oard

Sounding



香港聲學會 The Hong Kong Institute of Acoustics

MESSAGE FROM THE CHAIRMAN

Dr K M LI

Dear Members.

First of all, I wish to extend my heartfelt congratulations to Au Yeung Yiu Nam ('Au Yeung' to his friends) for his contributions in recent issues of Sounding Boards. He has brought in a lot of great ideas that make the HKIOA Newsletter a pleasure to read! I trust that you all agree with me.

After the summer recess, the Executive Committee has a fresh start in September. We have been busy already this academic year with the Past Chairmen, Westwood Hong, K K Iu and Maurice Yeung attended the 9th National conference in Noise and Vibration held in Nanjing in October. We continue to co-host seminars with the Hong Kong Institution of Engineers, (Mechanical, Marine, Naval Architecture and Chemical Divisions). Dr. C M Mak, Martin Chan and other experts have been invited to give talks to young engineers who seek life-long continuing education by attending seminars. Any ideas for new conference/seminar topics will be welcomed. Organizers and attendees can be non-HKIOA members; so please pass the invitation around to your colleagues. Maurice Yeung has agreed to organize a Technical seminar on "Calibration and Acoustical Standards." He has invited two local experts, Tom Ho and Jonathan Kwan as well as an international expert, Dr. George Wong who will share their experiences with attendees. Dr. Wong is a Principal Research Office and the Program Leader responsible for acoustical standards at the Institute for National Measurement Standards, National Research Council of Canada. This seminar is being organized with a short lead-time, so please note the date in your diary.

In the last AGM, members have voted to introduce two membership categories. The Executive Committee will investigate carefully for right candidates. In addition, the Executive Committee plans to encourage an increased number of Associate Member to apply to be a Corporate Member, and for more professionals to join as Member. Potential new members from Universities and Governmental Departments should be relatively easy to identify, but for industry and consulting firms we would appreciate any help we receive. In the last 6 months we have received over 20 applications

for membership. If you believe that your colleagues would be interested to join HKIOA then please ask us to contact them with membership details (contact Dr. K Cheng, kwcheng@epd.gov. hk).



Showing up of all committee members in a monthly meeting.

REPORT ON GINLIN CONFERENCE: NATIONAL ACOUSTIC & NOISE CONFERENCE (Sept 2002)

Dr. Westwood Hong

Prof. Ma Da You (seated with KK Iu and Westwood Hong).



It was the beautiful scenery of Ginlin that drew us (K K Iu, Westwood Hong and Bunny Tsang) to the Conference. After landing, we had the opportunity of embracing ourselves amidst the natural beauty of the Environmental Park in the Country side and meeting the beautiful Yao people. With the golden sunset, we

took a speedboat trip up and down the picturesque Li River scratching the crystal clear and shallow river bed lined with pebbles.

The next morning, we had the rare chance of meeting with the acoustic "grandfather" of China, Prof. Ma Da You, and other famous acousticians all over China, including Professors Tien Jing, Zhang Ren He, Cheng Ming Kun, Xiang Duan Qi from Beijing and Prof. Zhang Kui Sheng, Lu Yu Heng, Chen Duan Shi from (with KK Iu and Westwood Hong) Shanghai.



Prof. Tian Jing

Thanks are to Prof. Tien Jing for making all the arrangements and we had a useful discussion with Prof. Tien and other friends for the whole evening over acoustic and social topics in a quiet tea-house with nice traditional Chinese settings of paintings and furniture.

The Conference was very successful and the Hong Kong delegates were really honoured to be seated in the front row seats with the "big brothers' of Chinese Acoustics Societies with the kind mentioning of the Hong Kong's active participation by the Chairman. This is a useful occasion for the three hundred and so delegates of acoustic professionals, academics and practioners to exchange their views and experience.



A happy delegate and the charming Li people

The next Conference will be held somewhere beautiful in the Mainland and we'll keep you posted.

SILENCER DESIGN (GAS TURBINE)

It has been two years since I left Hong Kong. Ten days later after I left Hong Kong, I started my new job in Oklahoma. The work nature was very different from the work I did in Mass Transit Railway Corporation Ltd. My job was to lead the acoustic engineering department and was responsible for the silencer designs of the gas turbines.

I may take this opportunity to share my experiences with all of you. There are 2 types of silencer; hard wall and soft wall design. Silencers are in flat parallel baffles of constant thickness and air gap. They can also be designed in off-set arrangements. The baffles are with or without tails in-



side circular stack, rectangular stack or inlet system of the gas turbine. The tails for the baffles are to reduce the

NOISE IS AGAIN THE FOCUS OF DEBATE AT LEGCO

Richard Kwan (Immediate Past Chairman)

On 19 July 2002, the LegCo Environmental Affairs and Transport Panels met to discuss the government's proposal to implement, on a trial basis, traffic management schemes at four locations for noise abatement purposes. On behalf of the Institute, I attended the meeting and expressed our support on this initiative that would provide a certain degree of relief to many residents.

Representatives from the transport trades, however, were strongly against the proposal. They argued that the proposal was misguided and would adversely affect their operation and business.

After several hours of debate and emotional lobbying, the meeting decided to defer the case. The government has been asked to provide additional noise data and substantiation. The Panels would also invite the new Secretary for Environment, Transport and Works to deliberate on traffic noise abatement issues.

TECHNICAL SEMINAR: "NOISE & VIBRATION CONTROL ENGINEERING INSIDE BUILDINGS"

James Lo



Dr. Mak presenting his talk in the seminar.

This seminar was held on 5 October 2002 at HKIE HQ Seminar Room. This was the first joint seminar in the series co-organized by our Institute and HKIE. The second seminar on Tackling Traffic Noise was held on 2 November 2002, which will be reported in the next issue of Sounding Board.

More than 80 participants attended the first seminar of whom 20% were our members with the rest being members of HKIE.

Dr. C.M. Mak of the Hong Kong Polytechnic University introduced from the fundamental acoustic principles to the more advanced 3-dimension vibration modeling that may be involved inside a building. I believed that this seminar served as an introduction of an "Acoustic world". After this seminar, participants can better understand which areas of acoustics he or she should focus in.

In the second part of the seminar, Mr. Tom Ho of S & V Samford Instruments Ltd. introduced the site evaluation methodologies for assessing the sound and vibration in buildings. An up-to-date 4-channels PC based sound & vibration analyzer was used to demonstrate the actual measurement process.



Mr. Tom Ho answering questions raised from the floor.

和高教授做專訪,可以得到一些啟示,就是在老前輩眼中,我們這 等後輩,很多都沒有理想,即使有,亦不夠堅持,不堅持的原因很多, 但可能共通的是"俗務太多"。



高家莊內的高華文,是一個不折不扣的藝術家,至少,他有藝術家的一 份堅持。

後言:

高華文教授是工程及學術界傑出 人士,其學術論文在國際間備受尊崇, 亦廣為業界所認識,故今次專訪,誠意

令大家,從另一面了解高教授,並分享他的理想及興趣。

採訪者:歐陽耀南(香港聲學學會出版委員會主席) 鄧兆強博士(香港理工大學屋宇設備工程系副教授)

[Prof. Norman KO is an outstanding scientist as well as an engineer and his reputation is renowned internationally. He research interest and performance is also well known by the local industry. This personal interview aims at disclosing the less revealed side of Prof. KO: his artistic interest and achievement, and his aspiration. His success posts an example for new comers.]



高教授和他的作品



MESSAGE FROM THE EDITOR

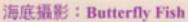
Y.N. Au Yeung

The background colour of this issue of newsletter is blue to reflect my feeling after the personal interview with Prof. Ko.

It is my honour to have a chance to talk in length face to face with Prof. Ko, the "grand dady" in the acoustic field. Prof. Ko's talk is inspiring and his success is of no coincidence. Just quote a few key factors: perseverance, open mind, target setting and time management. Of course, the gift of talent and the luck of having a supportive second half cannot be denied. You can find out more after you read through the Elite Club article and you can understand more on why science and arts are not mutually exclusive. It was deliberately written in Chinese for capturing the essence of his words.

It is time I carried out a review of my future and my target. Are you going to do so for your life-long planning?

We again received a support from Mr. Po who contributed to the Members' Talk corner. He shared with members his experience in silencer design for gas turbines. Besides, Dr. Gabriel Lam gave a response to the article submitted by Prof. Daniel Chan in the last issue on the HKIOA logo design. This is encouraging because members start to talk to each other via the Sounding Board. Any improvement in the newsletter as the focal point for members' communication depends on your input.





術界中佔一席位,我一直都朝著這個方向走,所以我選擇了基本學術研究,而不選R&D,因為前者可以出很多論文,論文愈出得多,愈多人認識你。"

我又問高教授,一日 24 小時,他除了工作,做研究,砌模型飛機,做雕塑,所餘下來的時間很少,那還有時間陪太太。高教授說,他太太不是一個喜歡行街買東西的人,而且很獨立,所以不成問題。他更和我說,要實踐理想,需要很小心的選擇另一半。說起來,高太太的確是高教授的賢內助,除了默默支持丈夫外,還懂得沖曬相片,曾經有一

次要協助高教授沖曬二千多張相片。

高教授另一要家工夫,就是海底攝影,話說他在英國當研究生時,每逢周末,都會去潛水影相,他說很喜歡珊瑚,要看珊瑚就一定要潛落海底,回港後,他繼續潛水,繼續海底攝影,地點只是換了在西貢···

高教授說他生活得很開心,因為有理想。他說: "現時很多年 青人,太沒有理想,他們總推說無時間,但一日24小時,如果每天 可以抽一兩個小時來實踐自己的理想,一星期就可以有14小時,我 就是不明白,他們有時間看電視,但就說沒時間做其他事情。"



海底攝影:珊瑚

我聽了他的話,心在盤算自己的 理想是甚麼,我只知每天都要開會, 開會,又開會,沒會開的日子,才可 以正正式式的工作,餘下的時間,可 謂少之又少,最迫切的目標,可能是 睡一個好覺。但當細想高教授的一番 話,又不其然的問,自己的理想是甚 麼?

"現時大部份年青人,眼光太窄了!"高教授繼續說:"人生是不停的學習,可以學的實在太多,例如我們唸理科的,並不等於不唸文學名著,因為每個學科都相互關連,讀得愈廣泛,可運用的知識就愈多,對自己更有好處,所以雖然我唸工程,但我能從事藝術工作,亦會寫詩。"

說的也是,現今能文能武的人, 不可以說無,但肯定不能說很多,之 所以通才教育實在重要····

"尋"

In the beginning

The search for good

Growth

Survival

With age

The search for the unknown

Understanding

Knowledge

And even recognition

Later

Discovered the power and dominance of scientific doctrines

Awakening to severe competition

Both healthy and unhealthy

Honoured to be given the opportunity to participate

To discover

Self expectation

Fascination



我問高教授,雕塑以及做模型飛機,興趣是否自小培養,他滿有興緻的說,自小可以將興趣用來 賺錢。"在抗戰成功後,母親買了一盒美國製的模型飛機給我,當時我只是唸小學,說明書上的英文 字,很多都不懂,唯有一面查字典,一面跟說明書的指示砌飛機,最終 當然成功了。"

"之後,我繼續在課餘時砌飛機,由於我砌得快,所以賣模型的老闆,就付錢讓我替客人砌飛機,每架工錢一元,而當時一條油炸鬼賣五仙。"

以前高教授砌模型飛機,除了興趣外,另一個目的是賺零用錢,而現時高教授砌飛機,除了興趣外,另一個目的是為了健康。

至於雕塑,高教授說他很喜歡雲石,很想用雲石雕出一些藝術品。 真正開始實踐理想,是他 1979 年在英國劍橋當 Commonwealth Academic Staff Fellow那段時間。他說,英國人很喜歡工餘或課餘進修,而 那時剛巧有雕塑課程,所以他便去報讀。"我報讀那個雕塑課程,但負

維持高教授身體健康的其中



責的老師說已滿額,但我一看張List,全班只得12人報讀,怎會額滿?在香港的校外課程,每班起碼 幾十人啦。"高教授繼續說:"於是我跟那個老師說,全班只得12人,誰說額滿,最後爭論了很久, 終於肯收我。"跟著下來又怎樣,,,?



高教授其中一些雕塑作品

"那個老師對我說,初學者最好用較容易雕刻的石頭,例如砂石或石灰石,但我說要用雲石,老師說雲石難於掌握,我們又爭論了很久,結果他打開了櫃門,說:Here is your marble!之後我便用雲石雕刻了。""由於我雕得快,而又無弄傷手,老師一口咬定我之前已懂得雕刻,我其實是初哥,當然否認,但老師死心不息,直至有一次,他突然和我說:我知道了,因為你們中國人雕象牙!我想,關雕象牙甚麼事?"

我一面聽著,一面望望室內的雕塑,我對藝術可以說一竅不通,但還是看出作品充滿了作者的堅持。

高教授從事雕刻藝術已有數十載,作品除了參展外,部份售予知音人,不少雕塑愛好者,以及政府部門,專程向他訂造雕像作為擺設,現時他手頭上,已有 九件雕塑有待完成付運。

"那麼多作品中,你最喜歡那件?"我問高教授。 "很難說的。"他回答。



"Flight of Birds"

在旁的高太太,並不多言,只是聽著高教授的想當年,她說她做人的目標,是身體健康。

"做人一定要有目標,無目標,無理想的人生,甚麼也不是。"高教授說:"我的目標是在國際學

ELITE CLUB

高家莊內的高華文

未進入高華文教授的家時,我已被門口的一塊寫著"高家莊"的 小牌坊,以及幾架掛在天花上的小飛機吸引著,心想: "怎麼高教 授會是一個工程師,而不是一個藝術家?"當我蹅入屋內,心中的疑問更大,寬闊的房子,擺滿了高教授的雕塑,大大小小的起碼有幾十件,加上牆上掛著多幅油畫,彷彿是一家小型的藝術館。這還未算,再進入工作間,抬頭一望,天花板掛滿了色彩繽紛的模型飛機,高教授說: "我已經做了千多隻飛機,我的目標是要做幾千隻。"





高家莊內的"藝術館"

幾千隻模型飛機需要多少時間去完成,對我來說,可能會是 數年,甚至是十數年,因為現時在"資源增值"下,工作時間不 斷增加,就連睡覺的時間都沒有了,那有時間做自己喜歡的事 情?心中實在羨慕。高教授說,他退休後,太太怕他沒事做,便 鼓勵他做模型飛機,"因為男人退休不做事,好容易會死的"。

高華文教授是本港工程界的老前輩,退休前不斷從事流體力 學的學術研究,期間更致力推動本港環保,尤其是嘈音對環境及

健康的影響。

雖然高教授已經退休,但一講開工作,他的話題還是滔滔不絕。他63年香港大學畢業,便遠赴英國進修及做研究,拿到博士學位後,同時獲得 Queensland University 以及香港大學的聘請,但由於母親患病,他就順理成章回港,在港大做研究一做就是廿多三十年,足下門生都能獨當一面,這是高教授引以為傲的。

"我回港教學初期,香港對嘈音的認識並不深,政府以及一般市民,都不了解嘈音對環境的影響",高教授回憶著說:"直至一次有位南華早報的記者,無意中和我提起,當時的啟德機場附近很嘈,問我可否去量度一下聲量,所以我便去度一度,發現飛機的聲量大得不得了,之後一直都有記者,電視和雜誌記者,訪問我關於嘈音問題,而我任教的大學課程中,亦開始了聲學一環,再過幾年,我做了一個關於嘈音的 social survey ,可以說是全港首次,地點由深水埗至九龍城,一共訪問了 1200人,而當時沒有政府及大學的資助,但慶幸得到九龍一間師範學院的學生協助,完成整個調查。"高教授笑說,由於他後來積極參與嘈音的環保研究,所以他的同事都稱他為 Noisy 高。

高教授提到在環保署成立初期,有關環保的條例,只是照將其他國家及部門法例搬字過紙,當中經典,莫過於"如有違法,罰款或入獄×年"。高教授說,政府在制定環保條例上,並無計算到成本問題,"環保的東西,是否要弄到坐監那麼嚴重?被檢控的人會說,我只不過是開大收音機,或是我的冷氣機嘈,幹甚麼要坐監,又不是殺人放火?""原來一萬元就等於坐十二個月監,條數是否這樣計?"之後的發展,是高教授給予當局意見,現時已見不到違反環保條例需要坐監的條文。話說回頭,在進行全港首次嘈音研究調查後,部份政府部門都有邀請高教授協助向屬下的員工,講解或解決有關環保的疑難。

說著說著,又到下午荼時間,我們一面吃蛋糕,喝著熱荼,一面再談,而高教授太太亦都加入了。

pressure drop. The offset row prevents a direct line of sight through the air path or air gap and provides additional attenuation in the middle to high frequencies. For the exhaust silencer design, the exhaust gas temperature from a gas turbine is normally over 1000 Degree Fahrenheit, therefore, the acoustic insulation materials for the exhaust silencers should be carefully chosen. Also, the flow resistance of the insulation material is one of the important factors for the silencer design. A low flow resistance means better attenuation of noise but there are tradeoffs that sometimes dictate alternate choices such as a denser and higher flow resistance material may attenuate low frequency noise better than a lighter, lower flow resistance material. I usually preferred to use the ceramic fiber (4 lbs./cu.ft.) or basalt (7.5 lbs./cu.ft.) for the exhaust silencers and mineral wool (4 lbs./cu.ft.) for the inlet silencers. Most of the customers also specify far field requirements in C-weighted noise levels; then, the noise levels at 16 Hz or below 16 Hz normally control the silencer design.

Last year, I gave up the traditional silencer design such as equal baffle thickness or equal air gap. My reason is to reduce the capital cost. Maximum dynamic insertion loss can still be obtained for unequal thickness, unequal effective length, unequal air gap, unequal hole diameter and different perforated patterns. It is more cost-effective in reducing the required noise at the specified frequencies.

I enjoy my life in the United States very much. Last year, I learned Kung Fu from Jet Li's friend. But, I like to practise Wing Chun Kung Fu very much as I practised it for a very long time in Hong Kong. I am still looking for a Wing Chun Kung Fu teacher to guide my practice. If you like, I may share the idea of Wing Chun Kung Fu with all of you in the next issue.

I hope that I shall have time to spend my vacation in Hong Kong next year and visit all of you.

[Contribution: W.P. Ko]

THE GOOD NOT TOO OLD DAYS

It was so nice reading the Sounding Board of the last issue where senior old folks, in the Members' Talk column talked about some of the historical past. To me, they all appear to have happened just yesterday. Let me now join in the recollection of memories on the establishment of the Institute Logo which Ir Professor Daniel P C Chan mentioned in the last issue.

In the founding meeting of the Institute, a number of proposed logo designs were tabled for views from the founding members. Suddenly, Mr Raymond Chan (Raymond: I was so glad to read about you in the last issue) pointed to the unprepared Gabriel and stated that I might perhaps submit another design for the logo. Instead of making a selection on the various logo design proposals, it was resolved that a logo design competition be held. Raymond's statement had taken effect that I did go to my computer after the meeting and made a design. To my total surprise, my design was selected for the Institute's Logo. It was also to my



surprise that the present Institute Logo is not exactly the same as my design. I learned that the electronic version of my design could not be printed for unknown reason and hence it was redrawn with lines of constant width based on concept of my design. The appearance is obviously not the same as my original one. So the present Logo is the effort of many hands and so please do not give credit (or otherwise) to me alone. And if Daniel wishes to propose a reward/award for the logo design retrospectively, I would ask the man who did the redrawing to join me to accept it.

This is just a record of the good not too old days on the history of the Institute Logo before it is forgotten and for those who may find it interesting. But there is one thing for sure: Irrespective of what, HKIOA will make it works.

[Contribution: Ir Dr Gabriel C K LAM]