



NTU & SGH collaborate on new Master of Science in Biomedical Engineering

New Masters programme a boost to life sciences industry

Singapore aims to triple its output from the life sciences sector by 2010. To play its part in building a world-class life sciences hub in Singapore, NTU is offering a new Masters course in Biomedical Engineering to train manpower for this high-growth industry

In an effort to meet the growing demand for trained biomedical engineers, NTU is collaborating with the Singapore General Hospital (SGH) to offer a new part-time Masters in Biomedical Engineering this July. This new course is believed to be among the first postgraduate-level courses in life sciences offered by a well-known technological university in collaboration with an established medical institution in the region. To be taught jointly by NTU professors and hospital consultants, it is also the first life

science-related programme offered by the University in the area of biomedical engineering.

Already, a task force chaired by NTU President, Dr Cham Tao Soon, has been formed to look into the provision of more life sciences-related courses at NTU. This new Masters programme represents a strategic commitment of the University towards this aim.

The MSc programme is administered by the School of Mechanical and Production Engineering, and co-organised by the School of Applied Science and School of Electrical &

Electronic Engineering. Besides the usual bio-medical subjects, the programme will also offer two unique subjects in **Sports Engineering** and **Tissue Engineering**. Sports Engineering, which focuses on using engineering and medical knowledge to maximise the performance of athletes, is probably being offered for the first time within such a specialisation in the world. The cutting-edge programme will be further enriched by the input of visiting professors from world-renowned universities

PROFILE OF THE BIOMEDICAL ENGINEER

- Works alongside physicians, surgeons and therapists in hospitals, universities and research institutes
- Uses advanced engineering technology to solve clinical problems, design new medical instruments, establish new clinical procedures and guidelines, conduct research, and provide consultancy services to health care companies

brought in at intervals to enhance the Schools' expertise.

The programme is targeted at engineers and medical professionals who wish to be equipped with the latest know-how in biomedical engineering technologies. Biomedical engineers provide an important link between the medical sciences and engineering technology, and have a major role to play in servicing the booming life sciences and healthcare industries.

Based on the 1999 Singapore Trade and Development Board (TDB) statistics, the life sciences industry in Singapore is now worth more than \$9.4 billion. The medical devices sector is a high-growth sector that is expected to boom. Indeed, with a clear twin trend of an aging population and growing affluence in the world, trained personnel in the life sciences and healthcare industries will be hotly demanded. ■



Anatomical measurement of human bones (biomechanics)

“Graduating” start-ups, here at NTU

A new Service Providers Competency Centre at NTU, the first-of-its-kind centre in Singapore, will provide the expertise and infrastructure for start-ups from the local Information Communications Technologies Industry

The Service Providers Competency Centre (SPCC) was launched through the signing of an MOU between NTU, the Infocomm Development Authority (IDA) and SUN Microsystems on 27 January 2000. Signatories to the MOU were Dr Cham Tao Soon (NTU President), Ms Yong Ying-I (CEO of IDA) and Mr Lionel Lim (VP and MD of SUN Microsystems Asia South).

The objective of the Centre is to provide a central point where potential service providers for Internet services can obtain assistance in the form of R&D (NTU), infrastructure expertise (NTU and partners), business advice (NTU and partners) and venture capital (VCs and possibly NTU). This is the first centre of its kind in Singapore.

The services of the SPCC will be of a consultative nature, based on project agreements. There will be three senior Service Provider (SP) Architects leading a team of six other project officers. In research activities, there will be six research engineers developing new technology under the supervision of NTU staff. Five

scholarships for graduate students will also be offered under the programme.

The SP Architects play a similar role to that of their counterparts in the Building profession. They will, in consultation with clients, design Internet-based systems which will provide the business services they intend to offer. The actual building of the systems will be done by systems integrators, software engineers and programmers. The main advantage is that prototypes of the services can be built and tested at the SPCC before being launched live on the Web.

Although the leadership of the SPCC will be provided by the School of Electrical & Electronic Engineering, the centre is in fact a multidisciplinary one and will involve several Schools at NTU. In particular, the Nanyang Business School and School of Computer Engineering are expected to play major roles in its activities. The SPCC will also be a focal point for R&D and consulting activities involving the Internet at NTU.

To be housed at NTU's Innovation Centre, the SPCC will have sufficient computing capacity to host 30 service providers at any one time. However, the



Laying hands on the future of dotcom: (left to right) Mr Lionel Lim (VP and MD of SUN Microsystems Asia South), Ms Yong Ying-I (CEO of Infocomm Development Authority) and Dr Cham Tao Soon (NTU President) at the MOU-signing

intention is to house about six projects there at any one time. Other projects can be initiated there and then moved off-site when they are ready for business.

The SPCC will help viable businesses “dotcom” themselves. “Within the next few years, a number of spin-off companies and technopreneurs are expected to have graduated from this centre,” said Prof Robert Gay, SPCC's Director Designate. ■

\$1.5 million from SMRT for new professorship

NTU is the beneficiary of SMRT's first-ever professorship endowment which will facilitate the advancement of transportation technology in land-scarce Singapore

The SMRT Professorship in Transportation Studies was officially launched on 13 January 2000 at Raffles Hotel Ballroom. The government will match, through the NTU Endowment Fund, \$3 for every dollar donated. A matching grant of \$1.5 million will accrue to the Professorship and another \$3 million will be credited to the pooled endowment. So, the NTU Endowment Fund will effectively receive a boost of \$6 million with Singapore MRT Ltd's (SMRT's) donation.

The donation, which will enable NTU to bring in internationally renowned scholars in the transportation field, is a recognition of the importance of research and development in



NTU President, Dr Cham Tao Soon, receiving the donation cheque from SMRT Chairman, Mr Goh Kim Leong

transportation. With a constant infusion of specialised expertise and new ideas, local professionals can advance their knowledge of

Revamped Nanyang MBA to develop E-Commerce experts

Business enterprises in Asia are quickly reinventing themselves to stay competitive in the New Economy. Keeping up with the e-times, the Nanyang Business School has reinvented its Nanyang MBA programme to summon up E-Commerce and e-business savvy for the workplace

“Success in the eBusiness world calls for a new mindset,” said NTU President, Dr Cham Tao Soon, on 28 January 2000 during a media briefing to announce the revamp of the Nanyang MBA programme.

And driven by this new business mindset, the Nanyang Business School (NBS) has now adopted E-commerce and



Web-based business models will be taught in the reinvented Nanyang MBA programme

transportation technologies. This is important as Singapore’s rapidly growing population and limited land area will pose new challenges for the public transport system here.

Singapore’s Mass Rapid Transit (MRT) system is one of the world’s most successful implementations of an urban mass transport system. With the experiences of SMRT, a world-leader in mass transportation, to draw on, the Chair provides a unique opportunity for ground-breaking R&D. Potential research fields include rolling stock design and maintenance, noise and vibration mitigation, safety systems, ergonomics, and demographic forecasts, just to name a few.

SMRT is the first public transport service provider to endow a Professorship at NTU and the SMRT Professorship in Transportation Studies represents a landmark development for SMRT and NTU. Besides enhancing NTU’s reputation as a leading institution in transportation studies and research, it will enable SMRT to capitalise on resources in NTU’s Engineering Schools, the Centre for Transportation Studies, Nanyang Business School, the Global Positioning Systems Centre and the Centre for Advanced Numerical Engineering Simulations. ■

Reinvented Nanyang MBA

Examples of new focus in core curriculum courses

Accounting – value of intangibles, performance of dotcom start-ups; share options incentive schemes

Economics – economics of information; network and knowledge-based businesses

IT – Internet technologies; knowledge management

Business Policy – web-based business models

Finance – new venture financing; valuation of dotcom companies

Marketing Management – marketing through digital and interactive channels

Organisational Behaviour – contingent workforce; virtual organisations

Courses in new E-Commerce specialisation

Technology Foundations in E-Commerce

Management of E-Commerce Projects

Digital and Online Marketing

Legal and Security Issues in E-Commerce

Strategic Planning and Design of eProcesses

Supply Chain and eLogistics

Enterprise Systems

eBusiness Forum

eBusiness concepts as the backbone of its Nanyang MBA programme. Students on the revamped programme, available from this July (academic year 2000/2001), will be exposed to the implications of doing business in a “wired world” and tasked to rethink their business strategies and implementations. It is expected that many graduates of this programme, equipped with e-Business savvy, will join knowledge-based start-ups and become technopreneurs in their own right.

In the reinvented Nanyang MBA programme, new concepts, ideas and best practices for developing and implementing new Internet-based strategies have been woven into all nine courses in the core curriculum. In addition, eight new E-commerce electives offered in a **new MBA specialisation in E-commerce** will train leaders to lead the implementation of E-Commerce business models and new Internet-based start-ups. An eBusiness forum will see students integrating theoretical and practical knowledge to create new eBusiness entities.

Already, the School has revamped a course in the core Nanyang MBA curriculum, Business Policy, taught from October last year. Three classes were offered because of the high demand for it.

Speaking on the revamped MBA, Prof Neo Boon Siong, Dean of NBS, said: “There are no standard textbooks and established theory to draw from. Nanyang Business School has taken the lead in incorporating these new elements into our Nanyang MBA programme. We hope to create the change agents equipped with the concepts and skills to transform their organisations to compete in the new economy.”

Launched in 1991, the Nanyang MBA programme, which takes in 200 students per year, is well known for its global perspective and Asian focus, as well as its compulsory 2-week Business Study Missions overseas. The new eBusiness orientation and E-commerce specialisation will certainly reinforce the Nanyang MBA’s reputation for innovation and impact. For more information on the revamped Nanyang MBA programme, surf to <http://www.nanyangmba.ntu.edu.sg/>. ■

Triple win for NTU in local IT competition

In another show of software savvy, NTU seized three prizes, including the top prize, in the Singapore Advanced Research and Education Network (SingAREN) Distributed Applications Competition

This is what NTU won in the recent SingAREN Distributed Applications Competition (DAC) sponsored by Sun/Netscape Alliance: the First Prize, Best Java Application Award and a Merit Award. A laudable performance, considering that its winning teams had to contend with 19 other teams from Temasek Polytechnic and NUS, and that only seven prizes were awarded.

Deflating the competition were three teams from NTU's School of Applied Science. The first prize was for a project entitled *ABECOS: Agent-based Electronic Commerce System*. For their superb efforts, the team won \$2,000 cash plus a trip to the Java ONE conference to be held in Orlando, Florida this year. From the same



First Prize winners: (left to right) Liew Chin Chuan, Ong Kok Leong, Tan Beng Suang and Zhao Lei (not in picture - Asst Prof Ng Wee Keong)

School also came a Merit Award winner (project title: *Distributed Interactive Simulation System*) and the winner of the Best Java Application Award, for the best Java application developed (project title: *Intelligent Online Network*).

The DAC was launched in May 1999 to encourage the development of innovative high-impact broadband applications on SingAREN. Opened to all undergraduates, postgraduates and polytechnic students in Singapore, it

attracted 22 projects spanning a wide range of applications. The final judging of the projects was done at NTU on 9 December 1999.

The Government has been proactive in its push for IT and a major part of it is encapsulated in the SingAREN project, launched in 1997, to create a high-speed

broadband network platform to support R&D and advanced technology development in Singapore. Having deployed an advanced network infrastructure in Singapore serving local and international users from academia, research organisations and industry, the next phase is to drum up R&D of new innovative applications on SingAREN, the DAC being a good start. For more details on the competition and SingAREN, refer to <http://www.singaren.net.sg/DAC/>. ■



Best Java Application Award winners: (left to right) John I C Gomes, Sneha N Shah, Jayanth Nagarajan and Asst Prof Clement Chia



Merit Award winners: (left to right) Sim Han Seah, Zhang Jianfeng, Assoc Prof Francis Lee and Assoc Prof Yeo Chai Kiat

Wireless campus on the cards

Come December, the campus community will be saying "bye" to wires and cables, and "hi" to the mobile computing lifestyle of the future

NTU is spending nearly \$4 million to get staff and students wired up – minus the wires. By the end of this year, a high-speed campus-wide wireless infrastructure would have been put in place to allow them to log onto the Internet with just a portable computer and a wireless card that receives signals from transmitters installed at access points on campus.

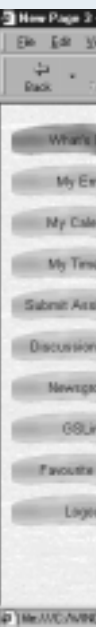
There will be about 500 such access points, unaffected by physical obstructions, covering a radius of about 30m each. Said NTU President, Dr Cham Tao Soon: "Going wireless

means students can access information instantly from worldwide sources." This immediacy also gives unlimited computing options. For example, students can get wired from the canteens, hostels, library, lecture theatres, meeting rooms and open areas.

The project certainly revolutionises the way research and learning is being done on campus. Mr Low Kin Kiong, Director of NTU's Centre for IT Services, envisions personal web portals coming onto the scene, creating a truly people-centred mobile-computing campus. "Personal web portals for every staff and student will make all online services easily accessible and customisable to individual needs."

NTU's campus-wide wireless computer network, when completed, will be one of the firsts in Asia. ■

Mock-up screen of a student portal



Challenge Finale sends JC students into high orbit

The inaugural NTU-JC Challenge is over, but judging by the output created, students will not be closing their minds and books on the subject of satellite technology so soon

The first NTU-JC Challenge organised by the NTU Career Guidance Committee ended with a **Grand Finale** at NTU's new Nanyang Auditorium on Saturday, 12 February 2000. The Challenge, launched in mid November 1999, attracted about 250 students from 14 junior colleges (JCs) and Jurong Institute to work on three difficult satellite-related problems posed by NTU professors. To solve these problems,



National Junior College students' imagination and creativity were fired enough to produce this great idea - a life jacket which saves your life by keeping you afloat and alerting rescuers via satellite

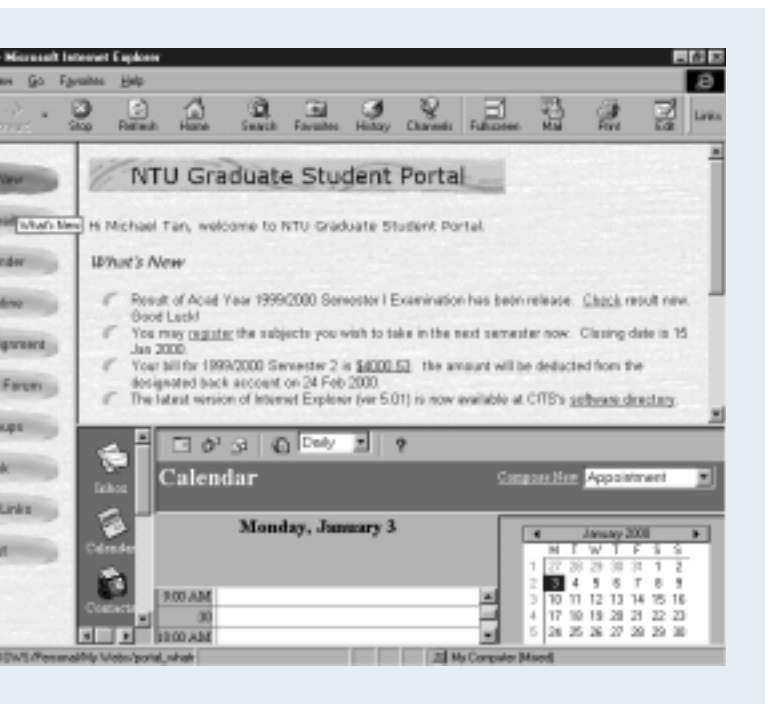


Education Minister RAdm (NS) Teo Chee Hean finds out more about satellite-based cashless purchasing from the team from Catholic Junior College

the students had to investigate the physics and mathematics behind orbiting satellites, develop computer software to perform satellite tracking and image downloading, and create innovative applications using satellite technology.

The end results of all participating teams were featured in an exhibition at the foyer of the auditorium. The Guest-of-Honour, RAdm (NS) Teo Chee Hean, Minister for Education and Second Minister for Defence, gave away the best technical, the most novel application, and the best presentation awards to Hwa Chong Junior College, Catholic Junior College and National Junior College respectively. Each award came with a crystal trophy and a cheque for \$2,500 sponsored by SingTel. The exhibition booths of these three winning teams were featured at "The Learning Metropolis" exhibition held from 7 to 11 April 2000 at the Singapore International Convention and Exhibition Centre.

The Grand Finale also featured a keynote address entitled "Watching Weather from Space" by Mr John Low, a senior R&D officer from the Meteorological Service of Singapore. NTU President, Dr Cham Tao Soon, urged the students not to let their intimate experience with satellite technology end with the Finale. He added: "Who knows, maybe some of you will be able to participate in the design and construction of the first satellite to be completely built in Singapore by NTU!" ■



Techno savvy from the Hwa Chong Junior College team, seen here receiving their trophy from RAdm (NS) Teo. Their modified MP3 player uses satellite transmission to enable direct downloading of MP3 files without the need for a computer

The fine art of micromachining

NTU's new laser micromachining system — a world's first — heralds in the next generation of disc technology

Carrying a CD the size of a 50-cent coin is a novel idea that is not yet a reality but a possibility made real with NTU's successful laser micromachining system. While the CD is not likely to shrink in size, it will be able to hold up to 14 times its present capacity with this breakthrough.

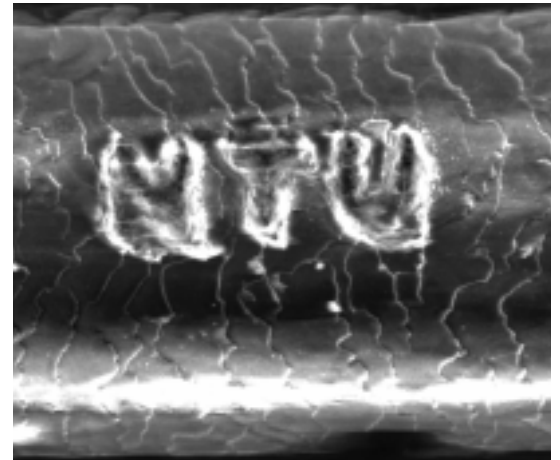
The Precision Engineering Strategic Research Programme (PESRP) of the School of Mechanical and Production Engineering has invented a laser micromachining system that is capable of reaching a sub-micrometer range using ultra-fast laser pulses. Superior to the conventional laser micromachining systems, this new method of laser beam scanning, patented in May 1999, is able to scan at resolutions of up to 1-10nm.

What makes an added difference in

this new laser beam scanning system is that no mechanical motion is involved during the entire machining process. Without these mechanical movements, errors from vibration and backlash will not occur. While reaching a higher resolution, scanning can now be more accurate and repeatable.

The most attractive part about this system is its cost-effectiveness. For instance, in data storage industries such as those which deal with CDs, VCDs, CD-Roms, and DVDs, the cost of current systems that create master copies of products is between \$1.5 to \$2 million. With this new system, the cost goes down to one fifth the price.

This new technology has considerable



Precision engineering at its finest on a human hair, thanks to a breakthrough laser beam scanning system developed at the School of Mechanical and Production Engineering

implications for the data storage industries and NTU has taken the lead in charting the way for the next generation of disc technology. ■

SCS-NTU and AMIC forge closer ties

Six years after signing an MOU on academic research and collaboration, NTU's School of Communication Studies (SCS) and the Asian Media Information and Communication Centre (AMIC) sign a Memorandum of Agreement to enhance their level of collaboration

A 1996 Agreement was signed between SCS and AMIC to develop and strengthen cooperation and interchange in research and academically related activities. The new Memorandum provides additionally for the sharing of services and resources. The AMIC/SCS Resource Centre, with a collection of over 40,000 records, can now be fully accessed by SCS faculty and students.

Joint publication of periodicals and books will be increased. The *Asian Journal of Communication*, which has been a joint publication with SCS since its launch 10 years ago, will be supplemented with the bi-monthly *Asian Mass Communication Bulletin* (AMCB) and the quarterly, *Media Asia*, which will also be joint publications

hereafter. *AMCB* is now in its thirtieth year and *Media Asia* in its twenty-sixth year of continuous publication. The School and AMIC have jointly published several books, the latest being *Information Highways in ASEAN: Policy and*



A new era in SCS-AMIC collaboration begun: Prof Eddie Kuo (Dean, School of Communication Studies) and Mr Vijay Menon (Secretary-General of the Asian Media Information and Communication Centre) signing the Memorandum of Agreement

Regulations. More joint publications are planned.

In the area of research, the School will work more closely with AMIC, which has played a pioneering role in promoting communication research in the region. This will be in keeping with the School's objective of becoming "a premier research institute that generates analyses of communication topics and policy issues important to Singapore and the region."

AMIC, which is located in the School of Communication Studies building, was set up in 1971 with the support of the Government of Singapore and the Friedrich Ebert Stiftung of Germany. The German Foundation has phased out its funding from this year. In view of the synergy that has developed over the years, the School has agreed to extend its support to AMIC for its documentation, publications and research activities. This opens the door to a new era of collaborative activities. ■

Ministerial Forum

“Go with the technology, or lose out”

As we face the global competition head-on — and imbibe a world view, we must also be mindful of our Singaporean heritage and values, says Senior Minister Lee Kuan Yew, who spoke at NTU recently

After four years, Senior Minister Lee Kuan Yew was back at NTU on 15 February 2000 to give a talk to both NTU and NUS students at the new Nanyang Auditorium. The Ministerial Forum, organised by the NTU Students' Union Ministerial Forum Organising Committee in association with the National University of Singapore Political Association, received overwhelming response. By 8pm, some 2,000 NTU and NUS students had already



Student leaders got up, close and personal with Mr and Mrs Lee during the reception

settled in the auditorium.

Mr Lee kicked off the evening with a 20-minute talk entitled “How will Singapore compete in the global economy?” where he urged Singaporeans to be more enterprising and daring in order to compete with other countries in the global league. With the digital revolution, international players now compete against us in our region. So, businesses and workers in Singapore have to be prepared to produce top-class business leaders and other talents who can measure up to the competition and better it, he said.

During the Q & A session, Mr Lee touched on topics like the impact of globalisation on Singapore society, the possibility of having a two-party system here, the changing culture of young Singaporeans, and the need to create the right social ambience to foster enterprise and derring-do among our young. Going cosmopolitan, he said, also means imbibing the best from the world while readying ourselves to counter any undesirable



“The choice is simple. Either we have a first-class airline, a first-class shipping line, and a first-class bank or we will be declining.” - Mr Lee Kuan Yew, speaking to NTU and NUS students at the Nanyang Auditorium

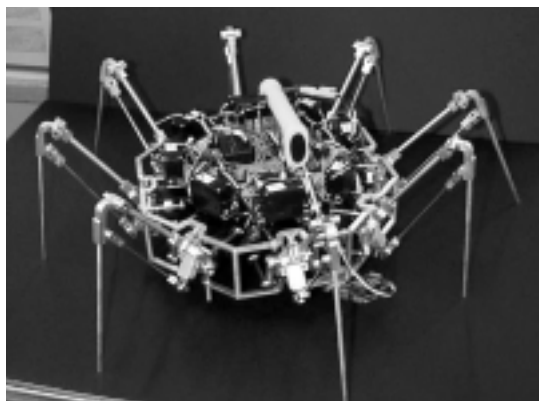
foreign influences. In the rush to dotcom or go global, Singaporeans must not lose the sense of community and national identity binding them as a nation. The Forum ended at 10.30pm, and all took home many valuable lessons from the venerable statesman himself. ■

A new mechanical engineer

The process of evolution has left its indelible mark on the mechanical engineer. As the world becomes more sophisticated in its demands for better products and services, the traditional mechanical engineer is metamorphosing

One of the facets of this emerging engineer comes in the form of an engineer who has imbibed the philosophy of mechatronics, which is an integration of mechanics, electronics, and computer and software engineering. The synergy of this multidisciplinary approach allows engineers to exploit the power that comes with using computer and software algorithms with their traditional craft and knowledge. A mechanical system cannot include these new additions only as an afterthought, which should, instead, be part of the design.

When engineers with the mechatronics specialisation graduate, they will be able to take on challenges in various industries such



No, this is not the new mechanical engineer but a mechanical spider that is actually a high-tech robot with 10 “brains”. It was built by final-year students taking the mechatronics specialisation at NTU

as consumer electronics, precision engineering, semiconductor fabrication and mass data storage. They will have the skills to design and manufacture products and systems that are very complex and sophisticated, yet cost effective and functional.

In July 1999, the School of Mechanical and Production Engineering offered for the first time a Mechatronics Specialisation in its B.Eng (Mech) programme to 71 students from both first year common engineering and direct entry (polytechnic diploma) students. Both did the same mechanical engineering subjects before being introduced in stages to the theory and practice of mechatronics. For more information on mechatronics, surf to http://www.ntu.edu.sg/mppe/What's_New.html. ■

Getting high on health

From a mass walk, to a road relay challenge run, to exhibitions, health screenings and talks... there was something for everyone during the NTU Healthy Lifestyle Week

In conjunction with the NTU Millennium Celebration, NTU kicked off the staff healthy lifestyle programme with a mass walk on Saturday, 15 January 2000. NTU President, Dr Cham Tao Soon, was the Guest-of-Honour. Addressing a crowd of about 400 staff, he touched on the importance of healthy living and also announced the formation of a healthy lifestyle committee to look into encouraging healthy habits at the workplace. After the President's address, staff were led in a warm-up before the mass walk around the picturesque Yunnan Garden campus.

The following week, three lunchtime talks (with healthy lunch provided) were held at LT 8. More than 500 staff attended the talks. A health screening conducted by the National Kidney Foundation (NKF) received overwhelming support from about 160 staff. There were also exhibitions and sales of health supplements and sports wear. Some gutsy staff even joined students in their annual fund-raiser with the NKF - a 120km bicycle rally round Singapore!

Finally, the grand finale of the week! A total of 29 teams took part in the 2000km Road Relay Challenge Run on Saturday, 22 January 2000. Three categories of teams - staff, junior colleges, and tertiary institutions and invited organisations - with 6 to 10 runners each, were to complete 100 km (for the men) or 50 km (for the women). NTUC cash vouchers were awarded to the top four teams in each category. Everyone had great fun and made new friends. In fact, as Dr Cham had pointed out during his speech, this event was also a platform where bridges were built for future partnerships. ■



Chairman of the Healthy Lifestyle Committee, Assoc Prof Quek Jin Jong (Dean, School of Physical Education), giving his address before the mass walk



Preparing for the long haul: walkers doing a mass warm-up before the great NTU amble



Are you ready... for 2000 km! NTU President, Dr Cham Tao Soon, starts the 2000km Road Relay Challenge Run



Walking in sunshine, at the Yunnan Garden



Hurry... long way to go!

A potpourri of Asian film

The three-day Asian Film Festival at NTU was a complete sell-out, and part of its prized collection of Asian films was delectably experienced "under the stars"

The School of Communication Studies (SCS) recently staged NTU's first film festival, *Asian Images, Asian Voices*. Organised in conjunction with the NTU Millennium Celebration, the festival was a three-day event held from 28 - 30 January 2000.

For the occasion, the amphitheatre at SCS was transformed into an open-air cinema. Next to it were stalls selling satay and *kacang putih*, a hark back to the good old days. Chairs lined the second and third floors overseeing the amphitheatre where the screen was placed.

Judging from the demand for tickets, it was a hugely popular event. Teo Wai Chin, the ticketing coordinator, recalled: "It was like the Hello Kitty phenomenon, minus the violence." Tickets for each of the eight sessions were snapped up within two hours of release.

A total of seven feature films were screened over the weekend - representative works from several Asian locations, namely, *Eating Air* (Singapore), *Children of Heaven* (Iran), *Tempting Heart* (Hong Kong), *303 Fear Faith Revenge* (Thailand), *Banana Paradise* (Taiwan), and *A Scene at the Sea* (Japan). The festival also featured a film from Australia, *Floating Life*, which was chosen for its sensitive portrayal of the Chinese/Hong Kong diaspora in Australia. Primary school teacher Sylvia Lee was impressed with the film selection and was "swept away by the experience of watching



Movies under the stars at the School of Communication Studies amphitheatre

movies in the open again."

A Local Filmmaking Showcase aimed to promote local filmmakers and their works, and to cultivate an appreciation for them. In addition to *Eating Air*, it featured award-winning shorts by young independent filmmakers here such as *Moveable Feast*, *Datura*, *Pariah's Diary*, *Another Guy*, *Senses*, and *Singapore... Dream*. Patrons of the festival were also treated to a forum with these filmmakers. Abdul Nizam, Director of *Datura*, observed that although Singapore had the



Eating Air? Hardly. More like Moveable Feast, judging by the speed at which this delicious spread, featuring all manner of delicacies, was cleaned up by the crowd at the local filmmaking showcase

infrastructure for a feasible film industry, it lacked "a 'feel' for filmmaking." Nizam's advice to aspiring filmmakers: do not be afraid to make mistakes.

Asst Prof Tan See Kam, the overall coordinator of the festival, was happy with its outcome. For him, such an occasion added to the cultural vibrancy of university life. "Film is an indispensable part of the cultural and intellectual life of any world-class university," he said. ■



Let's talk film: directors, cast and crew of homegrown films taking questions from the floor at the local filmmaking showcase

The key to safer e-shopping: your face

NTU researchers have developed a novel, state-of-the-art face recognition system, FaceID, that can be applied to online user verification in e-shopping and online banking

Why isn't Internet shopping taking off in a big way? School of Applied Science (SAS) researchers, Dr Maylor Leung, Dr Hui Siu Cheung, Mr Gao Yongsheng, Ms Wang Wei and Mr Lim Ching Hor, reckon the bugbear is the security issue. In e-shopping, it is difficult to verify the identity of the e-shopper as the buyer's signature cannot be produced on demand. Furthermore, it is easy to impersonate another's identity by using a stolen credit card number when making online payments. True enough, credit card frauds have been reported all over the world.

Relying on biometrics, i.e. using a person's unchangeable physiological or behavioural characteristics in user verification, the research team has developed a superior and novel face recognition system called FaceID. When devising the face recognition algorithm, the following factors were considered: the ability of the technique to handle large databases, insensitivity to viewing

orientation and illumination, and fast response time. FaceID measures up, as it can handle large databases, is robust under changing lighting conditions and facial expressions, and has a verification processing time of less than half a second.

This unique technology sprung from research initiated at the Centre for Graphics and Imaging Technology, SAS. Developed over two and a half years, it is now in the process of being commercialised. Two useful applications are in secured electronic shopping and secured online banking using ATM Machines.

In secured e-shopping, the e-shopper's credit card number and face image data captured by a video camera located on the PC are encoded, encrypted and transmitted via Internet to the bank or credit card server for verification and



FaceID demo: online face capturing



payment. At the bank or credit card server, the face image code associated with the credit card number is retrieved from the face image code database and then matched with the received face image code captured from the e-shopper using the FaceID algorithm. A positive verification gives the go-ahead for the intended transaction.

In a secured Online Banking System (SOB) using ATM machines, the camera is installed in a normal ATM machine. The user's face is captured on camera after his/her ATM card is inserted and the pin number entered. The face image is then encoded and transmitted to the bank server for recognition. ■

Better slabs for high-rise residential buildings

An NTU-BCA research collaboration aims to generate a comprehensive and reliable design approach for the flat-plate slab system, which has superior buildability and economy

The School of Civil & Structural Engineering (CSE) at NTU and the Building Construction Authority (BCA) have been jointly conducting research on the flat-plate slab system for high-rise residential buildings in Singapore. The joint research programme aims to generate a comprehensive and reliable design approach for the flat-plate slab system to support construction industry practices and to fill the gap between theory and practice in this area.

The flat-plate slab refers to a reinforced concrete slab (floor) of uniform thickness that is supported directly on columns without the use of intermediate beams. The support columns are

normally placed on regular layout (spacing) and the cross sections of the columns are mainly square. This type of floor slab reduces construction time considerably and makes for more economical buildings. The flat-slab system is now widely used in high-rise residential developments.

Currently, the available building codes cannot cater for flat-plate slabs with very rectangular (elongated) columns, irregular

column layouts, or large openings near the columns. Thus, a clear and reliable design approach is urgently needed. Leading the research is Assoc Prof Susanto Teng from CSE. Other team members include CSE staff, Dean Prof Cheong Hee Kiat, Assoc Prof Lee Sai Cheng and Asst Prof Paulus Irawan; Mr Steven Cheong, an engineer from BCA; and several postgraduate research students of CSE.

Fifty full-scale slab specimens have been tested within the past two years. A 7-column, 5.5m x 7m, floor specimen was analysed and tested under various loading combinations to take into account loading cases in actual practice. A large 15-column floor specimen was also built in February and recently tested in April 2000. ■



Advisory panel and industry professionals of the NTU-BCA joint research project

IDSS Millennium Conference

Security challenges and responses in the 21st century

With the advent of the third millennium, the Institute of Defence and Strategic Studies (IDSS) held a Millennium Conference, *Security Challenges and Responses in the 21st Century*, from 17-18 January 2000 at the Marina Mandarin Hotel.

The preceding century has witnessed two world wars, the discovery of atomic energy and concomitantly, the human ability for complete destruction of life on earth, the ascent and decline of the communist ideology, the reintegration of Europe, the end of colonialism in Asia and more. It seemed timely to ponder, at the



Deputy Prime Minister, Dr Tony Tan, opening the conference

threshold of the new century and millennium, what laid ahead for us.

The two-day conference brought together a group of academics to examine the changing strategic landscape of the Asia-Pacific region. The key challenge for the new century: fostering regional peace and stability. Intrinsic in this challenge was the need to appreciate the region's



Tackling security issues of the day: (from left) Ambassador Chan Heng Chee, Prof Aaron Friedberg, Prof Khong Yuen Foong (Acting Director, IDSS), and Ambassador Tommy Koh

security issues and to better prepare ourselves to grapple with them. Renowned specialists were thus invited by IDSS to write on areas of strategic interest.

Among the 20 international participants were prominent scholars such as Amitav Acharya (Canada), Kanti Bajpai (India), Chung Min Lee (South Korea), Ding Kuisong (PRC), Aaron Friedberg (United States), Francois Godement (France), BA Hamzah (Malaysia), Takashi Inoguchi (Japan), Stephen Walt (United States), Tommy Koh (Singapore) and Chan Heng Chee (Singapore). Papers discussed included Aaron Friedberg's "Will Asia Be Different?", Steve Walt's "US-China-Japan Triangle", Sumit Ganuly's "Ethnoreligious Conflict in Asia" and Francois Godement's "The Asia-Pacific Security Architecture: Prospects and Possibilities."

About 50 people attended the closed-door Millennium Conference. The 15 papers, written for the conference, will be published in a volume. They are currently being reviewed by the writers to take into account critiques and new ideas generated at the conference. ■

Are you ready for a wireless world?

Soothsaying ICICS'99 gave a glimpse of a future world driven by wireless personal communications

Following the success of the first *International Conference on Information, Communications and Signal Processing (ICICS)* held in September 1997, the School of Electrical and Electronic Engineering was determined to make the second conference as successful as, if not better than, the first one.

The theme of the conference was "Information Systems Engineering and Multimedia Communications for the next Millennium". Proving to have great appeal, the conference, held at the Mandarin Hotel from 7 - 10 December 1999, attracted 498 abstracts and over 300 conference delegates from 28 countries. It was opened by NTU President, Dr Cham Tao Soon.

At the conference, it was noted that Information Systems Engineering and Multimedia Communications would play a

critical role in technological developments globally in the coming millennium. Already, the present Internet is being advanced. Soon, LEO satellite constellations and 4th and 5th generation terrestrial mobile communication systems will provide truly wireless multimedia services. Further developments in microwave, digital signal processing and information technologies will no doubt lead to the emergence of ubiquitous wireless personal communications in the foreseeable future.

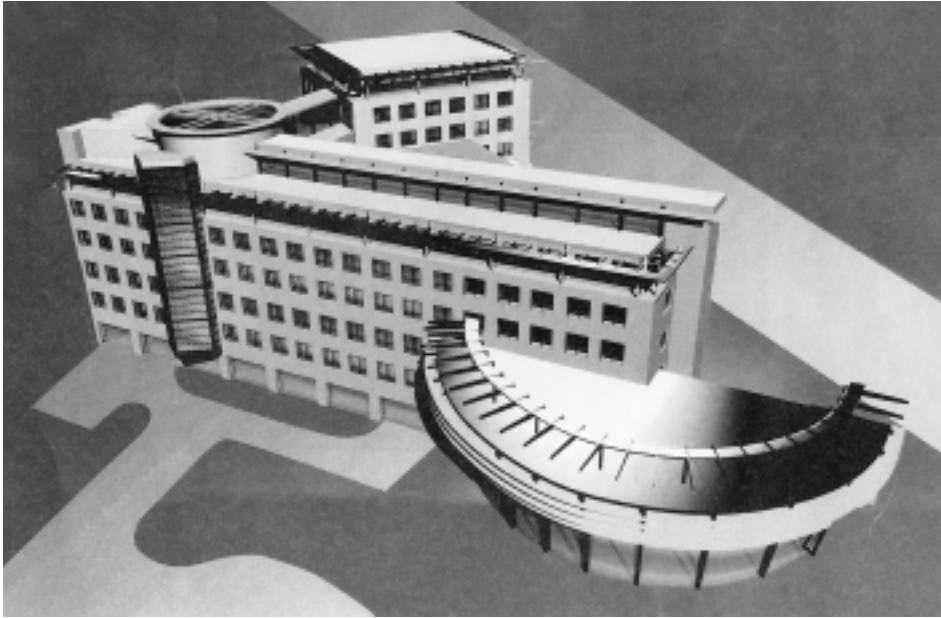
A legendary researcher and two world renowned professors delivered inspiring keynote speeches, namely: Dr Bishnu Atal, Fellow of AT&T Shannon Laboratories, Prof Jan Rabaey of University of California at Berkeley, and Prof Hamid Aghvami of King's College, London, respectively.

In conjunction with the conference, the *Surrey Space Club*, chaired by Prof Martin Sweeting, held their second Forum which was attended by His Excellency, Mr Toheed Ahmad, High Commissioner of Pakistan, and other distinguished personalities from around the world. Representatives from NTU and local organisations also participated in this international meeting. ■

Arriving 2002

Research Techno Plaza

This new R&D hub is designed to facilitate multi-disciplinary research on campus - and to reflect the future glory of the University



An early artist's impression of the proposed Research Techno Plaza

In two and a half years' time, NTU will have a \$25 million one-stop research centre that will be a thriving hotbed of multidisciplinary research activity, housing various research centres at NTU. This new Research Techno Plaza is envisaged to be a mini Silicon Valley, serving as a focal point for NTU researchers, budding entrepreneurs, industrialists, investors, and venture capitalists. It will occupy a floor area of 20,000 sq metres on the land adjacent to the Nanyang Auditorium and Block S1 (School of Electrical and Electronic Engineering), with vehicular access from Nanyang Drive.

The building complex consists of a combination of two major component blocks: a rectangular block of six storeys and a squarish block of eight storeys, both linked. A glass-fronted atrium/foyer will face Nanyang Drive. Apart from research centres, the Research Techno Plaza will also house some staff rooms and meeting rooms. The first storey will include exhibition and display areas, an on-line conference room, and administrative offices. A 113-seat lecture theatre will complete this new development on campus. ■

NTU Executive Centre

Taking NTU one step closer to becoming a self-contained learning and research hub is this purpose-built professional training centre with residential facilities

Come 2002, a brand new nine-storey *NTU Executive Centre* will also grace our Yunnan Garden campus. Conceived to meet the regional demand for professional training at a well-known technological institution, this centre is to be differentiated from the NTU Executive Centre presently located

downtown at 268 Orchard Rd. While the one downtown is a temporary NTU extension until a larger, permanent city campus is built in 5 years' time, the as yet unbuilt NTU Executive Centre on the Yunnan Garden campus will be a permanent fixture.

A one-stop training centre with residential facilities, the new \$30 million

NTU Executive Centre will have 200 guest rooms, a 200-seat lecture theatre, classrooms, and meeting rooms. According to NTU President, Dr Cham Tao Soon, the proposed NTU Executive Centre meets a growing need for a residential training centre on campus, where short courses and seminars can be conducted in a conducive and self-contained environment for participants, many of whom come from Asian countries. Currently, executives attending short courses on campus stay in hotels downtown. With the new training centre up and running in 2002, participants can enjoy lower course fees, a greater variety of courses, and at-your-doorstep convenience.

Course participants will also value the centre's strategic position on campus. When ready, it will be next to the recently refurbished NTU Staff Club, which now boasts a gym, karaoke lounge, function room, and a restaurant. And a mere stone's throw away will be the NTU Sports and Recreation Centre. ■

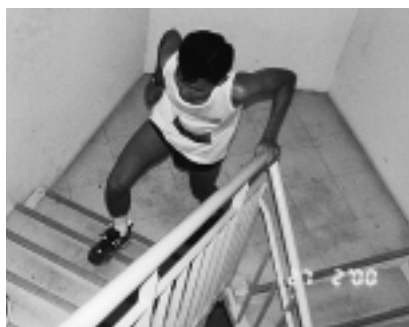


Soon, residential and educational facilities under one roof at the NTU Executive Centre, Yunnan Garden campus

Taking vertical step climbing to new heights

The National Vertical Marathon organised by NTU got runners to dizzying heights - up one of the tallest buildings in Singapore, in fact

Did you know that the annual National Vertical Marathon held at the OUB Centre on 27 February 2000 was organised by the NTU Sports Club? The Club's effort to promote the sport of vertical step climbing was immensely successful; the event attracted not only our students but also a large group of people outside campus. Out of the 900 participants, only 200 were from NTU.



Sixty-one storeys of sheer climbing

There were 5 categories: Men's Open, Women's Open, Mixed Open, Inter-JCs and Inter-Statutory Boards. Mr Ernest Gion Ng won in the Men's Open category in 7 minutes 55.69 seconds. Not surprisingly, he was also the champion at last year's vertical marathon. Ms Lim Le Anne came in first for the Women's Open in a record 11 minutes 46.34 seconds. Jurong Junior College and HDB won in the Inter-JCs and Inter-Statutory Boards categories respectively.

Assoc Prof Ho Peng Kee, Minister of State for Law and Home Affairs, and the Guest-of-Honour, was invited to give out prizes to the fatigued but blissed-out winners. ■

All things Chinese...

... revived! A bygone era was revisited at the Chinese Cultural Festival, and what a feast for the eyes, ears and stomach

With the intention of introducing the Chinese culture to NTU staff and students, the Chinese Society organised the *Chinese Cultural Festival 2000* from 17 - 28 January 2000. This is the biggest annual event organised by the Society to date.

The Festival started with a simple opening ceremony by the Guest-of-Honour, Prof Chew Cheng Hai, Director, Centre for Chinese Language and Culture. A three-day Chinese Cultural Exhibition and several interesting quizzes and competitions were held concurrently. The exhibition featured famous persons during the period of "Zhan Guo" (e.g. Kong Zi and Lao Zi) and ancient



Prof Chew Cheng Hai graced the opening ceremony held outside the campus computer shop at Canteen B

"Glowing in the Dark" is back!

Glowing in the Dark is a concert organised annually by the NTU Welfare Services Club. It seeks to raise public awareness about the disabled as well as to raise funds for participating organisations. In a wonderful evening of manifold talents, dreams and pursuits, watch the glowing faces of the disabled as they show the public that though disabled, they are certainly not helpless. This year, the magic will happen at Kallang Theatre, with participants from 10 organisations taking to the stage:

*Spastic Children Association of Singapore * Chao Yang Special School * Katong Special School * Minds Youth Group * Touch Ubi Hostel * Lee Kong Chian Garden School * Jervois Special School * SUN-DAC Centre For the Disabled * Handicap Welfare Association * Down Syndrome Association*

An exhibition and mini-fair will be held on two weekends before the concert to tell you more about it, as well as to give the disabled a chance to raise funds by selling their own handicrafts. Here are the details of both events:

Exhibition venue : Suntec City

Date : 1 & 2 July (Sat & Sun) Galleria Dome, near Olio Dome
8 & 9 July (Sat & Sun) Entertainment Centre, near Carrefour entrance
Time : 10am - 8pm

Concert venue : Kallang Theatre

Date : 16 July (Sun)
Time : 7pm
Ticket prices : \$10, \$12

For general enquiries, please contact **Claudia Sim** at 9700 0995 (pg). For ticketing information, please contact **Tan Su Fern** at 9697 8648 (pg).

coins. Besides the exhibition, there were also quizzes on the contents of the display and a video presentation. Through the exhibits, several Chinese cultural associations outside campus were introduced to the students. There were fun competitions too - *the Chinese Calligraphy Competition, Chinese Puzzles, Lantern Riddles and Lanterns Counting*.

One of the highlights of the Festival was the setting up of a Chinese Cultural Street at the linkway between the North and South Spines. This brought together all forms of Chinese arts and handicrafts, food, and traditional games. For example, Chinese medicine, prominent Chinese festivals and the making of glutinous rice balls ("Tang Yuan") and Dragon Beard candy were introduced. To conclude the Chinese fiesta, a mini bazaar, showcasing traditional food and games, was held at the carpark in front of the Chinese Heritage Centre. ■

International experts give public lectures

As part of the NTU Millennium Celebration, NTU has been inviting eminent academics and well-known experts from prestigious universities and organisations worldwide to speak, in a series of public lectures, on a variety of exciting topics.

The first in the line-up of lectures was delivered by Albert Winsemius Professor, Prof Tae Hoon Oum, who spoke on *Global Strategic Alliances and Partnerships* at LT 2 on 13 January 2000. His lecture focused on strategic alliances and inter-firm partnerships in globalising industries such as the airlines, telecommunications, and electronics industries. He is from the Faculty of Commerce and Business Administration at the University of British Columbia, Canada, where he specialises in policy analysis, demand modelling, cost and productivity analysis, globalisation, and competitiveness issues of the transportation and telecommunications industries.

Shaw Professors, Prof Paul S Goodman and Prof Denise M Rousseau spoke on *New Forms of Organising and the Boundaryless Career*. Their talk, the second one in the line-up of public lectures, was held at LT 25 on 7 March 2000. Prof Goodman, an international expert on new forms of work groups, described successful practices in "exocentric" teams where temporary work groups combining people inside and outside the organisation increasingly perform the work of the core business. Prof Rousseau, an international expert on the changing employment relationship, described new forms of employment relationships worldwide, giving due attention to the rise of "boundaryless careers". Prof Goodman is a Professor of Organisational Behaviour and Theory and Psychology, while Prof Rousseau has researched extensively on the impact of the new economy on the workforce. ■

NIE-NTU hosts 4th 'English in Southeast Asia' conference

On 22 - 24 November 1999, the Division of English Language and Applied Linguistics (ELAL) hosted the fourth *English in Southeast Asia* conference at Raffles Building, National Institute of Education (NIE). About 250 people attended, including participants from as far away as the UK, USA, Canada, Taiwan, Hong Kong, Australia and New Zealand. An impressive line-up of speakers was programmed, including Prof Ronald Carter, Prof Frances Christie, Prof Sandra McKay, Prof Jack Richards, Prof Ted Rodgers, Prof Ian Malcolm and Dr Beverley Derewianka. Country representatives were Prof Wong Soak Koon (Malaysia), James McLellan (Brunei) and Prof Andy Kirkpatrick (Australia). In addition to seven plenary sessions, there were a total of 37 parallel sessions and five workshops. This was the fourth in a series of annual conferences hosted in rotation by five collaborating institutions: NIE, the University of Malaya, Universiti Brunei Darussalam, Curtin University, and Ateneo de Manila University. The 2000 conference will be hosted by Curtin University, and the 2001 conference by Ateneo de Manila University. ■



Animated discussion: (left to right) Assoc Prof Quek Jin Jong, Prof Frances Christie (USA), Prof S Gopinathan and Prof Jack Richards (RELC, Singapore) at the conference

SCS: venue for regional workshop on environmental economics

A workshop for journalists writing about economics-and-environment was held in Singapore from 16 - 17 November 1999 at the Regional English Language Centre (RELC) and the School of Communication Studies (SCS). It was attended by newspaper and news-wire agency journalists from throughout Southeast Asia, as well as from the People's Republic of China and Papua New Guinea. The workshop was sponsored by the Asian Media, Information and Communication Centre (AMIC) and the Economy and Environment Program for Southeast Asia (EEPSEA). Two SCS faculty members, Asst Prof Joseph Sommerville and Asst Prof Brian Massey, served as trainers in the workshop. They taught journalists about the economic consequences of environmental policies and disasters. Asst Prof Massey imparted basic news-writing skills and specialised environmental-reporting techniques while Asst Prof Sommerville taught participants how to incorporate the Internet into their newsgathering efforts. The goal of the workshop was to upgrade the journalists with basic economic knowledge, and news-writing and Internet skills. That way, they would be better able to provide their audiences with a deeper level of reporting on various environmental issues. ■



Developing strategies for reporting environmental economics: Asst Prof Brian Massey guides two participants

Come to the IMARC Executive Summit 2000

For cutting-edge views and news on "Strategising and Implementing E-Commerce"

The Information Management Research Centre (IMARC), Nanyang Business School (NBS), is organising the first IMARC Executive Summit 2000, a mini-conference targeted at the industry from 28 - 30 June 2000 at the Grand Hyatt, Singapore. This event, the first in what will be an annual highlight of IMARC, is structured to bring together CEOs/top management, heads of business functions/senior IT-users and CIOs/senior IT executives from participating organisations for updates on E-Commerce and related IT management issues. The programme will consist of lectures and exercises/workshops as well as moderated discussions facilitating peer learning. The first half-day is targeted at CEOs and top management. The rest of the programme is targeted at both the CIOs and business function heads. For maximum effectiveness, the summit will be restricted to organisations and individuals who meet specific criteria.

Senior NBS/IMARC faculty members including NBS Dean, Prof Neo Boon Siong, will present current research results, concepts and ideas on the theme of the conference - along with three distinguished guest speakers:

- Prof David Feeny from Templeton College, Oxford University, who will deliver a session on *Leadership for E-Business* targeted at CEOs.
- Prof M Lynne Markus from Peter F Drucker Graduate School of Management, Claremont Graduate University, who will deliver a session on *E-Systems* and *E-Business* targeted at CIOs and business function heads
- Mike Mobley, Managing Director of Integrated Project Systems (a highly reputed IT project management international consulting firm) who will moderate a workshop on *Implementing E-Commerce Projects*.

For more information, contact Assoc Prof K Pelly Periasamy (email: apelly@ntu.edu.sg; tel: 790 6164).

WELCOME

The University welcomes the following new staff members:

Nanyang Business School	
Assoc Prof Chandrasekhar Krishnamurti	- Associate Professor
Assoc Prof Yip Sau Leung	- Associate Professor
Asst Prof Lang Chin Ying, Josephine	- Assistant Professor
Asst Prof Lee Chadwick Simmons	- Assistant Professor
Asst Prof Tan Seet Koh	- Assistant Professor
Mdm Teoh Wei Kium	- Lecturer
Mr Tong Yen Hee	- Senior Tutor
Prof Denise M Rousseau	- Shaw Foundation Professor
Prof Paul S Goodman	- Shaw Foundation Professor
Prof Albert William Richardson	- Visiting Professor
Prof Chang Hsifeng, Otto	- Visiting Professor
Prof Ferdinand Akthar Gul	- Visiting Professor
Dr Yang Joon-Mo	- Visiting Fellow
Dr Kang In Soo	- Senior Fellow
Dr Tsaw, Diana	- Senior Fellow
Mr Vivek Gupta	- Senior Fellow
Dr Wagdy M Abdallah	- Senior Fellow
Prof (Adj) Allen Joseph Pathmarajah	- Adjunct Professor
Asst Prof (Adj) Tan Wee Chiew	- Adjunct Assistant Professor
Dr Geetha Pillaiyarkulam Ramaswami	- Research Fellow
Mr Heng Choon Poo	- Research Associate
Mr Harminder Singh	- Project Administrator
Mrs Tan-Liew Wai Chuan	- Senior Administrative Officer
School of Applied Science	
Assoc Prof Lai Ming-Kit, Edmund	- Associate Professor
Asst Prof Fong Cheuk Ming, Alvis	- Assistant Professor
Asst Prof Tan Yong Jun	- Assistant Professor
Mdm Zhang Ruitang	- Research Associate
Mdm Song Meehae	- Research Engineer
Mr Bimal Gisuhan	- Project Officer
Mr Quek Kai Hock	- Project Officer
School of Civil and Structural Engineering	
Asst Prof Lim Teik Thye	- Assistant Professor
Mr Venayagampillai Shanmuganayagam	- Senior Fellow
Dr Hwang Eung Ju	- Research Fellow
Dr Li Xibing	- Research Fellow
Dr Qian Guangren	- Research Fellow
Dr Zheng Dingyang	- Research Fellow
Mr Lai Kwok Leung Dickson Lai Cheung Yip	- Project Officer
School of Communication Studies	
Mdm Nicole Lorraine Draper	- Lecturer
Mr Pang Sze Kwang, Augustine	- Lecturer
Prof Irving Pang	- Visiting Professor
Assoc Prof (Adj) Chong Wing Hong	- Adjunct Associate Professor
Assoc Prof (Adj) Jose Maria Galan Carlos	- Adjunct Associate Professor
Assoc Prof (Adj) Soh Wai Ming, Felix	- Adjunct Associate Professor
School of Electrical and Electronic Engineering	
Assoc Prof Tran Phuoc Xuan	- Associate Professor
Asst Prof Chen Tupei	- Assistant Professor
Asst Prof Poenar Daniel Puiu	- Assistant Professor
Asst Prof Shum Ping	- Assistant Professor
Asst Prof Tan Yap Peng	- Assistant Professor
Prof Stephen Yueh-Hsung Su	- Visiting Professor
Prof Yao Xi	- Visiting Professor
Dr Michael Ernest Fisher	- Senior Fellow
Dr Sheel Aditya	- Senior Fellow
Dr Chada Venkata Gopal Reddy	- Research Fellow
Dr He Xiufeng	- Research Fellow
Dr Li Hongjie	- Research Fellow
Dr Toh Kar Ann	- Research Fellow
Dr Yu Yabin	- Research Fellow
Dr Chen Jingsheng	- Post Doctoral Fellow
Dr Luo Gang	- Post Doctoral Fellow
Dr Shantanu Kumar Padhi	- Post Doctoral Fellow
Dr Zhang Yueqiu	- Post Doctoral Fellow
Dr Zhao Yang	- Post Doctoral Fellow
Dr Zhou Guangya	- Post Doctoral Fellow
Dr Feng Shaohua	- Research Associate
Mr Shao Jianliang	- Research Associate
Mr Tan Zhiqiang	- Research Associate
Mr Chen Tai Pang	- Research Engineer
Mr Yu Rongshan	- Research Engineer
Prof Nguyen Dinh Thong	- Visiting Researcher
Miss Wee Seo Lay	- Administrative Officer
School of Mechanical and Production Engineering	
Asst Prof Vincent Chan	- Assistant Professor
Asst Prof Liu Yong	- Assistant Professor
Asst Prof Yang Chun, Charles	- Assistant Professor
Dr Lu Jiangzhou	- Research Fellow
Dr Subramaniam Santhikumar	- Research Fellow
Dr Xu Jinliang	- Research Fellow
Mr Chen Jun Wei	- Project Officer
Mrs Chng-Chung Poh Choo	- Administrative Officer
School of Arts	
Asst Prof Quah Sy Ren	- Assistant Professor
Asst Prof Norhaida Bte Aman	- Assistant Professor
Miss Koh Guat Hua	- Teaching Fellow
Mr Chia Ti Yong, Alexius	- Teaching Fellow
Miss Ng Chiew Hong	- Teaching Fellow
Miss Wee Bee Geok	- Teaching Fellow
Ms Jane Margaret Prendergast	- Teaching Fellow
Mrs Anne Frances Watt	- Teaching Fellow
Mdm Aw Guat Poh	- Teaching Fellow
Miss Emmeline Christabelle Payne	- Teaching Associate
School of Education	
Assoc Prof Lee Ong Kim	- Associate Professor
Dr Elwyn Thomas	- Senior Fellow
Mr Lim Cher Ping	- Lecturer
Mdm Thana Luxshme Thaver	- Teaching Fellow
Miss Chua Guat Kheng	- Teaching Fellow
Mr Wan Fareed	- Project Officer
Mdm Leong Ping Ping	- Project Officer
Miss Lai Ling Ling	- Administrative Officer
School of Physical Education	
Mr Anwari B Khairuddin	- Teaching Fellow
School of Science	
Asst Prof Cheang Wai Kwong	- Assistant Professor
Mdm Ho Sze Yin, Cathleen	- Teaching Fellow
Deputy Presidents' Office	
Miss Ng Ai-Leen	- Administrative Officer
Registrar's Office	
Miss Tan Lai Tee	- Administrative Officer
Library	
Mr Tan Chiang Wee	- Trainee Librarian

Centre for IT Services	
Mr Abdul Rahman Bin Awad	- Systems Analyst
Centre for Educational Development	
Miss Lim Poh Gek	- Courseware Specialist
Centre for Continuing Education	
Mrs Mah-Ng Bee Lan	- Assistant Director
Alumni and Endowment Office	
Miss Saik Hwai Choo	- Administrative Officer
Centre for Chinese Language & Culture	
Mr Wang Hong	- Research Fellow
Network Technology Research Centre	
Mr Dai Shaowei	- Research Associate
Mr Seet Boon Chong	- Project Officer
Institute of Defence & Strategic Studies	
Asst Prof Chung Chien-Peng	- Assistant Professor
Asst Prof Kumar Ramakrishna	- Assistant Professor
Mr Sng Seow Lian	- Executive Secretary
Singapore-MIT Alliance Programme	
Dr Malathi Venkatarathinam	- Post Doctoral Fellow
Centre for IT in Education	
Mr Gui Chee Meng	- Systems Analyst
Mr Chew Tyng Song	- Systems Analyst
Miss Tan Wei Kei	- Assistant Programmer
Miss Tan Kim Geok, Ivy	- Educational Media Officer
Computer Services Centre, NIE	
Mr Eric Bonneau	- Systems Analyst
Mr Pua Tee Wee	- Analyst Programmer
Mr Syed Rahat Zaman	- Analyst Programmer

PROMOTION

Congratulations to Assoc Prof Choi San Shing, School of Electrical and Electronic Engineering, on his recent promotion to Full Professor.

APPOINTMENTS

New Appointments

The President of NTU has made the following appointments:

Assoc Prof Yeo Chuan Seng, Victor	- Head, Division of Business Law, Nanyang Business School
Assoc Prof Tan Mui Siang, Patricia	- Head, Division of Financial & Management Accounting, Nanyang Business School
Assoc Prof Geraldine Chen	- Vice-Dean (Corporate Services), Nanyang Business School
Assoc Prof Choo Teck Min	- Vice-Dean (MBA), Nanyang Business School
Assoc Prof Koh Hian Chye	- Vice-Dean (Business), Nanyang Business School
Assoc Prof Gillian Yeo	- Vice-Dean (Accountancy), Nanyang Business School
Asst Prof Pearlke Koh	- Sub-Dean, Nanyang Business School
Assoc Prof Lee Chun Wah	- Head, Division of Public & Promotional Communication, School of Communication Studies
Assoc Prof Srikanth Thambipillai	- Director, Centre for High Performance Embedded Systems
Asst Prof Chang Chip Hong	- Deputy Director, Centre for High Performance Embedded Systems

Director, NIE, has made the following appointment:

Assoc Prof Lim-Teo Suat Khoh	- Head, Division of Mathematics, School of Science
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Re-appointments

The President of NTU has made the following re-appointments:

Prof Leo Tan	- Director, NIE
Prof Koh Tai Ann	- Dean, School of Arts
Prof S Gopinathan	- Dean, School of Education
Assoc Prof Quek Jin Jong	- Dean, School of Physical Education
Prof Leo Tan	- Dean, School of Science
Assoc Prof Christine Lee	- Vice-Dean, School of Arts
Assoc Prof Vilma D'Rozario	- Vice-Dean, School of Education
Assoc Prof Teo-Koh Sock Miang	- Vice-Dean, School of Physical Education
Assoc Prof Lim-Teo Suat Khoh	- Vice-Dean, School of Science

Director, NIE, has made the following re-appointments:

Prof S Gopinathan	- Head, NIE Centre for Educational Research
Assoc Prof Lee Sing Kong	- Head, Division of Biology, School of Science
Prof Lee Sing	- Head, Division of Physics, School of Science

TRANSFER

Asst Prof Patricia Wong Jia Yiing from the Division of Mathematics, School of Science, has been transferred to the School of Electrical and Electronic Engineering, NTU wef 1 January 2000.

STAFF ON SECONDMENT FROM MOE

Mr Kong Yew Chye, a Senior Officer (Grade 1), has been seconded from the Ministry of Education for a period of 2 years wef 1 February 2000. He is attached to the Personnel & General Affairs Division, NIE, and his current internal designation is Assistant Manager/Academic Service Matters (AM/AS).

CONGRATULATIONS

We would like to congratulate:

Assoc Prof Lee Sing Kong, Head, Division of Biology, School of Science, on being conferred the award of *Chevalier dans l'Ordre des Palmes Académiques* by the French Minister for Education, in recognition of his contribution to Science and Culture co-operation with France.

Assoc Prof Tseng King Jet, Division of Power Engineering, School of Electrical and Electronic Engineering, on being awarded the *IEEE Third Millennium Medal* for his contributions to electrical and electronic engineering education and research.

Four new Halls of Residence

Get a whiff of hostel living here

And be pleased, future hostelite. After all, it is not everyday that you get to live in a cosy retreat featuring courtyards and back alleys, and yet enjoy the amenities of modern hostel living

NTU currently has eleven Halls of Residence. But to meet the growing student population, it is expanding its campus infrastructure. Among the new developments are four new halls of residence, two of them (Halls 12 and 13) ready for occupation this July 2000. The other two (Halls 13 and 14) should be ready by end-August 2000.

The halls are colour themed. Walking past them is like traversing a cross section of a rainbow. Starting at Hall 12, one is met by striking yet pleasant shades of green, blue, yellow and red, in that order, as one walks down Nanyang Crescent, where the halls are located. Apart from the distinctive colour theme, the four new halls also have other distinctive features. For example, Halls 12 and 13 feature an open-air amphitheatre, jointly shared by the two halls, while Hall 12 boasts a unique centrepiece - a three-face clock tower. The rooms at both halls feature space-saving, modern touches like built-in ceiling-length wardrobes and beds with curved headboards. Just outside the rooms, hostelites can enjoy the convenience of built-in shoe cabinets and clothes lines concealed from public view by clever architecture. The overall design for Halls 12 and 13 is based on the concept of a series of courtyards and streets around which the residential blocks are arranged.

VISITORS

During the period January to March 2000, the University received the following distinguished visitors:

- 6 Jan Dr George Rupp, President, Columbia University, USA
- 25 Jan Dr Yasuharu Suematsu, President, Kochi University of Technology, Japan
- 28 Jan Dr Jim Ebben, President, Edgewood College of Madison, USA
- 8 Feb Prof A Kalanidhi, Vice-Chancellor, Anna University, India
- 16 Feb Prof Zang Shu-liang, Vice-President, Liaoning University, China
- 21 Feb Dr Kazuichi Sakamoto, President, Ritsumeikan Asia Pacific University, Japan
- 24 Feb Dr Emmanuel Y Angeles, President, Angeles University, Philippines
- 25 Feb Prof Jens Petter Tondel, Vice-President, Norwegian School of Management BI, Norway
- 8 Mar Dr Frank Fernandez, Director, Defense Advance Research Projects (DARPA), USA
- 10 Mar Dr Frank Wood, Vice-Chancellor, Lincoln University, New Zealand
- 13 Mar Dr David Johnston, President, University of Waterloo, Canada

During this period, the University also received visiting delegations from the Korea Dae Lim Technological College, Korea; the Hong Kong University of Science and Technology, Hong Kong; the Norwegian University of Science and Technology, Norway; the Institute of Technology & Management, India; and the Nanjing University of Science and Technology, China. ■



Hall 13: modern functionality plus old-world charm!



Green green grass of "home": Hall 12, with distinctive green windows and columns, overlooks a pleasing forestscape



The amphitheatre, where a cultural beat comes alive at Halls 12 and 13

Promoting a healthy balance of work and play, each of the four new halls feature, among other facilities, a reading room, music room, games room, computer room, seminar rooms and meeting rooms. There will also be two new canteens - canteens 13 and 14 - to be shared between the four halls. Together, the four new halls will be able to accommodate 2,400 students. About eleven per cent of the students will stay in single rooms while the rest will share double rooms.

All NTU matriculated undergraduates are eligible to apply for hostel accommodation on campus. As is the practice for the existing halls on campus, the four new halls will take in a mixture of students from various NTU Schools on campus, including the National Institute of Education. Senior students, however, will continue to be admitted based on their ECA points. ■