong Kong in 1987. He finished his PhD specializing in acoustics and fluid dynamics from the same department in 1992.

Professor Tang joined the Department of Building Services Engineering, The Hong Kong Polytechnic University in July 1993 and since then has been involved in teaching subjects related to the Built Environment and Acoustics. He is currently the leader of the Building Acoustics and Vibration research group in the Department and is the Director of the Urban Noise Research Laboratory of the Research Institute for Sustainable Urban Development of the University. He is also active in organizing acoustics conferences and providing services to the industry. Professor Tang has published over 90 research papers in SCI journals denoted to the science and applications of fluid mechanics, acoustics and mathematics. He has also completed over 80 consultancy projects.

WHO SHOULD ATTEND:

This conference is designed to attract all those who are involved in sustainable building projects:

Property Developers, Construction & Engineering Firms, Contractors & Builders

- Sustainability
- Environment
- Planning & Development
- Urban Planning
- Construction
- Legal and Compliance
- BEAM / LEED Certificate
- Building Codes and Assessment
- Procurement & Purchasing
- Operation

Architecture Firms

Government Authorities & Ministries

Universities, Associations & Research Centers

Engineering & Consulting Firms

Material Laboratories

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BUILDING DESIGNS FOR NOISE MITIGATION- THE LATEST TRENDS**

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REGISTRATION

24 May 2013 (Friday)

Please print or type

Title: Mr / Mrs / Miss / Prof / Dr

Name: _____

Company/Organization : _____

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Symposium Secretariat

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