NTU to house region’s largest life sciences supercomputer outside Japan

NTU is partnering Compaq to build the supercomputer at the University’s new Bioinformatics Research Centre, which will provide the infrastructure and manpower for worldclass research in bioinformatics.

Life sciences, the fourth pillar of Singapore’s economy, recently received a $12.4 million boost. The investment, shared equally between NTU and Compaq Computer Asia, has resulted in a new research centre at NTU that will house the region’s largest life sciences supercomputer outside of Japan.

When fully installed in 2003, the supercomputer will be among the world’s top supercomputers devoted to life sciences research. Capable of performing half a trillion calculations per second, it will be used for crunching reams of complex life sciences data such as genomic information.

The new Bioinformatics Research Centre (BIRC), which is hosted by the School of Computer Engineering (SCE), will “focus on education, research and development, and human-resource training in bioinformatics at NTU,” said NTU President Dr Cham Tao Soon, speaking at the MOU-signing with Compaq on 12 March 2002. Compaq is pumping another $4 million into the alliance to fund scholarships and research projects. “In the spirit of scientific cooperation, Compaq is working closely with BIRC to facilitate the training of staff and students at our R&D facilities in the United States,” said Mr Tan Choon Seng, Vice President and Managing Director of Compaq Computer ASEAN.

Assoc Prof Chia Tet Fatt, the newly appointed Director of BIRC, said that the bridging of interdisciplinary subjects will take place at the centre, which aims to develop niches in pharmacogenomics, neuroinformatics and “therapeutical-bioinformatics”. BIRC, which is linked to the national BioGrid, is keen to collaborate with research groups from academic and commercial institutions in Singapore and around the world. It will move from its temporary premises in SCE to the new Nanyang TechnoPlaza in 2003.

Singapore’s first MSc in Bioinformatics

When NTU launches its two-year part-time graduate programme in Bioinformatics this July, it will be the first university in Singapore to do so. Starting with an initial intake of 20 – 30 students, the programme will train a new generation of bioinformaticians to lead the development of new health care tools, find cures for diseases like cancer, Alzheimer’s and AIDS, and study and protect fragile ecosystems. For more information on the programme, visit http://www.ntu.edu.sg/sce/msc-bioinformatics-intro.htm.
NTU gets a prime spot in Buona Vista

Continuing education will become more accessible when NTU’s new $20 million satellite campus in the Buona Vista Science Hub is completed in 2005

If all goes according to plan, by 2005, part-time postgraduate students and teachers taking in-service courses could be heading for classes in the heart of a new science hub, One-North, in the accessible Buona Vista area.

This is because NTU’s new satellite campus will occupy a prime spot there – near North Buona Vista Road, about five minutes away from the Buona Vista MRT station and Ministry of Education.

Construction work on the new satellite campus is expected to start next year. The proposed continuing education centre will house teaching facilities such as classrooms, computer rooms and lecture theatres. To be co-located with it is the NTU alumni clubhouse, currently at River Valley Road. The new clubhouse will have a range of club facilities such as restaurants, tennis courts and a swimming pool.

The move to Buona Vista will mean greater convenience for the thousands of city-based working adults and teachers enrolled in the University’s part-time and in-service courses. NTU will also be able to intensify its outreach to working adults employed in the new Buona Vista Science Hub, who may be keen to upgrade professionally via continuing education courses.

The location of NTU’s satellite campus in One-North is prime for another reason – greater synergy with industry, including the Biopolis, Singapore’s new worldclass biomedical hub, and other financial, infocomm and media companies which will be housed there.

Singpore’s first Masters programme in Knowledge Management

The first intake will be in July, with 25 – 30 participants

The School of Communication and Information (SCI) has launched Singapore’s first Master of Science (MSc) programme in Knowledge Management (KM). It has done this in collaboration with the Civil Service College of the Prime Minister’s Office, a pioneering institution in spearheading knowledge management initiatives in Singapore.

This is the second Masters programme offered by the Division of Information Studies, which was formerly part of the School of Computer Engineering. The first, the flagship MSc programme in Information Studies, is one of the most popular Masters programmes by coursework at NTU.

The launch of this new programme – a two-year part-time course – is timely and reflects the growing interest in the formal training of professionals who can ably lead knowledge management initiatives in their organisations. Effective management of knowledge results in better customer care, increased return-on-investment, enhanced work performance, and innovation.

Knowledge management, being interdisciplinary in nature, draws upon the theories and practices of a number of disciplines, including management, information, communication, and technology. Participants must complete five core subjects, four electives and a research project. Graduates of the programme will be conversant with strategies and technologies needed for managing knowledge and information within organisations.

For more information, visit http://www.ntu.edu.sg/sci/is/, or contact Assoc Prof Suliman Hawamdeh, MSc (KM) Programme Director at the School of Communication and Information (tel: 6790-5065; email: msc_km@ntu.edu.sg).
New year, new times, new names

The renaming of two NTU Schools reflects new focus areas due to industrial developments and changing work processes.

Two NTU Schools got a fresh start to the new year – with new names each. The School of Civil and Structural Engineering (CSE) was renamed the School of Civil and Environmental Engineering (CEE), while the School of Communication Studies (SCS) became the School of Communication and Information (SCI). The new names were inaugurated by NTU President Dr Cham Tao Soon on 17 January 2002.

At the CSE renaming, Dr Cham unveiled the School’s Board of Honours bearing the new name of the School. Over the last 20 years, CSE has built up core capabilities within the civil engineering discipline. The School will continue to emphasise traditional areas such as structures and geotechnics, while increasing its focus on relatively “newer” areas such as environmental engineering, currently a major strength of the School.

The focus on the environment fits in with the growing importance it is being given in Singapore and the region. The renaming of the School is also in keeping with developments that have already taken place in established institutions worldwide, where civil engineering departments have similarly been renamed.

Over at the former SCS, a sulphur-crested cockatoo was roped in to help Dr Cham launch the School’s new name. Sassy, a ten-year-old performing cockatoo from the Jurong Bird Park, flew from the roof of the School building and landed on the arm of the waiting president with a string in her beak for him. A tug of the string by Dr Cham unveiled the School’s new signage on the building’s façade.

SCI’s new name – SCI – reflects the inclusion of the Division of Information Studies, which used to be part of the School of Computer Engineering. SCI now has five divisions. The regrouping of divisions has resulted in a stronger information technology component in the School’s degree courses. “With the addition of the new division, the School is now able to fulfil its long-term objective of catering to the demands of the digital landscape,” said Prof Eddie Kuo, the School’s Dean.
The idea to relocate NIE to the NTU campus in Jurong was first conceived in 1990 when the Institute of Education merged with the School of Physical Education to form NIE as part of NTU, recalled Mr Chiang Chie Foo, Permanent Secretary of the Ministry of Education (MOE) and Chairman of the NIE Council, at the official opening of the new NIE complex on 26 January 2002. He said that the decision to relocate came a few years later, in 1994. Construction began in 1998, and the purpose-built $400 million NIE complex was finally completed at the end of 2000.

In his speech, Guest-of-Honour RAdm (NS) Teo Chee Hean, Minister for Education and Second Minister for Defence, congratulated NIE Director Prof Leo Tan and his staff for successfully repositioning NIE to meet the changing needs of education in Singapore. He revealed that a new National e-learning Competency Centre would be established at the Institute to set and measure compliance with e-learning standards in institutions and corporate bodies. With funding of $48 million from MOE, a new Centre for Research in Pedagogy and Practice would also be set up at NIE to develop its research capability in three areas of national significance – Mathematics and Science Literacy, Language Literacy, and ICT.

“NIE is today already regarded as one of the top education schools in Asia,” said RAdm Teo. “By 2010, NIE should be among the top Institutes of Education in the world.” He expressed confidence that NIE would rise to this challenge in the coming decade.

In conjunction with the official opening, a symposium entitled “Valuing The Teaching Profession: Purpose, Passion and Hope” was held on 25 January. At the symposium, a special tribute was paid to the past directors of NIE. An open house with many interesting and fun-filled activities was also organised to celebrate the Institute’s official opening.

Fresh grads survive 2001 gloom

Despite the sluggish economy of 2001, 81.6% of fresh graduates managed to find jobs by the end of the year. More fresh NTU graduates jostled for fewer jobs in 2001, as Singapore sank deep into a recession. The number of fresh
First international student exchange fair on campus a hit

NTU students discover plentiful study opportunities abroad, while the University reinforces ties with its overseas partners

“This is a great opportunity for us to find out about studying abroad. We hope to see this event every year!” enthused an NTU undergraduate at the University’s first International Student Exchange Fair organised by the International Relations Office (IRO) on 6 March 2002.

Twenty-one exchange partners from 11 countries were represented at the fair, among them, Xi’an Jiaotong University in China, Chalmers University and Linköping University in Sweden, and University of Strathclyde in UK. Explaining the rationale for the event, Prof Brian Lee, the Director of IRO, said: “As part of the University’s strategic goal of internationalisation, we are striving to increase our students’ awareness of the opportunities available for studying abroad.”

The fair at the Exhibition Gallery drew close to 500 students, and benefited many curious undergraduates, some of whom attended presentations on specific universities held in tutorial rooms. NTU students were not the only ones who found the event useful. “This is a great idea. I’m going to do the same when I get back to Australia,” said a professor from Perth. Other exchange partners revealed that the turnout for the fair far exceeded their own expectations.

A day before the event, IRO organised an orientation programme for the exchange partners, where presentations on NTU and the University’s exchange programmes were made. Exchange Coordinators from the Schools and staff of the Office of Professional Attachments and NIE hosted the orientation, which included tours of the campus. With the overseas partners now in a better position to promote NTU to their own outgoing students, the exchange of students could take place on a reciprocal basis.

Still in demand: Almost 60% of NTU’s accountancy graduates received multiple job offers

graduates who found jobs fell from the previous year by 14.4% to 81.6%, and only 82.2% of those who found employment got hired less than three months after the final year examinations.

Though jobs were few and far between, the class of 2001 did not fare as badly as expected. Their mean gross annual salary was only 5.2% lower than that of the previous year’s graduates. Communication studies graduates even saw a 1.9% rise in their gross annual salary over the previous year. And all those with an honours degree in computer engineering found jobs within three months of their final year examinations.

Most of the graduates were hired by the private sector, which provided 82% of them with jobs. Accountancy graduates enjoyed the greatest success in their job hunt, with 96.8% securing jobs and 59.6% receiving multiple job offers. Also faring well in the employment stakes were students of communication studies (86.7% employed), computer engineering (83.1% employed) and civil engineering (82.3% employed).

The majority of fresh graduates (36.4%) found jobs through the University; 26% secured employment through press advertisements. The comprehensive career guidance services of the Office of Professional Attachments helped many first-time job seekers find work. Compulsory industrial and professional attachments for NTU students also proved a boon, as scores of graduates were hired as permanent staff by the companies they were attached to.

NTU and the National University of Singapore (NUS) conducted separate graduate employment surveys, the results of which were released at a joint press conference on 5 March 2002. The NTU survey, conducted over 10 weeks, received a response rate of 60.1%, with 2,054 out of the total graduating cohort of 3,418 responding over a period from 15 October to 19 December 2001.
Nanotechnology has taken its pride of place in manufacturing and precision engineering. When nanocomposite, nanophase or nanostructured bulk materials and coatings become the mainstay of such industries, research must move to keep pace with the trend.

Recognising its importance, the School of Mechanical and Production Engineering (MPE) recently signed a Memorandum of Understanding (MOU) with Shimadzu (Asia Pacific) to work in tandem to study nanocomposite thin films.

The $750,000 research project with Shimadzu was secured only a few months after the Thin Films Technology Strategic Research Programme in the School of MPE was established. Shimadzu (Asia Pacific) is a subsidiary of Shimadzu Corporation, Japan.

At the heart of your intelligent microwave oven, dishwasher, DVD player and palm pilot are embedded systems. Without these hidden computer systems, consumer appliances and electronic products stop “thinking” and behaving intelligently.

The Centre for High Performance Embedded Systems (CHiPES), a multidisciplinary research centre in NTU, looks set to score more successes in this vital field. It recently joined forces with the Technology Information Forecasting and Assessment Council’s Centre of Relevance and Excellence (TIFAC-CORE) at Shanmugha Arts, Science, Technology & Research Academy (SASTRA), an established educational and research institute in India, to develop new industry-relevant embedded systems applications. The collaboration provides for the sharing of resources online, and faculty and student exchanges.

Formalised at NTU on 1 February 2002, the embedded systems tie-up is expected to tap into the global embedded systems market, which is projected to grow to more than US$100 billion by the end of 2002.

Embedded systems are computer systems that are hidden within larger systems and are usually not perceived as general-purpose computers. They perform dedicated tasks, usually at a lower cost and battery power than available alternatives. Embedded systems can be found in many different places, ranging from complex systems such as nuclear missiles and intelligent weapons to consumer products such as consumer electronics, cars, communication devices and personal computers.

CHiPES was established in April 1998 to promote research and development in embedded systems engineering using state-of-the-art VLSI CAD tools and technology. Its researchers have developed many innovative high-performance architectures, such as a low-cost embedded system that removes distortion in camera images taken with wide-angle lenses.
The shocking collapse of Hotel New World in 1986 could have been avoided, if only fibre optic sensors of the kind developed by NTU spin-off Inventive Fiber had been installed in its structural columns.

Inventive Fiber’s technology, with three patents pending, is unique as it uses fibre optic sensors – instead of their bulkier, more conventional electronic cousins – to measure how stable structures are. When embedded in or mounted on columns, these sensors act as nerves in the building, transmitting information about stressors like cracks or strain. Being extremely sensitive, they can detect subtle changes in a structure’s health – a quality lacking in conventional sensors.

The company founded by Assoc Prof Tjin Swee Chuan, 42, from the School of Electrical and Electronic Engineering (EEE) has already taken off on a steady footing, with contracts from the Housing Development Board (HDB) and the Singapore Productivity and Standards Board (PSB).

As one of HDB’s suppliers, Inventive has provided 40 sensors for installation in the ground-floor columns of four new 30-storey HDB flats in Ang Mo Kio. In March 2002, the company landed another contract, this time with PSB. NTU has also capitalised on its spin-off’s technology; the University’s Nanyang TechnoPlaza, when completed later this year, could well be one of the safer buildings on campus!

With HDB flats getting taller, Singapore’s proximity to earthquake zones in the region, and construction on reclaimed land, structural health monitoring is the way to go here, while in the “danger zones” of the region, where earthquakes are frequent, such monitoring has even greater utilitarian value. In a trillion-dollar construction industry, these benefits are augmented with cost-savings from reduced maintenance work and repairs due to premature “ageing” of structures.

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Adam Khoo, a best-selling author, performance trainer and business consultant, is a good example of the kind of entrepreneur the Nanyang Technopreneurship Center (NTC) hopes to unleash from its flagship graduate diploma programme, TIP.

Adam was invited, as a speaker in NTC’s recent Entrepreneurship Speaker Series, to spill the beans on the “Entrepreneurship Mindset” and what makes or breaks a business. A self-made millionaire by the age of 26, Adam owns and manages five companies with a combined turnover of $20 million. His book I Am Gifted, So Are You! was a best seller in 1998 and 1999.

Launched on 15 January 2002, TIP is a four-month graduate diploma programme jointly conducted by NTC and the University of Washington’s Center for Technology and Entrepreneurship. It is the first of its kind in the Asia-Pacific. Best summed up as a programme of “real-life” training in starting up new ventures, it takes students through the entire venture creation process, allowing them to tap on the expertise of Seattle-based inventors and technopreneurs during a six-week stint at the University of Washington (UW). Seattle is the birthplace of corporate bigwigs Microsoft, Amazon.com and Starbucks, which are among the companies TIP students will visit.

The UW experience concludes with a business plan competition, with US$30,000 in prize money at stake. “Winning teams with commercially viable projects will have the opportunity to create start-up ventures supported by the venture capital communities,” said NTC’s Director, Assoc Prof Tan Teng Kee.

“Anyone with creative ideas, regardless of social and financial background, can succeed if he or she can turn innovative ideas quickly into products or services,” said NTU President Dr Cham Tao Soon at the launch.

Those driven by this sharp instinct for entrepreneurial success, with at least a Bachelor’s degree in any discipline, will be considered for the course, which leads to a joint NTU-UW graduate diploma. So far, TIP has attracted a good mixture of applicants from the engineering and business disciplines, including graduating students and young working professionals. Only 50 will be accepted after applications close on 11 May 2002.

“We are serious about helping the truly passionate,” said Assoc Prof Tan, which is why NTC is offering no-bond scholarships worth $23,000 to all participants of the programme. This covers a large part of the programme fee of $28,500. For more information, surf to http://www.ntu.edu.sg/ntc.
First professorship in Education named after philanthropist CJ Koh

The Koh Choon Joo Professorship in Education is established with a donation of $2 million to the NTU Endowment Fund. NTU’s 15th professorship, it will benefit NIE.

The belief in the traditional value of “what we take from society, we should return to society” prompted Mr Koh Choon Joo (CJ Koh) to contribute generously to education and charity in his living years.

A clear example of this magnanimity was witnessed on Friday, 8 February 2002, when Mr Ong Tiong Tat, the Executor of the Estate of Mr Koh Choon Joo, donated $2 million to NTU to establish The Koh Choon Joo Endowment in Education. This will amount to $4 million when matched dollar for dollar by the Government.

Of the $2 million, $1.5 million will be used to establish The Koh Choon Joo Professorship in Education. The remaining $500,000 will be endowed to award The Pradap Kow (Mrs CJ Koh) Scholarships for Higher Degrees in Education. Mr CJ Koh, a prominent lawyer and philanthropist with his own law firm, CJ Koh & Co, was at one time a Magistrate of the Juvenile Court. His late wife, Pradap Kow, taught at the old CHIJ in Victoria Street.

The income generated from the professorship will enable NIE to fly in renowned academics to give public lectures, conduct seminars and initiate research in education. The scholarships will be given to encourage more educators in the schools and the Ministry of Education to pursue higher education.

Praising Mr and Mrs Ong Tiong Tat for being strong advocates of education, NIE Director Prof Leo Tan said that their benefaction facilitated a vision of the Kohs – that of bringing excellence to education. Through the Ongs, NTU also received $530,000 from Mr CJ Koh in January 1997, when he turned 96. The income generated from the invested endowment has resulted in the “CJ Koh Collection” on Education for the NIE Library.

The launch ceremony at the NIE Art Gallery was graced by His Excellency Mr SR Nathan, President of the Republic of Singapore and Patron-in-Chief of the NTU 21st Century Fund, who received the cheque from Mr and Mrs Ong on behalf of NTU.

16th professorship to honour EW Barker

NTU has kicked off fund-raising efforts for a new professorship in physical education and sports science. The professorship is named after Mr EW Barker, Singapore’s former Law Minister and a champion sportsman, who passed away in April 2001. A 15-member fund-raising committee led by Dr Tan Eng Liang has been formed to raise $2 million. For more information, contact the Alumni & Endowment Office at 6790-5919.

A helping hand for education from the late Mr CJ Koh (picture on banner) through Mr and Mrs Ong Tiong Tat (second and first from right). Receiving the cheque are (from left) Prof Leo Tan, Dr Cham Tao Soon and President SR Nathan.
For the past few years, researchers from the School of Civil and Environmental Engineering (CEE) have been toiling away at a 25-sq km plot of reclaimed land in Changi prospecting for clean water.

Working with engineers from SPECS Consultants, they have been collecting hydrogeological data on the reclaimed site. Their preliminary findings show that the Changi aquifer already holds a substantial amount of freshwater from rainfall infiltration and could potentially store more than 70 million m³ of water.

“Singapore’s land reclamation programme has produced large subsurface environments, or aquifers, that are ideal for water storage and water reclamation,” explained project team leader Prof Tay Joo Hwa, also the Director of the ENV-NTU Environmental Engineering Research Centre.

Team member Asst Prof Stephen Tay said: “These aquifers have highly permeable and porous sand that can hold large volumes of water economically, with minimal disruption to land use. As an added benefit, the sand acts as a natural filter, further purifying the water passing through.”

More research needs to be done to confirm the technical feasibility of using the Changi aquifer – and other aquifers in Singapore’s parcels of reclaimed land – for water storage and reclamation. If found feasible, it would be a turning point in Singapore’s quest for self-sufficiency in water supply.

With the recent award of a $5.8 million Clean Water Programme (CWP) grant from the Agency for Science, Technology and Research (A*STAR), and an additional $3.8 million from NTU, the CEE researchers are now soldiering on in their pioneering research. The funding enables them to work closely with Stanford University, ranked top in the US for its graduate environmental engineering programmes, and the Public Utilities Board, which spearheads Singapore’s major water reclamation efforts, to further investigate the Changi aquifer.

In addition to the aquifer studies, the researchers will explore other promising clean water technologies, such as photocatalytic oxidation and membrane-based methods. They will also develop advanced capabilities in Water Quality Analytics to enhance Singapore’s water management and R&D infrastructure.
**Hip replacement surgery a cinch with ARORA**

ARORA, a computerised navigational system for hip replacement surgery, may soon make it to the operating theatre.

Those among us suffering from deteriorated, arthritic or severely injured hips can take heart. NTU researchers have created a high-tech aid that can help surgeons to position prosthetic hip joints to get the best fit during hip replacement surgery.

Called ARORA, or the Augmented Reality Orthopaedic Aid, it is the invention of a CIMIL (Computer Integrated Medical Intervention Laboratory) team at NTU led by Assoc Prof Ng Wan Sing of the School of Mechanical and Production Engineering.

When diseased hip joints are successfully replaced, the result is enhanced mobility, comfort, and independence for people who would otherwise be substantially disabled. However, if the artificial hip is not positioned properly, patients could end up with a smaller range of leg movement or a shortened leg, or fall prey to dislocation after surgery. Surgeons currently position hip implants using a pair of X-ray images of a patient’s anatomy. With no standard to define optimal placement, they rely on their experience and skill to get the best fit during surgery.

With ARORA, X-ray images are taken from different angles of a patient’s hip joint and a model of the prosthetic joint is created. A virtual image of the model generated on each X-ray image allows the surgeon to adjust the position and orientation of the model. During surgery, a 3D tracking device with a stereo camera finds the location of the hip joint, and 3D images of the artificial component are superimposed on live images of the patient’s pelvis. Guided by this display, the surgeon is able to implant the prosthetic joint with great precision.

The navigational system has been tested on mock pelvis and cadavers, and trials replicating operating room conditions are being planned to validate the system for its robustness, usability, safety and registration accuracy.

**CoE Tech Week impresses**

For the first time, NTU’s five engineering schools banded together to showcase their technological prowess at one of the largest tech exhibitions ever held on campus. A convention and 14 focus seminars added “byte” to CoE Tech Week 2002.

ECG monitoring of the heart using personal digital assistants, an intelligent lift monitoring system that warns of an impending lift door malfunction, and the creation of life-saving bone substitutes that are so much like the real thing, they actually encourage bone growth.

These were just three of more than 90 staff and student projects showcased at an exhibition held in conjunction with the College of Engineering’s (COE) first CoE Technology Week. The event, which ran from 8 – 13 March 2002, was a joint effort of the five engineering Schools – the Schools of Civil and Environmental Engineering, Electrical and Electronic Engineering (EEE), Mechanical and Production Engineering, Computer Engineering, and Materials Engineering. An extended version of the highly successful E3 Technology Week organised by EEE over the past four years, CoE Tech Week will be an annual affair.

The five-day technology exhibition, which attracted a turnout of 3,000, marked the first attempt by CoE to showcase some of the latest research projects of the five engineering Schools under one roof. “Visitors were impressed by the Schools’ achievements and research capabilities,” said Assoc Prof Sng Yeow Hong, the Chairman of the organising committee.

As part of Tech Week, a special convention on “Biomedical Engineering” was also held. Three prominent industrial experts – Dr Victor Donald Samper of the Institute of Microelectronics, Mr Phatak Madhav Krishna of GE Pacific Pte Ltd, and Dr Gunaretnam Rajagopal of the Bioinformatics Institute – heralded the future of biotech with their previews of the “Shrinking Laboratory”, “Diagnostic Imaging” and “New Frontiers in Biology”.

Adding to the tech fever were 14 focus seminars attended by over 1,500 engineers, industry experts, researchers and academics. These focused on key emerging technologies in Environmental Engineering, Intelligent Transportation Systems, Information Technology, Wireless Communications, Display Technology, Power Quality, Mobile Robotics, Embedded Systems, Human Factors Engineering and Biomaterials.
Business School launches new journal

The Nanyang Business Review offers the latest management thinking and business ideas

A new journal launched by the Nanyang Business School (NBS) gets leading business thinkers to make sense of the dynamic changes in the Asian business environment. It does this while stimulating an in-depth understanding and adoption of best business practices.

A bi-annual journal with a rare academic-practitioner focus, the Nanyang Business Review was launched in January 2002. Its editors are Assoc Profs Hooi Den Huan and Joseph Wan, marketing and strategy specialists at NBS. Distinguished professors from major universities and practitioners from leading corporations sit on the journal’s editorial board. They include Donald Lessard from MIT, Howard Stevenson from Harvard and Gunter Dufey from McKinsey and Co.

The inaugural issue features six articles, covering such topics as a new approach to managing the Asian business environment. The journal is circulated to major public and private organisations, and is available for subscription at $38 per year in Singapore. Regional subscribers pay slightly more. To order a copy of the journal, visit http://www.nbs.ntu.edu.sg/Research/NBR/NBR.htm or email adhhoi@ntu.edu.sg. NBS also publishes the Asia Business Law Review (ABLR), a quarterly journal targeted at lawyers and business professionals. ABLR’s website is at http://www.asiabizlaw.ntu.edu.sg/page2.html.

Raffles JC’s “EyeCatching” solution

A team from Raffles Junior College has won the SingTel Best Overall Performance Award in this year’s NTU-JC Challenge, an annual science and tech competition encouraging innovation from A-level students. The team’s project, “EyeCatching”, uses virtual reality headsets to screen patients for common eye problems by simulating the environment and equipment found in opticians’ testing rooms. Their solution benefits especially the elderly immobile.

The other winners were from Pioneer Junior College (SingTel Best Presentation Award), Tampines Junior College (Siemens Best Innovation Award) and National Junior College (Bayer Best Scientific Input Award).

SingHealth CEO Prof Tan Ser Kiat explored the theme of this year’s Challenge, “Telemedicine”, at the Grand Finale at NTU on 2 February 2002. He traced the evolution of medicine and touched on several fascinating facets of telemedicine, such as telesutuation, telediagnostics and teletherapeutics. Next year’s Challenge will most likely see JC students exploring new applications in environmental technology.

Latest buzz on the economy

Respected NTU economic forecasters predict 4% growth for Singapore this year

Assoc Prof Chen Kang, Head of the Econometric Modelling Unit (EMU), and Assoc Prof Tan Khee Giap, Head of the ASEAN Economies Monitoring Unit, have gazed into the economic crystal ball again.

With their crystal-gazing guided by expert analysis of real data and trends, the respected duo from the Nanyang Business School have concluded that Singapore’s economy will grow by 4% in 2002 and 6.4% in 2003. The all-important manufacturing sector will grow by just 2% this year, before bouncing back in 2003 with 7.1% growth.

Giving their bi-annual economic forecast to reporters on 25 January 2002, the professors cautioned that the sluggish Japanese economy and reform inertia in ASEAN countries will continue to be a negative factor for Singapore’s economic growth. Other key factors determining how Singapore rides out the storm: the strength of the US economic recovery and the extent of the global electronics upturn.

Singapore’s economic health, with its reliance on electronics and manufacturing, has been fluctuating wildly since 1997. The increased volatility in the economy stems from the country’s external demand-driven manufacturing sector and shortened electronic cycles. “Changed circumstances and shifts in the region”, including greater competition from neighbouring players in the manufacturing and services sectors, present serious threats to Singapore’s economic foundation, said the NTU dons. These call for long-term measures to retune the Singapore economy.

Assoc Profs Chen Kang and Tan Khee Giap, who released the figures through the EMU, have an impressive track record. Two years ago, they forecast 7.5% growth for 2000, at a time when overt pessimism was widespread. The Singapore economy eventually registered a robust growth of 9.9%.
Former Olympian joins Hall of Fame

Champion sprinter Asst Prof Canagasabai Kunalan from the Physical Education and Sports Science Academic Group, NIE, has been inducted into Singapore’s Hall of Fame. Asst Prof Kunalan is the most successful track and field athlete in Singapore, who has contributed greatly to the sporting arena through his representation at international competitions. He is certainly a role model for all young aspiring athletes.

Twice winner of prestigious UK Award for Excellence

Assoc Prof Foo Check Teck from the School of Mechanical and Production Engineering’s Division of Systems and Engineering Management has won, as main author, his second UK Literati Club Award for Excellence. His work on “Corporate Identity Strategy”, published in Corporate Communications, bagged him the Outstanding Paper Award for Excellence this year. His first win was in 2000, when he received an Award for Excellence (Highly Commendable) for research also published in Corporate Communications.

As part of their 10th anniversary celebrations on the famed Lord’s Cricket Ground, the UK Literati Club has invited him to speak about his award-winning paper. One mission of the UK Literati Club is to foster excellence by authors and researchers. Assoc Prof Foo will share his experiences with other winning authors and researchers. He will speak on the inspiration, thinking and teamwork behind his award-winning paper.

Asst Prof Foo Check Teck has established himself globally as the leading researcher in corporate identity strategy.

Mauritius government consulting Prof Lim Chong Yah

Prof Lim Chong Yah, an eminent Professor of Economics at Nanyang Business School (NBS), is wearing a new hat these days – as Consultant to the Mauritius government.

Prof Lim, who is the founding Chairman of the National Wages Council, has been studying the Mauritian wage determination system as well as issues of wage equity, wage competitiveness and wage reforms. Assisting him are colleagues Prof David Reisman, a full Professor of Economics at NBS, and Prof Lim’s doctoral student in Economics, Ms Sng Hui Ying, who currently teaches at the School of Electrical and Electronic Engineering.

The “Wage Mission Team” has visited Mauritius from time to time to meet representatives of the trade unions, employers and the Government. They will submit their final report to the Mauritian Cabinet at the end of May 2002.

Professor lands plum role

For the first time ever, the Association for Business Communication (ABC) has an Asian at its helm. Its new Director-at-Large is Asst Prof Tan Joo Seng from the Nanyang Business School.

ABC is a prestigious international organisation based in New York with over 1,000 members, including world-class researchers, scholars and leaders, all seeking to advance the field of management and business communication.

Asst Prof Tan will serve a five-year term, during which he will work with ABC’s top management team to spearhead global initiatives in business communication and management research, education and practice. He will oversee ABC’s five regional groupings in the United States and four international regions – Canada, Europe, Asia and the Pacific, and Caribbean/ Central/South America.

“I have been a member of ABC since 1994 and have served the association in a number of roles. I believe my record of services has finally been recognised, hence my appointment as the Director-at-Large,” said the NTU’s Asst Prof Tan Joo Seng is now Director-at-Large of the Association for Business Communication (ABC).
The risky world of interest rate derivatives

Visiting UOB
Professor Carl Chiarella sizes up interest rate derivative instruments at a public seminar

Prof Carl Chiarella, an eminent financial engineering expert from the University of Technology in Sydney, recently delved into “The Risky World of Interest Rate Derivatives”.

At the NTU Executive Centre on 20 February 2002, he described some of the main interest rate derivative instruments and gave his perspective on the range of models that currently exist to price and hedge, using the Heath-Jarrow-Morton (HJM) model as the unifying framework.

The framework he presented helped the 50 participants, including finance professionals and NTU staff and research students, better understand interest rate term structure dynamics.

Expository in nature and targeted at an intermediate technical level, the seminar benefited many like NTU financial engineering graduate Mr Yip Yew Tong, who works for the Government Investment Corporation. “The seminar served as a refresher – a sort of summary of what I had learnt in the Masters programme,” he said. Mr Martin Kleinelanghorst, with TNT Singapore, said the seminar offered him valuable networking opportunities with the industry.

Prof Chiarella was attached to the Nanyang Business School’s Division of Banking and Finance from 6 January to 22 February 2002. He is from the School of Finance and Economics of the University of Technology, Sydney, where he is a Professor of Finance.

Constructive exchange at civil engineering conference

The School of Civil and Environmental Engineering (CEE) had the privilege of hosting the 8th East Asia-Pacific Conference on Structural Engineering and Construction (EASEC-8) from 5 – 7 December 2001. Attracting 450 participants, the conference, themed “Challenges in the 21st Century”, was the most successful in the EASEC series and one of the largest civil engineering conferences ever held in Singapore.

EASEC was conceived in the early 80s at the Asian Institute of Technology in Bangkok to provide a forum for academicians, researchers and engineers working in broad areas of structural engineering and construction to share and exchange information.

Held at the Shangri-La Hotel and NTU, the conference attracted 375 technical papers, including 11 invited ones, covering the most recent findings of academics, researchers and practitioners from 36 countries. Dr Vivian Balakrishnan, Minister of State for National Development, opened the conference.

Issues discussed at the constructive exchange included the maintenance of existing infrastructure, defences against natural and man-made disasters, and the protection of both the fragile natural and built environments.

Global eye on cyber security

For the first time, an international conference focused on tightening cyber security worldwide was held in Singapore.

Attendee by some 50 representatives from the defence and domestic security agencies of the US, Japan, Australia, Hong Kong and Singapore, the conference examined national approaches to governing cyberspace and discussed ways to enhance transnational cooperation.

It was jointly organised by the Institute of Defence and Strategic Studies (IDSS) and Washington DC’s Center for Strategic and International Studies from 4 – 6 March 2002.

Opening the proceedings at the Shangri-La Hotel, Deputy Prime Minister and Minister for Defence Dr Tony Tan said that tackling cyber security threats requires the serious attention of policymakers everywhere as all countries are vulnerable to cyber attacks. With such attacks on the rise, there is a need for professionals in the field to constantly share ideas to keep ahead of technological advancements. Governments and the private sector could work more closely to tighten cyber security, he said.

Besides Dr Tan, other distinguished speakers like Mrs Regina Ip, Hong Kong’s Secretary for Security, Mr Paul Kurtz, the US National Security Council’s Senior Director for Cyberspace Security, and Ms Wu Choy Peng, the Singapore Infocomm Development Authority’s Assistant Chief Executive (Government Services), also shared their experiences in governing cyberspace.
Postgraduate’s biomedical engineering success

Ms Zheng Miaomiao, a postgraduate student from the School of Electrical and Electronic Engineering, has won the second prize in a Student Paper Competition at the 7th Australian and New Zealand Conference on Intelligent Information Processing Systems (ANZIIS 2001). Her paper, “Decision Support by Fusion in Endoscopic Diagnosis”, details the fruits of her research work at NTU’s Biomedical Engineering Research Centre (BMERC). It was co-authored with her supervisor, Assoc Prof S M Krishnan, who is the Director of BMERC. At the prestigious conference held in Perth last November, she was judged on the quality of her paper, an oral presentation, and a question-and-answer session. ANZIIS 2001 was organised by the Institution of Electrical and Electronic Engineers (IEEE) and the Engineering in Medicine and Biology Society, USA.

More help for the tongue-tied

NTU and NIE staff who wish to practise their public speaking now have one more opportunity to do so – through Nanyang BrassTacks, a new Toastmasters chapter in NTU. Hosted by the School of Computer Engineering, the chapter meets regularly on the second Saturday and fourth Wednesday of every month. Ms Lilian Lau, the District Governor of Toastmasters International, attended the chapter’s first meeting on 2 February 2002.

Honouring Toastmasters’ vision of grooming orators and uplifting the tongue-tied, Nanyang BrassTacks will be organising Speech-Craft Training sessions to club members and non-members from NTU and NIE. “We view this as a pro-active step towards staff development,” said the club’s president and founder, Assoc Prof Khong Chooi Peng.

Nanyang BrassTacks is the second Toastmasters chapter hosted by an NTU School. The first was started at Nanyang Business School in 2000. For more information on Nanyang BrassTacks, visit the club’s website at http://www.ntu.edu.sg/sce/toastmasters.

Promotions

Our heartiest congratulations to our NIE colleagues on their recent promotion:

To Associate Professor

English Language & Literature: Asst Prof Phyllis Chew Ghim Lian; Humanities & Social Studies Education: Asst Prof Kalyani Chatterjea, Asst Prof Wong Shuang Yann; Instructional Science: Asst Prof David Hung Wei Loong; Policy & Management Studies: Asst Prof Jason Tan Eng Thye; Psychological Studies: Asst Prof Tan Ai Girl; Mathematics & Mathematics Education: Asst Prof Koay Phong Lee

To Senior Officer (Special Grade)

Head/Development & Estate: Mr Selvarajan Selvaratnam

To Senior Officer (Grade 1)

Head/Strategic Planning & Corporate Services: Mrs Jacklyn Ko-Phua Yeu Huay; Student & Academic Services: Mrs Mak Lek Cher

To Senior Officer [Lib] (Grade 1)

Library & Information Services Centre: Mrs Ong Pang Hui

To Senior Officer [IT] (Grade 2)

Computer Services Centre: Mdm Catherine Chan Chor Ling, Miss Lim Wan Peng

To Senior Officer [IT] (Grade 4)

Computer Services Centre: Mr Pua Tee Wee

To Senior Officer (Grade 5)

Strategic Planning & Corporate Services: Miss Chan Guet Har

Computer Engineering School establishes new division in computer communications

The School of Computer Engineering (SCE) has set up its third division – the Division of Computer Communications. Headed by Assoc Prof Francis Lee Bu Sung, the division with a current staff strength of 20 will study hot areas in computer communications. These range from video/multimedia transmission and network protocol design and simulation to parallel and distributed systems and Grid technology. “The timing is just right as we move into the digital age, where computer communications will play a major role in our life,” said Assoc Prof Lee. The new division complements SCE’s existing two divisions specialising in Computing Systems and Software Systems respectively.

Moving into the digital wireless age with DSP-Bluetooth solutions

The School of Electrical and Electronic Engineering (EEE) is collaborating with Excelpoint Systems Pte Ltd, a leading local company distributing electronic components, on an R&D project based on digital signal processing (DSP) and Bluetooth technology. A Memorandum of Understanding was signed on 4 January 2002.

Excelpoint Systems will provide research funding for DSP and Bluetooth equipment as well as top-up scholarships for postgraduate students.

Using Bluetooth-enabled headsets, a team at EEE will develop an integrated DSP-Bluetooth solution for handling signal processing issues, such as noise reduction, 3D audio perception, speaker identification and localisation problems. This could eventually spin off some exciting new applications for the digital wireless age.

Bluetooth is the latest cable replacement technology that provides wireless connectivity to mobile devices such as mobile phones, PDAs, headsets and digital cameras. Digital signal processors are ideal candidates for processing digital data and signals from Bluetooth-connected applications as they are very powerful and can process such information in real time.
Welcome

The University welcomes the following new staff members:

Nanyang Business School (NBS)

Assoc Prof Douglas Leslie Mackell – Associate Professor
Assoc Prof Narendran Shriavig Chaudhari – Assistant Professor
Asst Prof Rajan Kashi Rodan – Assistant Professor
Asst Prof Tian Feng – Assistant Professor
Mr Wong Kai Juan – Senior Officer
Prof Stanislav Vladimirovich Klimentov – Assistant Professor
Dr Roll Gunnar Karlsson – Assistant Professor
Dr Xue Jinguo – Assistant Research Fellow
Dr Wei Junhu – Assistant Professor
Dr Zheng Chengji – Assistant Research Fellow
Miss Liu Li – Assistant Research Fellow
Mr George Rosario Jagadresh – Assistant Research Fellow
Mr Golam Ashraf – Assistant Research Fellow
Mr Li Feifei – Assistant Research Fellow
Mr Liu Zhuhua – Assistant Research Fellow
Miss Patel Chandi Rajiv – Assistant Research Fellow

School of Electrical & Electronic Engineering (EEE)

Asst Prof Gin Yew-Hoong, Karina – Associate Professor

School of Computer Engineering (SCE)

Assoc Prof (Adj) Ng Siew Kiong – Assistant Professor
Assoc Prof (Adj) Loo Yee Luen – Associate Professor
Assoc Prof Tan Su Min – Assistant Professor
Assoc Prof Loe Say Wei – Assistant Professor
Assoc Prof Chien Hsing – Assistant Professor
Assoc Prof Goh Min Foo – Assistant Professor

School of Mechanical & Production Engineering (MPE)

Mr Chong Tan Boon – Senior Officer [Lab]
Mr Sandeep Bagaria – Business Development Manager
Mr Zhang Dianwen – Project Officer
Mr Wang Peng – Project Officer
Mdm Palei Win – Project Officer
Mr Ong Beng Hwee – Project Officer
Mr Lim Shiun Pin – Project Officer
Mr Eric Cheah Mun Yew – Project Officer
Mr Zhu Yinian – Research Associate
Mdm Zhang Yani – Research Associate
Mr Xia Jinghua – Research Associate
Mdm Sun Yan – Research Associate
Miss Yeung Chun Ping – Research Associate
Mr Venkatakrishnan Venkataramanan – Research Associate
Mr Xia Jinghua – Research Associate
Mdm Zhang Yani – Research Associate
Mr Zhu Yimin – Research Associate
Mr Eric Cheah Mun Yew – Project Officer
Mr Lim Shiu Pin – Project Officer
Mr Ong Beng Hwee – Project Officer
Mdm Fueri Wu – Project Officer
Mr Wang Peng – Project Officer
Mr Wong Mui Tuck – Project Officer
Mr Zhang Daowen – Project Officer
Mr Sandeep Bagaria – Senior Development Manager
Mr Chong Tan Boon – Senior Officer (Lab) (Grade 5)

School of Civil & Environmental Engineering (CEE)

Mdm Tan Hui Nai, Loreen – Senior Officer (Grade 4)
Miss Lee Mun Wai – Project Officer
Mr Rajendra Kumar s/o N Kasinath – Research Associate

School of Materials Engineering (SME)

Miss Patel Chandni Rajiv – Project Officer

School of Biological Sciences (SBS)

Assoc Prof Loo Siew Kiong – Assistant Professor
Assoc Prof Loo Siew Kiong – Assistant Professor

School of Communication & Information (SCI)

Mr Zhou Yuan – Project Officer
Mr Bai Weimin – Research Associate
Dr Wang Gangfeng – Research Fellow
Dr Simson Suja Helen – Research Fellow
Dr Wang Gangfeng – Research Fellow
Mr Bai Weimin – Research Associate
Mr Paul Stanley – Research Associate
Mr Wang Hongmin – Research Associate
Mr Low Tue Hang – Research Associate
Mr Zhou Yuan – Project Officer

School of Computer Engineering (SCE)

Miss Sally Yong Choo Wey – Project Officer

School of Electrical & Electronic Engineering (EEE)

Asst Prof Gin Yew-Hoong, Karina – Assistant Professor

School of Computer Engineering (SCE)

Assoc Prof Srikanthan Thambipillai (SCE) – Re-appointments
Assoc Prof Chia Tet Fatt (NIE) – New Appointments
Assoc Prof Lim Siew-Lee, Shirley – IT Sub-Dean, Support and Training, NIE
Assoc Prof Hung Wei Loong, David – IT Sub-Dean, E-learning, NIE
Asst Prof Tan Siew Ching, Jason – E-learning Competency Centre
Centre for IT in Education
Mr Wong Jia Hoe – Project Officer
Mr Chau Kian Keng – Project Officer

School of Mechanical & Production Engineering (MPE)

Prof Viswanatha Ramamurti – Visiting Professor
Dr Sidney W A Dekker – Research Fellow
Dr Jiang Daihui – Research Fellow
Dr Duan Xianbin – Research Fellow
Dr Pandeyashraya Kuttugune – Research Fellow
Dr Simon Sia Su Helen – Research Fellow
Dr Wang Gangfeng – Research Fellow
Mr Bai Weimin – Research Associate
Mr Li Hua – Research Associate
Mr Paul Stanley – Research Associate
Mr Wang Hongmin – Research Associate
Mr Low Tue Hang – Project Officer

School of Electrical & Electronic Engineering (EEE)

Asst Prof Gin Yew-Hoong, Karina – Assistant Professor

School of Computer Engineering (SCE)

Assoc Prof Srikanthan Thambipillai (SCE) – Director, Bioinformatics Research Centre (BIRC)
Assoc Prof Jagath Chandana Rajapakse (SCE) – Deputy Director, BIRC

Appointments

New Appointments

Assoc Prof Ong Lim Seng – Head, Division of Engineering Mechanics, MPE
Assoc Prof Lim Siew-Lee, Shirley – IT Sub-Dean, Support and Training, NIE
Assoc Prof Hung Wei Loong, David – IT Sub-Dean, E-learning, NIE
Asst Prof Tan Siew Ching, Jason – IT Sub-Dean, Projects, NIE
Assoc Prof Chia Tet Fatt (NIE) – Director, Bioinformatics Research Centre (BIRC)
Assoc Prof Jagath Chandana Rajapakse (SCE) – Deputy Director, BIRC

Re-appointments

Assoc Prof Srikanthan Thambipillai (SCE) – Director, Centre for High Performance Embedded Systems (CHiPES)
Students create paper of Guinness proportions

The Rotaract Club sets a new Guinness World Record and raises close to $10,000 for its beneficiary, the Lions Befrienders

Sixty students from the Rotaract Club have created a piece of paper measuring 5m by 5m, rewriting the previous Guinness World Record for world’s largest sheet of handmade recycled paper.

The students spent over 10 hours on the record-breaking feat at Chinatown Point on 23 February 2002. They had to endure the tedious process of shredding unwanted paper and then soaking and blending the paper to form pulp. “We spoilt two blenders because some of the blenders could not stand the stress of blending paper!” said project leader Kong You’E, a second-year student from the School of Communication and Information. Ensuring that the paper came out evenly textured was another challenge.

In the end, “Project 5 by 5” was a great success, not only for the world record it set, but also for the funds and awareness it helped raise for the club’s beneficiary, the Lions Befrienders – a volunteer welfare organisation assisting the elderly poor. Through the project, the students also sent the message that saving the earth through recycling and reusing is everyone’s responsibility.

The students got down to serious “paperwork” last August, recycling paper by hand and raising funds through pledge cards and a karang guni session. At Chinatown Point, they ran a song dedication service and rented stalls to vendors to raise more funds for their beneficiary. Chinatown Point, the National Youth Council and Lee Foundation helped to finance the project.

Visitors

During the period January to March 2002, the University received the following distinguished visitors:

- 15 Jan Prof Wolfgang Herrmann, President, Technical University Munich, Germany
- 22 Jan Dr Cyril Harrison Wecht, Lee Kuan Yew Distinguished Visitor
- 25 Jan Dr Jim Ebben, President, Edgewood College, USA
- 31 Jan Prof Brian Mellitt, President, Institution of Electrical Engineers, UK
- 7 Feb Dr Ng Eng Hen, Minister of State for Education, Singapore
- 14 Mar HE Mr Andres Carral, Ambassador of Mexico to Singapore
- 16 Mar HE Mr Hans Ulrich Stoeckling, Minister for Education, State of St Gallen, Switzerland
- 18 Mar HE Mr Raymond Loretan, Ambassador of Switzerland to Singapore
- 19 Mar Mr Karl-Heinz Kammerlohr, Pro Vice Minister, Ministry of Science, Research and the Arts Baden-Wuerttemberg, Germany
- 16 Mar Mr Fakhru Currimjee, President, University of Technology, Mauritius

During this period, the University also received visiting delegations from Chulalongkorn University and Rajabhat Institute Songkla, Thailand; the Ministry of Finance, Vietnam; Jilin University and Xiamen University, PRC; the Ministry of Education, Culture, Sports, Science & Technology and Iwate Prefectural University, Japan; and Hochschule Fur Technik Rapperswil (HSR), Switzerland.