New Centre to Give Techno Boost to Industry

The Advanced Surface and Materials Analysis Centre, a centre which assists metal finishing and related manufacturers tackle practical production problems and setting operation protocols for quality control, was officially set up by the University and the Hong Kong Productivity Council (HKPC) on the University campus on 15th January 1999.

The University has been engaged in materials science research and has made significant contributions both in practical application and theory. The setting up of the centre exemplifies technology transfer from academia to industry and partnership between the two in promoting technology-intensive industry in Hong Kong.

Established with grants from the Industrial Support Fund, the centre consolidates the existing facilities and expertise of the Departments of Physics, Chemistry, and Electronic Engineering, and the experience of the HKPC in industrial liaison to provide user-friendly, one-stop service to manufacturers in surface analysis, reverse engineering, process and product development, quality control and assurance.

The centre is equipped with state-of-the-art materials analysis machines including the X-ray Photoelectron Spectrometer and the Scanning Auger Microscope. The centre has the active participation and support of over 20 manufacturers.

Advanced surface analysis is vital to the development of high value-added manufacturing. The metal finishing and related industries yield a major portion of the gross manufacturing earnings in Hong Kong because they involve a series of high value-added processes, often for the production of critical components. These businesses include surface finishing as well as the production of watches, jewellery, spectacle frames, batteries, magnetic devices, integrated circuit leadframes, circuit boards, computer components, and electronics components.

Guests at the grand opening of the centre included Mr. Francis Ho, director-general of the Industry Department of the HKSAR, Mr. Thomas Tang, executive director of HKPC, and Prof. Arthur K.C. Li, vice-chancellor of the University.

Mathematician on Mathematics as Cornerstone of Science and Technology

Prof. Yau Shing-tung, professor of mathematics at Harvard University and director of the Institute of Mathematical Sciences at The Chinese University, delivered a lecture entitled 'Mathematics and Society' on 15th January 1999 at the lecture theatre of Shaw College. The lecture was a Sir Run Run Shaw Distinguished Visiting Scholar Public Lecture.

In his lecture Prof. Yau analysed the role played by mathematics in social development. He pointed out that the economy of modern society is largely influenced by industry whose technological advancement requires the support of the basic sciences. Mathematics is the language of the basic sciences.

Prof. Yau read mathematics at Chung Chi College and pursued postgraduate studies in the US, obtaining his Ph.D. from the University of California at the tender age of 22. Fields medalist in 1982, he was once known as the most influential world-class mathematician under 50.

Education Conference Examines Teacher Professionalism for the Next Century

An international conference on 'New Professionalism in Teaching: Teacher Education and Teacher Development in a Changing World' took place at the University from 15th to 17th January 1999. The conference was organized by the Hong Kong Institute of Educational Research and the Faculty of Education in collaboration with the international research network PACT (Professional Actions and Cultures of Teaching), an international network of scholars and practitioners who share a common interest in a broad range of issues affecting teaching, teachers' work, and professionalism.

The theme of the conference was the multi-faceted role of teachers and the direction of their development in the rapidly changing world today. Six scholars from the US, the UK, Canada, Australia, and Hong Kong delivered keynote addresses in the plenary sessions which were broadcast live on the Internet: 'Towards a Principled Professionalism', 'Professional Development in the US: Practices and Policies', 'The Status of the New Professional in Schools of the Third Millennium: Benchmarking Against the Best in Medical Practice', 'Building an Electronic Professional Community of Teachers', 'Teacher Development and Education in Rapidly Changing Societies', and 'Professionals and Parents: Personal Adversaries or Public Allies?'

Concurrent sessions for paper presentations, symposiums, and round-table discussions were held each day after the plenary sessions.

New Programmes of Study

The following programmes of study have recently been approved by the University Senate:

- Professional Diploma Programme in Health Promotion and Health Education for introduction in January 1999;
- Advanced Diploma Programme in Security Studies (Distance Education) for introduction in January 1999 by the School of Continuing Studies; and

International Nursing Scholar Visit

The Department of Nursing Education recently hosted a visit from international nursing scholar, Prof. Janice Morse, the Director of the International Institute for Qualitative Methodology. During her visit she gave research seminars and workshops to staff and guests from all over Hong Kong. Prof. Morse celebrated her scholarly writings on clinical research and methodology.
New Head of Department Aims to Make Hong Kong See Better

Prof. Dennis Lam, new head of the Department of Ophthalmology and Visual Sciences, may be familiar to many people due to the frequent appearance of his bearded face in the media. This is something he can’t help, being someone whose business is seeing extremely close to home.

Of all our senses, sight is perhaps most deeply rooted in our sense of being and how we interpret the world. With industrialization and the birth of cities, visual communication in such forms as film, television, neon signs, and window displays has given even greater precedence over sound, smell, taste, and touch. The overriding importance we give to sight is reflected even in language. We say “the way we see” or “the way we look at” the world when we see ‘it’ or “if we understand” when we understand. Yet most of us take our sight for granted. Often it is only when something comes in the way of seeing that we realize its importance in our lives.

Ophthalmology, the scientific study of the eye and its diseases, is a subject with tremendous potential for the future. The department, established in 1993 under Prof. Mark O.M. Tso in response to a need to develop ophthalmology into a specialty, is relatively young. Prof. Lam, its second chairman to date, pointed out, “Vision has an important status in the information age — over 90 per cent of the information that goes to our brain does so through vision.” Ophthalmology is also technology-driven, relying heavily on equipment for tests, eye examinations, surgery, etc. The many advances in equipment technology in recent years means that a lot more can be done in the field. Social demand is also on the rise. “We all live longer now and one of the things that go wrong often is our eyes.” The population grows. Moreover, there are many medical conditions which affect our eyes, e.g., diabetes,” said Prof. Lam.

The department’s two most important areas of research are myopia and the molecular genetics of eye diseases. Myopia or short-sightedness is a condition with many environmental risk factors. This can be seen by its variation in prevalence among places with the same genetic pool. For example, epidemiological studies have shown that the percentage of the population in glasses increases as one moves from the country in mainland China to the cities, and then to Hong Kong. Animal studies have also shown that short-sightedness can be induced through the manipulation of visual environment. The department is studying the causes and treatment of myopia through epidemiological and animal studies. It will conduct surveys on the prevalence of myopia in Hong Kong and mainland China; it is also developing a new animal model for the animal studies. As to what (unfortunate) animal that will be, Prof. Lam said, it cannot be revealed. In any case the study will examine the effect of environmental factors on myopia such as light and darkness, or user abuse thereby by, to use two simplified examples, putting things in front of vision with only TV and nothing else, or a period of time so that all they can do is eat and watch TV, or making armadillos wear glasses with only one prescription lens, and then comparing these animals with others used as control. As regards treatment, experiments on certain medicated eye drop will be performed to see if it can arrest the progression of myopia.

Many eye diseases are genetically-based. It is only to understanding the defective gene mutations behind them that the related functional problems can be effectively dealt with. Yet genetic mutations of eye disease may differ between Chinese and Westerners. Prof. Lam pointed out that squinting, for example, tend to be concurrent among Westerners and divergent among the Chinese. There is also a higher incidence of myopia among the Chinese, indicating different genetic makeup. “The first step in molecular genetic research is to identify the defective gene. The next question is why is there this illness when there is this gene? There must be a link between the form of a defective protein or protein that is determined by the disease-causing gene. If we can identify the defective protein/enzyme, we can have supplement or even gene engineering (reprogramming).” Prof. Lam said.

In Hong Kong, where the prevalence of myopia in the student population is one of highest in the world, the use of traditional and laser surgery to correct the condition is gaining popularity. One often hears models and beauty queens oohing and aahing over their miraculous effects, and understandably so since oohing — definitely not the clinical term for observation of glasses and not even the subtle continuance of the contact lens — comes close to having naturally perfect vision. Yet there is also much skepticism over their risks, the skill of the doctor performing the operation, the high costs involved, etc. Prof. Lam is probably the man to ask in Hong Kong about these operations. He said, “All procedures carry risks and limitations. These operations differ from other eye operations in that they have good substitutes. If a patient with cataract is not operated upon in time, the cataract will block his/her vision, or if operation comes late to a patient with retinal detachment, his/her vision will be similar to overexposed images even if the retina is reattached. For these eye operations, the patient does not have any choice. But for laser operations, it is a choice. For this reason the considerations and expectations of safety and efficacy are particularly high for both doctors and patients in such operations.”

To date there are mainly four kinds of myopia operation: (1) RK or Radial Keratotomy; (2) PKR or Photo Reflective Keratotomy; (3) LASIK, or Laser-assisted in situ Keratomileusis; and (4) clear lens/implantation intracocular lens implantation. Both RR, belonging to the first generation of myopia operation, and PKR, the second generation, are suited for short-sightedness of up to 600 degrees. LASIK, the third generation, is state-of-the-art and is suited for short-sightedness of over 600 degrees. Patients with short-sightedness of over 1,200 degrees should consider clear lens extraction/ intracocular lens implantation which involves the replacement of the lens with a crystal. As laser technology is making fast improvements, better technology may be in store for those who opt to wait.

The department will continue to train medical students from the Chinese University and the University of Hong Kong in primary eye care, and train and education programmes for up and coming eye doctors on the mainland, and engage in collaborative research between Hong Kong and the mainland. Prof. Lam said, “The department is full of hope and confidence that ophthalmology and visual sciences will develop even more rapidly in the future,” said Prof. Lam.

—Piera Chen

CSC/ITSU Seminars on Technology for Teaching and Learning

To provide teaching staff members with a better understanding of technology for teaching and learning, the Computer Services Centre/Information Technology Service Unit (CSC/ITSU), a series of seminars and workshops have been organized to take place in February.

Classroom Presentation Technology Primer

Interested in enhancing your classroom lectures? This session illustrates and discusses the selection of hardware and software, and design strategies for creating effective computer presentations.

Classroom Presentations

Microsoft PowerPoint 97 is a powerful presentation tool. Try using its key features in preparing your classroom presentation.

World Wide Web Search Strategies

Don’t know how to search the web? Search results not useful? This session gives you practical means to conduct effective searches.

Creating Web Animations Using Macromedia Flash and Fireworks

What makes your web page more interesting? Want to enhance and clarify complex concepts for your students? Using Macromedia Flash and Fireworks you can make both vector and bitmap animations come to life.

Schedule for the seminars

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Type of Event</th>
<th>Date</th>
<th>Time</th>
<th>Venue</th>
<th>Language</th>
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</thead>
<tbody>
<tr>
<td>2E</td>
<td>Classroom Presentation Technologies Primer</td>
<td>Seminar</td>
<td>6th Feb</td>
<td>9.30 a.m. - 10.30 a.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>English</td>
</tr>
<tr>
<td>4E</td>
<td>Classroom Presentations</td>
<td>Hard-core</td>
<td>6th Feb</td>
<td>11.00 a.m. - noon</td>
<td>Room 104, Pi Ch’iu Bldg.</td>
<td>English</td>
</tr>
<tr>
<td>5C</td>
<td>World Wide Web Search Strategies</td>
<td>Seminar</td>
<td>9th Feb</td>
<td>12.45 p.m. - 1:45 p.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>Cantonese</td>
</tr>
<tr>
<td>6C</td>
<td>World Wide Web Search Strategies</td>
<td>Seminar</td>
<td>12th Feb</td>
<td>9.30 a.m. - 10.30 a.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>English</td>
</tr>
<tr>
<td>6F</td>
<td>From the Classroom to the Web</td>
<td>Seminar</td>
<td>10th Feb</td>
<td>12.45 p.m. - 2:15 p.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>Cantonese</td>
</tr>
<tr>
<td>6E</td>
<td>From the Classroom to the Web</td>
<td>Seminar</td>
<td>13th Feb</td>
<td>11.00 a.m. - 12:30 p.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>English</td>
</tr>
<tr>
<td>7C</td>
<td>Optimizing Web Images Using Macromedia Fireworks</td>
<td>Seminar</td>
<td>22nd Feb</td>
<td>12.45 p.m. - 1:45 p.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
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<tr>
<td>7E</td>
<td>Optimizing Web Images Using Macromedia Fireworks</td>
<td>Seminar</td>
<td>27th Feb</td>
<td>9.30 a.m. - 10:30 a.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>English</td>
</tr>
<tr>
<td>8E</td>
<td>Creating Web Animations Using Macromedia Flash and Fireworks</td>
<td>Seminar</td>
<td>24th Feb</td>
<td>12.45 p.m. - 1:45 p.m</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>Cantonese</td>
</tr>
<tr>
<td>8F</td>
<td>Creating Web Animations Using Macromedia Flash and Fireworks</td>
<td>Seminar</td>
<td>27th Feb</td>
<td>11.00 a.m. - noon</td>
<td>Room 120, Pi Ch’iu Bldg.</td>
<td>English</td>
</tr>
</tbody>
</table>
Golf Club Membership
As a founding member of the Mission Hills Golf Club (MHGC) in Shenzhen, the University may nominate a staff to MHGC membership. Full-time Terms (A) and equivalent staff are now invited to bid for the privilege of being the University's nominee with effect from 1st July 1999. Note: Medical Library resumes normal opening hours from 19th February 1999 and all other libraries from 21st February 1999.
Information in this section can only be accessed with CWEM password.

若要浏览本部分的资料，
请须输入中大校园电子邮件密码。
科學新知

查探細胞基因變異特性：
鬱探新知

開闢治癌新路向

機緣巧合

化學病理學系林青雲教授形容

他的發現是機緣巧合。九五年年底，

他與三藩市加州大學三名研究人員

商討皮膚癌的研究計劃，剛好全美...

林教授在本校學習，九五年取得內科學及外科學士學位，其後

分別於九四、九七及九八年獲授澳洲臨床生化學專科學院院士、

澳洲皇家病理科醫學院榮授院士及香港病理學專科學院院士。林

教授曾任瑪嘉烈醫院病理科醫生，九五年加入中大為化學病理學

系助理教授。圖為林教授與研究小組成員湯瑞芬女士。

林青雲教授形容他的新发现是机缘巧合，九五年他与三藩市加州大学

三位研究人员讨论皮肤癌的研究计划时，结果刚好全美所有

资助机构及与大学有关人士。私人索阅，请致函本

院查询。

1. 本文原稿日期及九月十三日。

2. 本校若按和法律香港中華大學秘書處出版事務處（中大通訊

編輯部）電話：2699 8544；網址：www.cuhk.edu.hk

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載。

5. 本校所載文章只反映作者之觀點和意見，並不代表校方或本

刊立場。

6. 資助具規模及創意的活動

張教授表示，“為了讓學生多舉辦和參與課外活動，藉以豐富非形式教育，增

加書院活力和學生的歸屬感。”

崇基推出「優質活動獎勵計劃」

鼓勵學生舉辦創新的活動

崇基学院去年推出「優質活動獎勵計劃」，資助學

生舉辦具有創意及規模的活動。學生代表及參與

者表示，計劃對於鼓勵學生舉辦有規模及創意

的活動非常有助。

「這個計劃成功地鼓勵學生舉辦大型的活動，從中學生

可學到策劃、組織及管理的技巧，亦對學生的

創意有所啟發。」

崇基學院去年十月推出「優質活動獎勵計劃」，資助學

生舉辦具有創意及規模的活動。學生代表及參與

者表示，計劃對於鼓勵學生舉辦有規模及創意

的活動非常有助。
設立表面及材料分析中心
推動材料科學教研及工業發展

本校與香港生產力促進局合作建立的「表面及材料分析中心」於上月十八日舉行開幕典禮，由李國章校長、香港生產力促進局總裁鄧觀瑤先生和工業署署長何宣威先生主禮。

該中心獲工業署工業支援資助計劃購置先進器材，並於去年七月啟用，為廠商提供生產過程、產品開發、品質控制和保障，以及原物料製造等支援服務。

本校物理系、化學系和電子工程學系的教研人員積極從事材料科學的研究及開發工作多年，在材料分析及新材料研究方面建立了良好基礎，並且引進了不少先進的材料分析儀器及技術，以配合本地高增值工業的發展。中心的成立是本校回饋社會，將科技成果轉予工業界的又一例子；而工業界也鼎力資助和積極參與中心的籌建及運作。

表面及材料分析中心主任劉煥明教授表示，香港的金屬加工及相關工業屬高增值生產程序，用以製造有關產品的重要部分，佔本港製造業收入的很大比例。這類需表面加工的產品包括鐘錶、首飾、眼鏡框、電池、集成電路、電腦及電子配件、硬碟及汽車零件等。廠商要掌握高水平的表面及材料分析技術，才能了解競爭對手的產品，檢測產品出錯的原因，解決生產問題，並開發新產品。中心新購置的X射線光電子能譜儀及掃描俄歇電子顯微鏡，均是本港獨有的表面及元素分析儀器，有助解決廠商，特別是中小型廠商的需求。

香港金屬表面處理學會會長郭振華先生說，過去產品出現問題，只能倚靠外國提供的分析服務，代價不菲，只有大廠家才能負擔，中小型廠家根本無法加入競爭。但中心成立後，可以協助廠商減低成本，提高生產效率，並減少次貨，故極受中小型企業歡迎。

劉教授透露，中心還會積極推動廠商與大學在教研、學生培訓及就業等方面的整體配套合作，建立有效的校企合作模式。

教師專業化國際研討會

各地教育學者及教師上月十五至十七日齊聚本校，或透過互聯網，參與「教學的新專業化特性：變革中的世界教師教育及發展」國際研討會，探討新紀元的教育需求，和師資培訓的發展方向。

研討會由本校教育學院校長及香港教育研究所與國際研究機構「教師專業行動與文化」合辦。後者是由多國學者及教育工作者於一九九二年成立的研究機構，專注於教師工作及專業化發展。

來自美國、英國、加拿大、澳洲及香港的著名學者在會上發表專題演講，探討教師的多重角色及專業發展方向，如何能配合社會的發展步伐，其他議題有教學文化、教師工作、教育政策和進修方法，旨在讓教師訂定本身的專業發展路向。

研討會開幕儀式於一月十五日假何添樓B6室舉行，由副校長金耀基教授主禮。

創意領袖培訓計劃

教育學院資優計劃獲得優質教育基金撥款，於本年舉辦一個創意領袖培訓計劃，內容包括溝通技巧、創意思考、領導技巧、朋輩支援等。

該計劃邀請十所中學參加，各自甄選六名中四至中六的學生受訓。他們於上月中旬至本月下旬參加一個為期五週，逢星期六上課的培訓課程，由富有資優教育經驗的導師悉心指導，啟發他們的創意和領導才能。

完成課程後，這六十名學生將在接下來學年擔任校內學生會導師，協助校內同儕。他們在校本活動進行期間和完成後，仍會接受教育學院的其他培訓。

是項計劃的開幕儀式於上月九日假何善衡工程學大樓五零八演講廳舉行，由香港教育研究所所長盧乃桂教授主持。

新設課程

教務會去年十二月十六日通過增設下列課程：

• 自一九九九年一月起開設健康教育專業文憑
• 自一九九九年春季起由校外進修學院開設經修訂的日語證書課程