

Message from the Chairman

Dr CM MAK



Welcome to this issue of "Sounding Board". I took up the chairmanship on 15 March 2006. The new executive committee has served you for nearly three months. Life is always busy as usual. Our institute has organized a very successful half-day seminar on "road traffic noise problem in Hong Kong" with PolyU-BSE, PolyU-ME, HKIE-MMNC, HKIE-Env and HKIEIA on 8 May to draw peoples' attention to the road traffic noise problem in Hong Kong and to stipulate ideas on how to deal with the problem. Over 100 participants from consulting companies, contracting companies, universities and government had attended the seminar. Looking ahead into the coming months, we will have more activities such as seminar(s) on vibration from rail track, a technical site and delegation visit to Shanghai.

We have signed an agreement on publication of the "Technical Acoustics" journal with Shanghai Institute of Acoustics for two years for the period Jan 2006 – Dec 2007. This journal is now published quarterly. Ir. N.C.Cheung and I are the members of the Editorial Board for two years. Our members and acoustic professional are encouraged to submit articles to the journal to share their knowledge of acoustics.

Thank you for your support in the past. I look forward to having your further support.

HKIOA-Professional Diploma in Acoustics and Noise Control

Dr F CHONG

This Diploma course has been running in sponsoring partnership with The Hong Kong Institute of Vocational Education (Chai Wan Campus) for many years. This seventh round of the Course commenced from November 2004 and completed in July 2005.

Well-qualified and experienced acoustic professionals from the industry including Mr. Martin Chan, Dr. Justin Kwan, Mr. KM Cheng and Mr. Albert Li were invited as tutors for the Course. Positive feedback was received regarding the enthusiasm and learning atmosphere of the students. The practical nature of the modules and the interactive way in which they were delivered was welcome by students.

A seminar was held on May 28, 2005 with distinguished speakers invited by the HKIOA to share their expertise and the latest developments in the acoustic field with the course participants. Fostering a closer contact between the course participants with the HKIOA is another objective of the seminar.

The Education Sub-committee wishes to thank Dr. CT Wong and Mr. Albert Li of HKIVE (Chai Wan) in running the course.

Seminar: Application of Quadratic Residue Diffuser as Noise Reducer in Barrier System

Dr CW LAW

In 19 July 2005 evening, BSE Dept of Hong Kong Polytechnic University (HKPolyU) and HKIOA jointly organized a seminar at HKPolyU focusing on the application of quadratic residue diffuser as noise reducer in the barrier system.



We had the honour in inviting Prof YW LAM as the speaker in that evening. Prof LAM is a Professor of Acoustics and the head of the Acoustics Research Centre at the University of Salford. He has over 20 year's experience of working in environmental acoustics, industrial noise and building acoustics. He is internationally recognised as an expert in these fields.



About 30 participants attended the seminar. A lot of questions were raised during the Q & A session. Our Chairman Mr NC CHEUNG lastly presented a souvenir to Prof LAM to show our gratitude.

Seminar: Building Services Noise & Vibration Control

Dr CM MAK

In 13 August 2005, HKIOA, PolyU-BSE, ASHRAE-HKC, HKIE-BSD, and CIBSE-HKB jointly organized the technical seminar on building services noise and vibration control at The Hong Kong Polytechnic University. About 150 participants from consulting companies, contracting companies, universities,...etc



attended the seminar. Four speakers gave their talks: Dr CM Mak of the HKPolyU, Mr John WM Lam of EPD, Mr Tommy Wan of IAC (HK) and Mr Tom Ho of S&V. Dr Mak firstly introduced building services noise and vibration control. Mr Lam then shared with the audience the building services noise and vibration issues & the enforcement of the Noise Control Ordinance (NCO). Mr Wan discussed the aspect of calculation, installation and practice followed lastly by Mr Ho on



modern noise and vibration measurement techniques. After the question and answer session, Mr NC Cheung, Chairman of HKIOA, presented souvenirs to the speakers to show appreciation.

北京噪声研究座谈会报告

Andy CHUNG

金秋九月也许是北京旅游的最好时间，温暖的阳光与和缓的微风让人心旷神怡。但对于噪声专家们来说，这个时候来访北京有更深一层的意义，因为由中科院声学研究所（IACAS）组办的为期一天的声学研讨会在北京举行。这次学术研讨会邀请了大陆、香港和台湾三地超过 40 位声学专家学者参加。与会者中有两个共通点：一是他们都为中国人，二是他们都是分享和交流各自在噪声和振动方面的观点和经验。

在 2005 年 9 月 5 号，声学学会张会长首先为这次研讨会的主旨作了介绍。张会长谈到，随着社会的进步和科技的发展，噪声污染问题逐渐得到人们的重视，噪声控制技术也不断向前发展，怎样更有效地控制噪声是本次研讨会的主要议题。同时张会长也谈及了香港的噪声控制管理政策和将来时间里，各位



系统，包括现时政府管制的技术趋势。在接下来的代表纷纷各抒己见，表达

各自对噪声管理和控制的见解。来自香港声学学会的钟先生作了噪声与信息通信技术结合的演示报告，主要介绍了在香港信息通信技术在噪声监测、噪声模拟和噪声专题图绘制等方面的应用。历时一天的研讨会在积极热情的交流气氛中结束，会后，来自中科院声学研究所、香港声学学会和台湾声学联合会的代表们交换了纪念品。



接下来的第二天，与会代表们还参观了中科院声学研究所和北京建筑研究设计院。

Advanced Level Course on Road Traffic Noise Measurement

YN AU YEUNG/Dr Kin CHENG

To foster continuous professional development, apart from technical seminars/visits, HKIOA has been organizing professional diploma/short courses with the Advanced Level Course on Road Traffic Noise Measurement being the most recent one. The course aims at providing the local industry with updated skills and techniques required for road traffic noise measurement, and is supported by EPD of the HKSAR.

It was a 12-hour course held during three evenings and one Saturday morning in December 2005. The evening meetings in the Royal Hong Kong Yacht Club

concentrated on acoustic theories, noise measurement techniques and instrumentation, legislation related to road traffic noise while the Saturday practical session provided participants with hands-on in-situ training on noise measurement technique.

Dr. CM Mak from Hong Kong Polytechnic University, Mr. Tom Ho from S & V Instruments Co. Ltd. and Dr. KW Cheng from Environmental Protection Department were the speakers.



Since the course was targeted to be in small group size to facilitate fruitful discussion and hands-on practice, only 15 applicants could be enrolled. Nonetheless, the response was overwhelming. The course was finished by having a lunch gathering during which feedback was obtained. Overall, participants considered that the course was useful to equip themselves with the proper technique in carrying out road traffic noise measurement.

The Institute will offer the course on a regular basis and those not admitted in the first round will be given priority in the second round.

Seminar: Guidance Notes on Road Traffic Noise Assessment

Dr CW LAW

On 13 December 2005 evening, HKIOA, HKIEIA, HKIE (Env Div & MMNC Div) and BSE Dept of Hong Kong Polytechnic University (HKPolyU) jointly organized a seminar at HKPolyU focusing on the Guidance Note on road traffic noise assessment in Hong Kong.



We had the honour in inviting Mr PS NG as the speaker in that evening. He is a Senior Environmental Protection Officer working in the Assessment and Noise Group of the Environmental Protection Department (EPD). The presented Guidance Note was

consolidated based on the past over 10 years' experience and practices on road traffic noise impact assessment in Hong Kong. Mr NG gave a brief discussion on the traffic noise assessment under the Environmental Impact Assessment Ordinance. Then he shared with the audience his observations in relation to CRTN calculation and presented the detailed procedures for road traffic noise measurement under CRTN.



More than 90 participants attended the seminar. Question and answer session was carried out with presentation of a souvenir to Mr NG at the end.

章奎生聲學設計研究所五周年紀念

姚景光

2006年1月10日是中國聲學界重要的一天。這一天，現任會長張廼聰和前任會長姚景光代表香港聲學學會前赴上海，參加章奎生聲學設計研究所成立五周年紀念活動。

與會人數超過 150 人，他們分別來自全國各地，包括北京的程明昆教授等，大家歡聚一堂、共同道賀章教授。



大會主人翁章奎生教授在致詞時表示，章奎生聲學設計研究所於 2000 年 7 月 28 日成立，在過去 5 年裏，業務不斷增長，承接了多項建築聲學廳堂音質設計和噪聲與振動控制工程。其中重點項目數不勝數，例如：北京保利劇院、上海東方藝術中心、杭州大劇院，上海影城，寧波雅戈爾體育館和博鰲亞州論壇會議中心等等。大會亦邀請數位嘉賓致詞，如香港聲學學會代表亦很榮幸為其中的一位。

前任會長姚景光在致祝賀詞時表示章教授與黃大仙在某幾方面很像。如：第一方面，章教授的「法力」很高，在多個項目上都能創造完美的聲環境。另一方面，便是章教授「有求必應」，Never Say No！所以，章教授朋友多，工作多，使其章奎生聲學設計研究所取得的成績也更多。



姚景光借此良好機會，向章教授提出一個要求，就是希望他本人抽空到香港，設計一個香港大劇院。

最後，張廼聰會長還贈送一支墨水筆給章教授，作為祝賀禮。同時亦寓意章教授很有「墨水」，很能幹。希望章教授用這支墨水筆構畫出更神奇的章奎生聲學設計研究所的宏偉藍圖。

慶祝活動在一片歡笑聲中完滿結束。

Members' Talk

WP KO

Last March, I graduated from Stanford University. My major was Civil and Environmental Engineering. When I was a graduate student in Stanford University, I was also a Visiting Professor in California State University at Los Angeles teaching fluid mechanics and dynamics to the graduate students. I was also a project leader in hypersonic aircraft design project funded by NASA. The hypersonic aircraft was designed to fly at Mach number greater than ten. Two months before I graduated from Stanford University, I was invited to join a consultancy company in the Bay Area.

I am very happy to share my working experiences with all of you. Silencers are used to

reduce airborne noise propagation inside pipes and ducts. Sound waves are absorbed when they propagate through silencer. Besides of silencer geometry, flow resistance of an absorptive material is also an important factor in silencer design. It would be very time consuming and expensive to measure flow resistance of an absorptive material in a laboratory. Most acoustic engineers then use calculated flow resistances to design silencers. Finally, calculated insertion losses are not close to real situation. As you know, manufacturing method of an absorptive material can affect flow resistance. I suggest using measured flow resistances rather than calculated flow resistances to reduce errors in silencer design. Also, installation method can affect insertion loss of silencer. Sound waves can travel along the surface of stack and reduce the insertion loss of the silencer. Silencer should be isolated to the inner surface of stack.

I am very well experienced in using the FHWA Traffic Noise Model (TNM). The model can calculate Leq (1 hour) at noise sensitive receivers. It requires input of five standard vehicle types; automobiles, medium trucks, heavy trucks, buses and motorcycles. However, the model may not be appropriate to be used in Hong Kong. There are differences in the vehicle type definitions between Hong Kong and the U.S. If you want to use the model in Hong Kong, you need to adjust the Hong Kong traffic flow data according to the U.S. vehicle type definitions.



San Francisco is a nice place to live and work. The weather is very good and I like to enjoy the sunshine here. The beautiful places in San Francisco are Golden Gate Bridge, Fisherman's Wharf, Twin Peaks, Napa Valley, etc.

I hope that I shall have time to come back to spend my vacation this coming December and visit all of you.

Message from the Editor

YN AU YEUNG



This is the first issue in the new committee year. Most of the activities reported took place last year. We had another year with regular events such as seminars, talks, delegation visits and professional diploma course. Besides, we have started to offer training courses in specific areas to strengthen the knowledge and skills of practising personnel in the field. The Road Traffic Noise Measurement short course was the first one and we received encouraging response from the industry. Details are given in one of the articles.

We again received a contribution from our long-supporting member WP to the Members' Talk corner. He shared with us his recent development and his professional experience which I am sure members will benefit. May I make use of this occasion to congratulate WP on his graduation from Stanford University. I hope that he can come back to Hong Kong this December and have a gathering with the old friends.

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