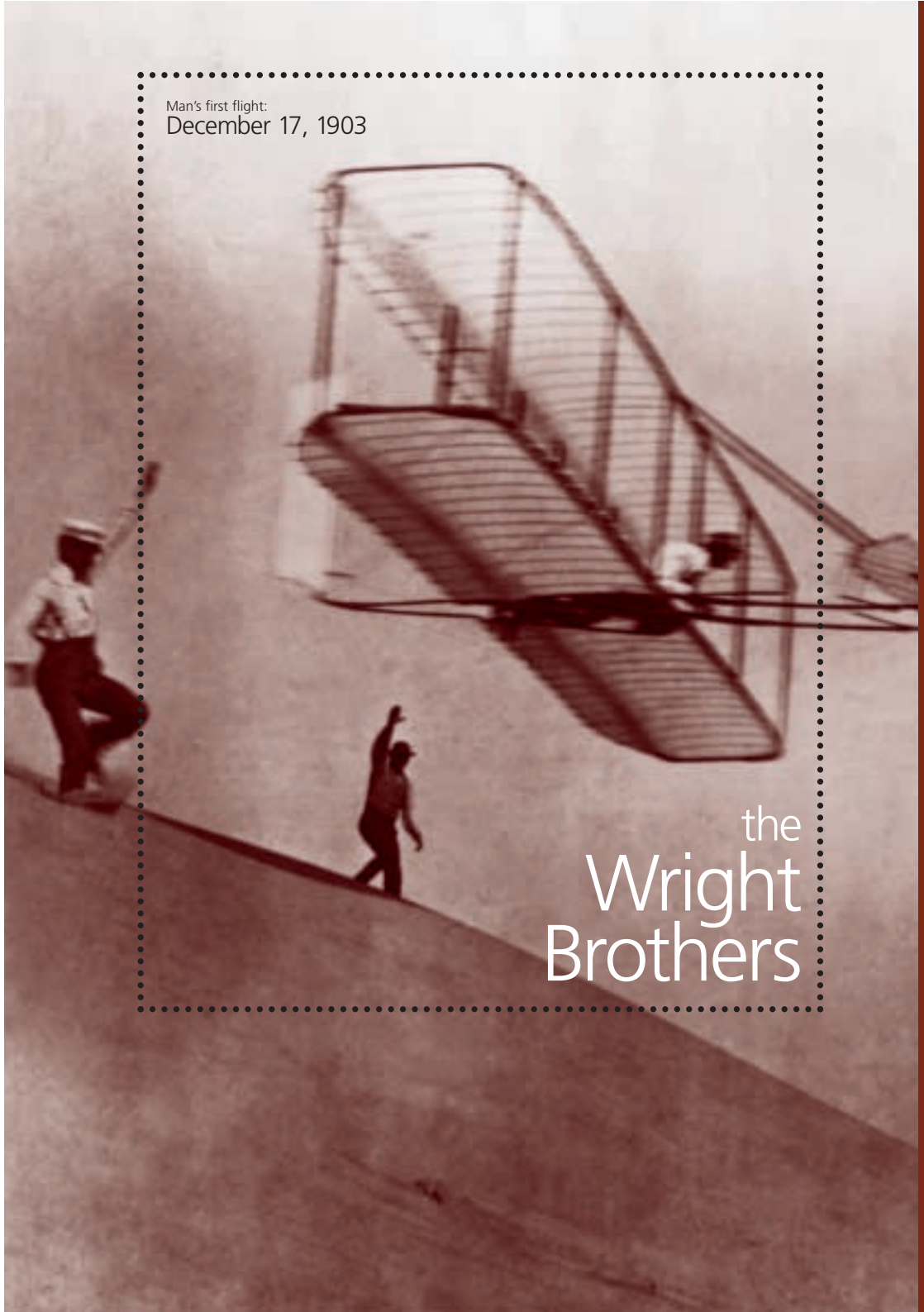
NUS ANNUAL REPORT 2001

NUS
National University
of Singapore

It is not the strongest
of the species that survive,
nor the most intelligent,
but the one most
responsive to change.

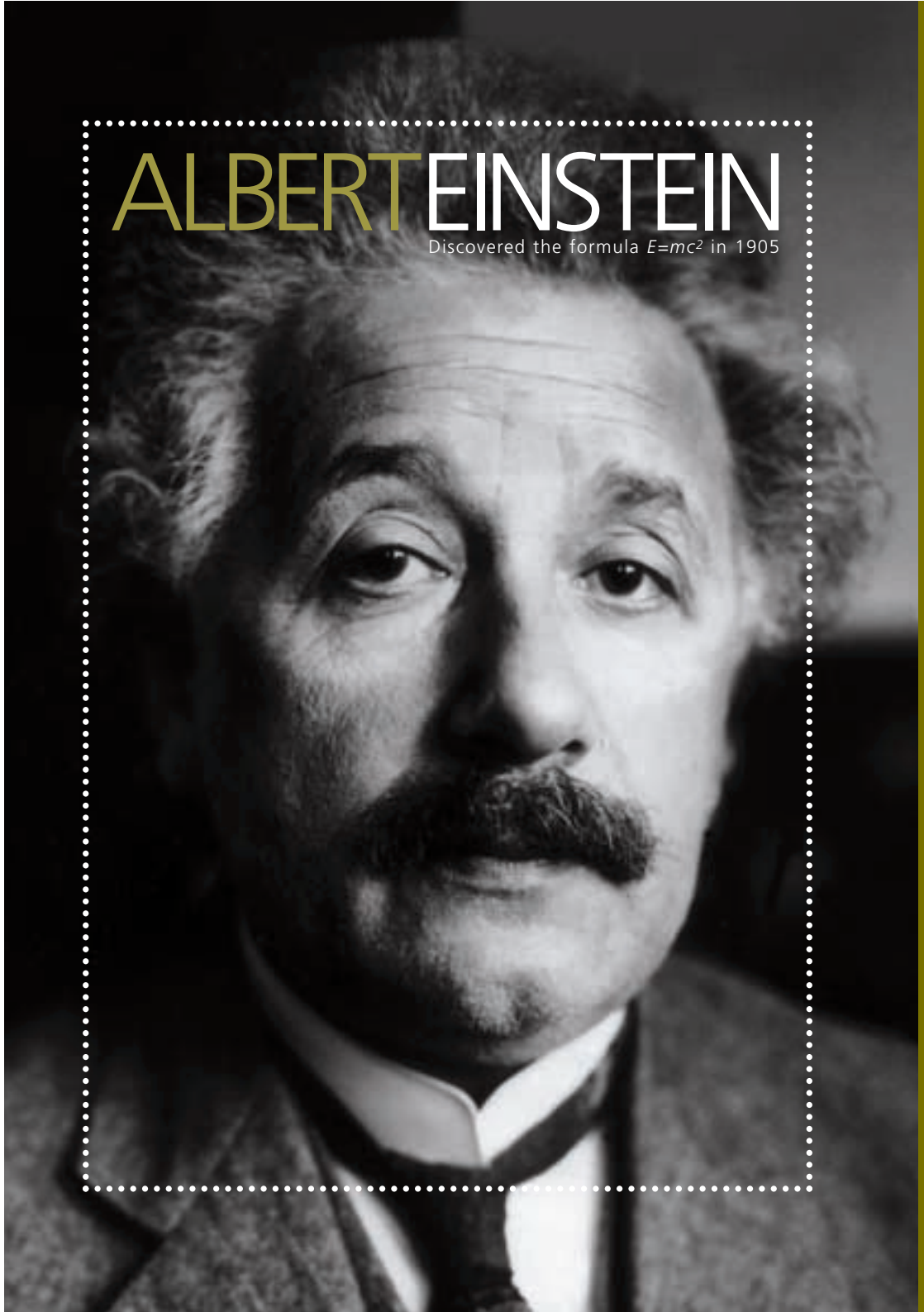
CHARLES DARWIN



INNOVATION & CREATIVITY

Orville and Wilbur Wright worked out of a bicycle repair shop to invent the airplane. Departing radically from the conventional theory of their day, the brothers experimented with movable portions of the wing assembly rather than shifts in bodily weight to correct the aircraft's position in flight. On December 17, 1903, the first controlled, sustained flight by man in a power-driven, heavier-than-air airplane was made. It changed forever mankind's spatial concept of the world.

Innovation and creativity, hallmarks of a global knowledge enterprise, will drive education, research and enterprise at NUS.



$E=mc^2$

PASSION

World-famous Nobel laureate, Einstein formulated the general theory of relativity and was a leading figure in the development of the quantum theory. A subscriber to a holistic approach to knowledge, Einstein believed all religions, arts and sciences are branches of the same tree. He was an ardent pacifist and a player of the violin besides being a physician and mathematician. He gave a simple explanation for his full and enlightened life. "I have no special talents. I am only passionately curious." That passion brought about man's better understanding of the universe.

NUS' excellence will be driven by the passion that emanates from its community. Translated into optimization of talent and opportunities this energy will render infinite NUS' fulfillment as a global knowledge enterprise.

1989

breaking down of the
BERLIN WALL

BOUNDARYLESS COMMUNITY

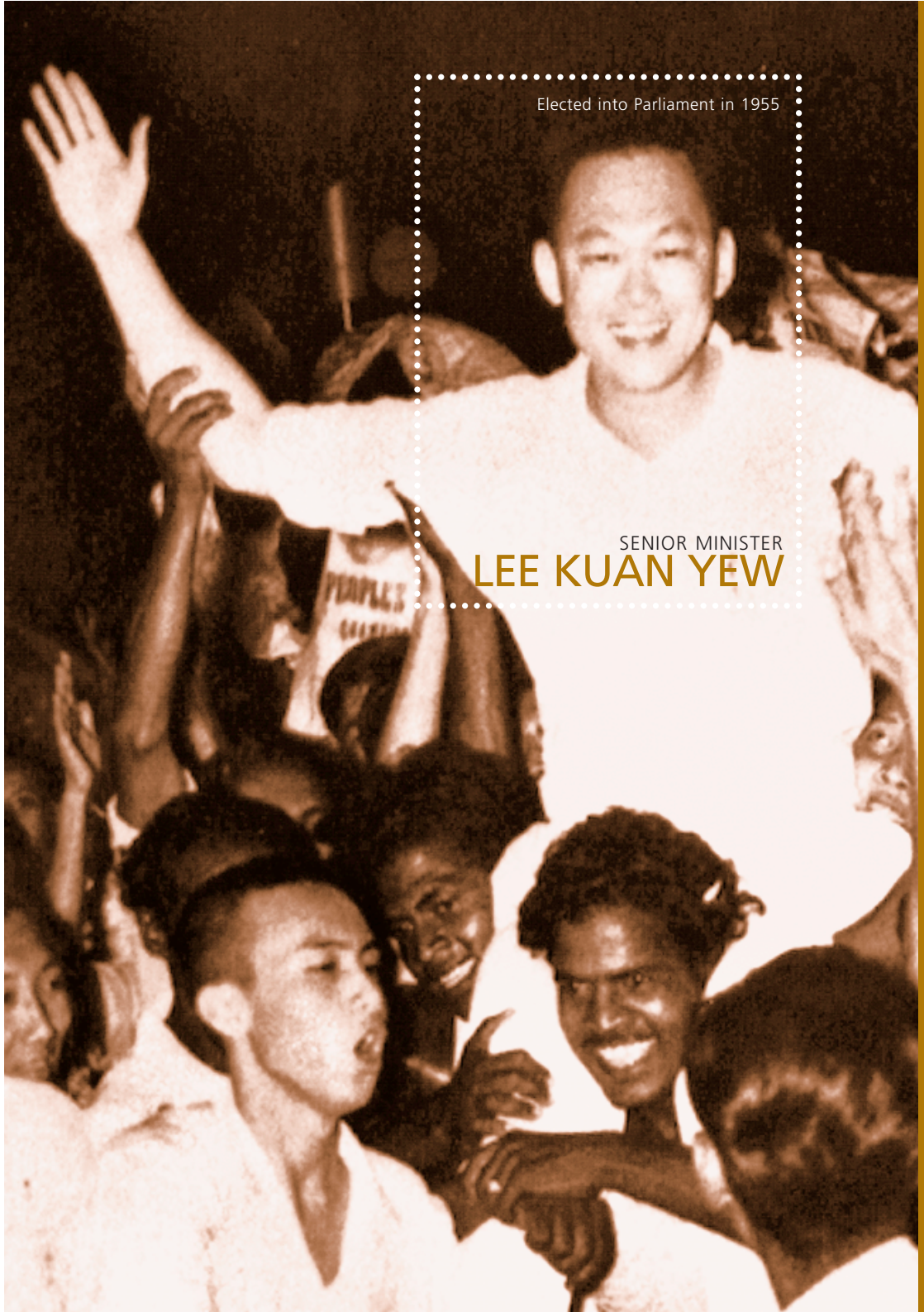
Erected in August 1961 by the East German government to halt defections and commuting to the West, the Berlin Wall represented to the free world closure, restriction and artificial divisiveness. In 1989, with the collapse of the communist regime in East German, Berliners from both sides of the wall broke it down in a gesture of unity and reconciliation. Its dismantling symbolized the end of the cold war and a new world order.

As a global knowledge enterprise, NUS will break down impediments to knowledge flow. Interconnectivity will be built between disciplines and across borders to enrich, enhance and strengthen its knowledge resources.

GLOBALIZATION

A local success story, Singapore Airlines proved home-grown can be world-class. Its trademark *Singapore Girl* is recognized all over the world as a benchmark of service excellence against which all other airlines are compared. A market leader, it operates one of the youngest and most modern fleets in the world and had pioneered several in-flight service enhancements that have become standards in the industry.

Globalization will the operating platform which will propel NUS to the forefront of the knowledge industry.



SENIOR MINISTER

LEE KUAN YEW

FROM THIRD WORLD TO FIRST WORLD

Prime Minister of Singapore from 1959 to 1990, Senior Minister Lee Kuan Yew was the architect and builder of modern Singapore. Under his leadership, Singapore was transformed from an island lacking natural resources to one of the world's major economic hubs. A visionary who is also a realist, the Senior Minister is a strong proponent of change. He constantly reminds Singaporeans that harnessing change positively is their warranty to continued prosperity.

Transforming NUS into a global knowledge enterprise will advance Singapore's position as a vital and dynamic economic hub in the first world.

The sequence of examples have been great turning points in history.
Whether an invention, a discovery or an event, they all share
a compelling quality – change

the Power of Change

NUS' answer to becoming a global knowledge enterprise

PRESIDENT'S REPORT

"NUS has entered an exciting and challenging phase in its growth. **Barriers will slip away**, facilitating a rich exchange of ideas and people across countries and faculties."

It is with great pride that I present this report on the new developments, innovations and achievements by the NUS community. NUS pressed ahead with academic innovations aimed to promote the quality of education and research, and better prepare our students to meet the new challenges ahead. NUS also formed new strategic alliances and strengthened existing ones with other institutions of learning, as well as with industry.

RAISING STANDING AND EXPANDING OUTREACH

NUS has made great strides in the international arena. *Asiaweek* has ranked the University third in academic standing among the leading multidisciplinary universities in Asia and Australia and an overall fifth place. Many of the faculties have also once again raised NUS' international standing. Our Law Faculty celebrated their fourth win at the 2001 Jessup International Law Moot Court, and is the only law school to have achieved several wins. Our MBA program continues to enjoy high ranking in surveys conducted by *Asia Inc*, *Asiaweek* and the *Financial Times of London*.

NUS ANNUAL REPORT 2001

PROFESSOR SHIH CHOON FONG
NUS President & Vice-Chancellor

PRESIDENT'S REPORT

Our faculties have also reaffirmed our mission to excel in research. Research output in the Science Citation and Social Science Citation Indices have increased substantially, coupled with an increase in the number of papers appearing in top quality journals. The high level of research output measured by the Science Citation Index places NUS within the top two universities in Australia, the top ten universities in UK, and the top sixty universities in USA. Overall, NUS today falls within the prestigious league of Extensive Doctoral/Research Universities by the Carnegie Classification of Institutions.

To reach out to the international community and further boost intellectual discourse on campus, NUS successfully hosted several high-profile international conferences of which I will highlight two. This year, NUS together with the Institute of Materials Research and Engineering hosted the *International Conference on Materials for Advanced Technologies (ICMAT 2001)*. A first for Singapore, ICMAT 2001 attracted four Nobel laureates and brought together more than 1400 members of the international scientific and materials research community. NUS also hosted the *Second International Conference on Fundamental Sciences* covering biological and chemical sciences. Biology and chemistry, the interface between them as well as the related sciences, constitute the disciplinary core of the life sciences. This conference attracted some 350 local and international scientists and eminent researchers.

I am delighted that through the conferences' public lectures sponsored by NUS, we have continued to play a vital role in inspiring Singapore's young and firing their imaginations to take a deeper interest in science and technology. NUS has reached out to a wider community to promote Singapore's intellectual and scientific endeavors.

INNOVATING EDUCATION

NUS is moving towards a more holistic university education that will prepare students to meet the challenges of a knowledge-driven global economy. The University admits students from a broad spectrum of varying abilities and different talents. Thus, our educational programs should have sufficient flexibility and choices to allow some degree of customization. This will give students more opportunities to stretch themselves, test their own limits and realize their full potential.

NUS continued pioneering innovative pedagogical methods and multidisciplinary approaches. The University Scholars Programme, a new approach pioneered by NUS, aims to nurture a pool of brilliant students by developing their potential for leadership and intellectual excellence. A merger of the Talent Development and Core Curriculum Programmes, the Scholars Programme brings together the best and brightest students from different faculties into a learning environment that catalyzes their intellectual passion and stretches them to their utmost.

Recognizing the need to equip students with vital skills in an ever-changing global economy, NUS developed General Education modules (GEMs). GEMs expose our students to bodies of knowledge and modes of inquiry in disciplines other than those offered in their own faculty. These modules will empower our students with the breadth of knowledge as well as critical and creative thinking skills for independent life-long learning and inquiry.

The Life Sciences curriculum has undergone a comprehensive review. Reinforcing the vision of a boundaryless community, a cross-disciplinary approach is adopted for education and research in Life Sciences at both the undergraduate and graduate levels. Many degree programs, including Engineering and Computing, offer a basic module or two in Life Sciences. These modules provide an understanding of an area where the rapidly expanding body of knowledge in pharmaceutical, biomedical applications and healthcare will have a crucial impact upon the lives of the present and future generations. The Information and Communications Management Programme is one of our new multidisciplinary initiatives jointly conducted by the Faculty of Arts and Social Sciences and the School of Computing. The Design Technology Institute, a collaborative effort between the Faculty of Engineering and Eindhoven University of Technology, will train engineers who can creatively combine technology and aesthetics and develop products with high value-add.

University education is moving from primarily classroom interactions to a holistic campus learning and living experience that promotes students' personal, social and intellectual development. This experience aims to develop mental agility, social interaction skills and cross-cultural competencies. The University Cultural Centre is a tangible expression for our new holistic education. Today, it has become one of the University's focal points for vibrant campus living and learning.

To reinforce the paradigm shift to promoting holistic education, NUS' graduation ceremony has been renamed Commencement. The term Commencement sends a clear signal that graduation is no longer the end of formal learning in one's lifetime. Graduates enter a new phase in their lives and begin a new relationship with their alma mater. This relationship of continuous personal and intellectual development encompasses learning, unlearning and relearning.

SPAWNING NEW KNOWLEDGE AND STRATEGIC INTERDISCIPLINARY RESEARCH

Facilitating the growth of new knowledge areas and fostering a research culture is the primary responsibility of the Office of Research (ORE). ORE has been tasked to work closely with the various research groups to promote the University's drive towards research excellence. It has stepped up efforts to establish a vibrant research culture for the University, focus on key research of strategic importance to the nation and develop multidisciplinary initiatives. ORE encourages and rewards research of high impact. It will also sustain and develop synergistic collaboration in key areas such as nanotechnology, wavelets and information technology and Asian research in the humanities. ORE has established Policy Units to develop policy and procedures and to provide advice and guidance in research-related areas that include research policy, planning, strategy and review, benchmarking and funding.

PRESIDENT'S REPORT

The university-level Institute for Asian Research will promote NUS as a center of excellence in Asian research. A cross-disciplinary initiative involving the Faculties of Arts and Social Sciences, Business Administration and Law, the Institute will focus on cultural and social changes in Asia as the region emerges as a global powerhouse.

The Singapore-MIT Alliance, an innovative global engineering education and research initiative between Singapore and the Massachusetts Institute of Technology, has grown from strength to strength. Two new programs have been added and NUS hosts four of the five programs. The students enrolled in the SMA are top students from all across Asia and the extraordinary talent they bring with them enriches the intellectual climate within NUS. SMA has set a new paradigm in its extensive use of state-of-the-art distance learning via an Internet2 connection that brings graduate students from MIT and Singapore together in one virtual classroom.

SERVING COMMUNITY AND COUNTRY

Talents, ideas and capital are the primary forces shaping the knowledge-driven global economy. To be competitive in such an economy, Singapore will have to attract the best talents both from the region and beyond.

NUS is poised to play a key role in developing a knowledge hub that will support our country's high value-add industries and services. With our community of talented individuals and through synergistic partnerships with other universities and industry, we aim to build up new knowledge areas and promote commercial application of knowledge to create wealth for country.

Our initiatives in Life Sciences research is one example of our commitment to serve our larger community and country. The Office of Life Sciences was created to co-ordinate NUS' efforts in research and education in this dynamic and exciting field. With the explosion of knowledge and quantum leaps in technology, NUS will harness and maximize rich diverse talent and resources from different departments, faculties and national research institutes through programmatic, multidisciplinary teams. Focus will be given to key diseases that include cancer, neurobiology, ageing, liver disease and infectious diseases. The Office of Life Sciences is also working with the Faculties of Law, Arts and Social Sciences, and Business Administration to evaluate the ethical, legal and social implications and provide viable solutions to resolve these issues.

NUS is proud to be able to contribute to Singapore's security and defense. The NUS' Temasek Laboratories is in collaboration with Defence Science and Technology Agency to develop defense technology R & D capability. Temasek Labs will conduct research in critical areas of science and technology, such as aerodynamics, electromagnetics, electromagnetic materials and information security. In addition, it will train research scientists and engineers to undertake advanced defense R & D.

CREATING A GLOBAL BRAND NAME

Today, university education and research are among the primary forces that create the conditions of globalization. Through scientific discoveries and technological advances as well as the training of cross-cultural talents, universities have become key players in the era of globalization, profoundly affecting industries, services and intellectual capital.

A new corporate identity has been launched to promote and differentiate NUS as a leading global brand name. To project the scintillating and vibrant spirit of NUS, the colors of the corporate identity are lively blue, symbolizing dignity, wisdom and continuity and golden orange, symbolizing youth, passion and imagination. This identity also embodies three hallmarks of NUS' vision to become a global knowledge enterprise – creativity, innovation and enterprise.

LOOKING AHEAD TO 2005

NUS will be celebrating its centennial in 2005. To foster synergy between academic excellence and entrepreneurial culture, NUS has set a target by 2005 to establish five overseas colleges in major entrepreneurial hubs of the world. Outstanding students who possess the extra spark and passion for entrepreneurship will be given the opportunity to spend a year of internship in start-up companies as well as attend classes in leading universities in the major entrepreneurial hubs. Each college will have a distinct emphasis and will leverage on the expertise of leading universities and industries there. Through immersion in these pulsating entrepreneurial cultures, we aim to mold our budding talents into enterprising, resourceful, independent self-starters and subsequently successful entrepreneurs.

The first of these is the NUS College in Silicon Valley, which focuses on technopreneurship. Our students will spend a year of internship with start-up companies in Silicon Valley and attend classes conducted at Stanford School of Engineering.

NUS has also targeted to increase the number of students participating in our overseas exchange programs by threefold, to 20 percent of the cohort by 2005. Through overseas exchange, students will develop a better appreciation of different cultures and modes of teaching and learning. These insights and their international network of friends will enrich their education, broaden their horizons and enhance their ability to explore opportunities in the global economy.

I would like to acknowledge the hard work and dedication of NUS' students, staff, faculty and alumni, who have all contributed to the University's successes. The University would also like to acknowledge the Government of Singapore for their foresight in viewing education as a long-term investment and thank them for their strong and steadfast support.

NUS
National University
of Singapore

A New Identity

The global knowledge enterprise calls for a new work culture, new attitudes and new strengths. This new identity expressed as a contemporary stylization of the NUS coat of arms denotes the University's present course, a logical progression in its evolution. Energized by vibrant colors, the logo sends out a powerful message:

NUS THRIVES IN MOVING ON

HIGHLIGHTS OF THE YEAR

01

02

03

JULY 2000

The academic year began significantly with a new format of welcome for the freshmen. The new Freshmen Inauguration Ceremony, involving the full participation of faculty, staff and student leaders, formally initiated the new cohort as full-fledged members of the NUS community. Combining dignity with warmth, the highly charged ceremony marked a new tone in student-staff relationship as joint stakeholders of the university.

The Singapore-MIT Alliance (SMA) Professional Master's programs came of age with the graduation of its pioneering cohort. The 36 students who received their Master of Science degrees acquitted themselves admirably with results comparable to those achieved by their peers at MIT. Half of them received their degrees in Advanced Materials (AM) and the other half in High Performance Computation for Engineered Systems (HPCES). The two programs are hosted by NUS.

AUGUST 2000

The first Term Chair Professorship at NUS was launched. Funded by Johnson & Johnson, the Chair was established in recognition of the Business School's high teaching standards in the area of Supply Chain Management. To be filled by an Associate Professor from the School, the Chair's first appointee is Assoc Prof Teo Chung Piaw (Department of Decision Sciences). In Term Chairs, funds are directly disbursed to fund the professorship.

SEPTEMBER 2000

The $65 million University Cultural Centre (UCC) was officially opened by the Deputy Prime Minister and Minister for Defence, Dr Tony Tan. The purpose-built performing arts venue consisting of a concert hall, a theater, an art gallery, a dance studio and a museum annex ushered in a new era of cultural renaissance on campus.

NUS held its first graduation ceremonies on home ground at the newly opened University Cultural Centre. Taking on a name change to Commencement, the ceremonies signify the graduates' new ties as alumni rather than the end of their relationship with their alma mater. The eight-day ceremony saw a record number of graduates receive their degrees with 5,987 first degree recipients and 2,187 higher degree recipients.

OCTOBER 2000

The multidisciplinary team of Associate Professors Ho Bow (Department of Microbiology) and Ding Jeak Ling (Department of Biological Sciences) received the bronze medal at the Asian Innovation Awards organized by the *Far Eastern Economic Review*. The award was in recognition of their breakthrough in successfully cloning the enzyme that clots the blood of the horseshoe crab in a controlled environment. The technology has been licensed commercially for the development of sterility tests and antibiotics.

NUS ANNUAL REPORT 2001

HIGHLIGHTS OF THE YEAR

04

05

06

NUS signed a Memorandum of Understanding on research collaboration and student exchange with the University of Kaiserslautern which has one of the biggest centers for industrial mathematics in Europe, the *Fraunhofer Institut fur Techno und Wirschafts Mathematik*. The tie-up is an ongoing international program embarked by the University to engage with the best knowledge centers in the world.

NOVEMBER 2000

The Faculty of Business Administration was officially admitted to the Program in International Management (PIM), a consortium of the world's top business schools, as member university. It also accepted an invitation to join the prestigious Community of European Management Schools (CEMS) as an Associate Member.

A Memorandum of Understanding was signed between the National University of Singapore and the Building and Construction Authority (BCA) to establish a tropical center for building research. Called the Centre for Total Building Performance, the facility's niche research areas will include developing a maintainability index for buildings and setting up a framework for building performance assessment.

DECEMBER 2000

Portability of IT resources at NUS took off to a new high with the mobile-enabling of its IT applications. With the introduction of Wireless Application Protocol (WAP) technology on campus, community members with mobile devices can now access the University's online services anytime, anywhere using the new *m-NUS* service. Those holding mobile phones with Short Messaging System (SMS) can avail themselves to an alert service while owners of WAP-enabled or Internet-enabled mobile devices can use them to access interactive services such as browsing for a book in the library's database.

In line with NUS' focus on learning through real-world problem solving, a group of 20 architecture and industrial design students built a canteen cum multi-purpose hall for the Lahu Village School in Northern Thailand. The project codenamed *Operation Najort* was the students' maiden effort in putting design into practice on a large scale.

CAPTIONS

01 Freshmen starting their NUS experience by taking the pledge.

02 Dr Tony Tan, Deputy Prime Minister and Minister for Defence, said that the good performance of the pioneer cohort augurs well for the development of the SMA program.

03 It was a red carpet day at NUS' first Commencement on campus. Gracing the occasion at the newly opened UCC was Singapore's President SR Nathan who is also the University's Chancellor. Rear-Admiral (NS) Teo Chee Hean, Minister for Education and Second Minister for Defence, is at the left of the Chancellor.

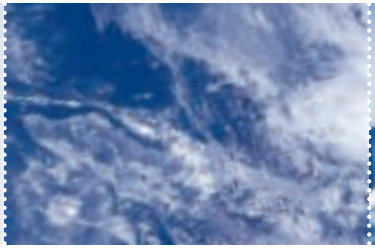
04 Multidisciplinarism at its best – the award-winning team of Assoc Profs Ho Bow and Ding Jeak Ling.

05 NUS Business School went places with membership in several international consortia of prestigious business schools.

06 Real-world application came to NUS students working on a community project in Thailand.

HIGHLIGHTS OF THE YEAR

07



08

09

10

11

12

JANUARY 2001

NUS launched the Lee Kuan Yew Fellows Programme strengthening its ties with the John F Kennedy School of Government, Harvard University. The Programme awards scholarships to senior public officials in Southeast Asia and East Asia to pursue a Master in Public Management degree jointly conducted by NUS and Harvard University.

A ground-breaking ceremony was held for the new $40 million building that will be home to the Defence Medical Research Institute. Sited at the NUS Faculty of Medicine, the Institute's close proximity will foster closer collaboration between its researchers and those of the University's. The Institute's research portfolio includes biomedical science, ergonomics, military physiology, combat performance as well as the life sciences.

FEBRUARY 2001

Professor Henry Rosovsky, Professor Emeritus, Harvard University delivered a public lecture on universities as the foundation of the knowledge-based economy. Aptly titled *What has happened to the Ivory Tower? University and Society in the 21st Century*, Prof Rosovsky's lecture examined the core values universities have to maintain as they become increasingly permeable to both external forces and internal diffusion. Prof Rosovsky was the driving force behind the Core Curriculum at Harvard University.

MARCH 2001

A Memorandum of Understanding was signed between NUS Business School and Bloomberg LP. The tie-up gives students and faculty round-the-clock real-time access to the news agency's financial information resources. The Bloomberg service will add value to the School's curriculum by giving students a better appreciation of the real financial world.

The first successful reception of MODIS (Moderate Resolution Imaging Spectroradiometer) by the NUS Centre for Remote Imaging, Sensing and Processing (CRISP) made Singapore the first Asian country outside Japan to have *TerraMODIS* data reception capability. MODIS is the key instrument onboard Terra, the flagship satellite of NASA's Earth Science Enterprise. Data that it transmits is vital to the study of regional global dynamics and processes occurring on land and in the oceans. CRISP developed the capability in-house.

APRIL 2001

An agreement was signed between NUS and Sumitomo Chemical Company Limited to undertake joint research into corrosion caused by seawater. The focus of the $1.5 million collaboration is to study the effects of seawater on materials used in cooling systems as well as the effects of water-treatment chemicals on seawater. NUS will front a multidisciplinary team of academic and research staff from the Chemical and Process Engineering Centre and the Departments of Chemistry, Chemical Engineering, Civil Engineering and Materials Science to work with researchers from Sumitomo's Process and Production Technology Centre.

NUS ANNUAL REPORT 2001

HIGHLIGHTS OF THE YEAR

The first batch of Singapore Armed Forces officers to complete a six-month intensive course in military technology received their Graduate Diploma in Defence Technology and Systems. Conducted by the Faculty of Engineering, the course is specially designed for mid-career officers.

MAY 2001

A teacher-student team from the School of Computing bagged the top prize at the *Start-Up @ Singapore* techno-venture business plan competition. The winning entry is an advanced programming technology that cuts down the amount of computing time needed to generate sports schedules from 24 hours to one minute. Assistant Professor Martin Henz and Mr Sevugan Alagappan worked with Mr Tobias Muller, a German research scientist, to come up with the breakthrough.

JUNE 2001

NUS signed a milestone agreement with Nanyang Technological University (NTU) and Singapore Management University (SMU) to establish the Singapore Universities Student Exchange Programme (SUSEP). Students participating in the cross-campus exchange program can pursue modules at a host university and transfer the credits earned to meet their degree requirements in their enrolled university. Mooted by Professor Shih Choon Fong, NUS President and Vice-Chancellor, the Programme will enrich undergraduate education in Singapore with a broader and more varied exposure to the unique strengths of participating universities.

JULY 2001

Professor Shih Choon Fong delivered his first State of the University Address to an audience of students, alumni and staff. Drawing a compelling vision of the University as a global knowledge enterprise, Prof Shih called for a new paradigm in which academic excellence is to be complemented by creative enterprise. He also took the opportunity to announce the formation of NUS Enterprise, a platform to push the boundaries of best entrepreneur practices and to launch major innovations.

CAPTIONS

07 Prof Henry Rosovsky called for universities of tomorrow to move towards more holistic education.

08 CRISP's *TerraMODIS* data reception capability was developed in-house.

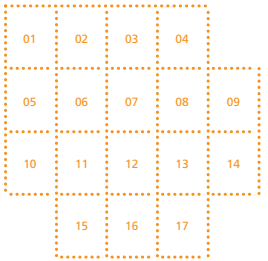
09 The NUS – Sumitomo Chemical collaboration was one of many that the University embarked on with industry partners in the year.

10 The graduation of the pioneer batch of SAF officers taking the Defence Technology and Systems Course was the result of an MOU signed between NUS and the Ministry of Defence in 1999.

11 Student and faculty collaboration was a winning formula at the *Start-Up@Singapore* competition.

12 Professor Shih Choon Fong mapped out the University's direction in his State of the University Address.

NATIONAL UNIVERSITY OF SINGAPORE COUNCIL



1 DR CHEONG CHOONG KONG
Chairman
National University of Singapore Council
Deputy Chairman & CEO
Singapore Airlines Ltd

2 DR KOG YUE CHOONG
Deputy Chairman
National University of Singapore Council
President
East West Engineering Consultants

3 PROFESSOR SHIH CHOON FONG
President & Vice-Chancellor
National University of Singapore

4 PROFESSOR CHONG CHI TAT
Deputy President & Provost
National University of Singapore

5 MRS SUSAN CHAN YOKE KATE
Principal
Tampines Junior College

6 MR CHAY WAI CHUEN
Chief Executive Officer
Grocery Logistics of Singapore Pte Ltd

7 PROFESSOR GEORGE P LANDOW
Dean, University Scholars Programme
National University of Singapore

8 MR LIEW HENG SAN
Permanent Secretary
Ministry of Law

9 MR LIM JIT POH
Chairman
Comfort Group Ltd

10 MR JAMES LOH SINN YUK
Vice Chairman (Asia Pacific)
Barclays Capital

11 MR ROBERT MARTIJNSE
Chairman & CEO
Philips Electronics Singapore Pte Ltd

12 MR CHANDRA MOHAN K NAIR
Partner
Tan Rajah & Cheah

13 DR ANTHONY REBUCK
Vice President and Director (Clinical Research & Development Asia Pacific Region)
GlaxoSmithKline

14 COL JIMMY TAN CHENG YAW
Director, National Security Secretariat
Ministry of Defence

15 PROFESSOR WANG GUNGWU
Director, East Asian Institute
National University of Singapore

16 MR WEE HENG TIN
Director-General of Education
Ministry of Education

17 MR WONG AH LONG
Chief Executive Officer
Suntec City Development Pte Ltd

EDUCATION Academic excellence is the heart of NUS' global knowledge enterprise where the imparting, creation and application of knowledge interlock into an ongoing cycle. The University's broad-based education provides conduits of inter-connectivity bridging disciplines for a more integrated and holistic approach to the acquiring and application of knowledge.

EDUCATION

CURRICULUM DEVELOPMENT

The year saw the culmination of an intensive curriculum review undertaken by NUS at the close of the 20th century. Conducted as part of the University's initiative to be relevant and vital in the 21st century, the review looked into giving our graduates the competitive edge by preparing them to excel in the globally competitive world shaped by the IT and Life Sciences revolutions.

Many features of the newly revised curriculum are now in place at the faculties. They will form the bedrock of NUS' aspiration to become a global knowledge enterprise. The new curriculum recognizes that the mere imparting of knowledge is no longer sufficient to fuel the creativity, innovation and passion needed to drive such an enterprise that will contribute significantly to Singapore's development as a knowledge-based economy.

NUS quality education has accordingly been redefined with emphasis on the optimization of students' talents and fulfillment of their potential to the fullest. Plans were set in motion in the year to introduce the University Scholars Programme, an honors program that provides personal, intellectual and leadership development to the best and brightest of talents. A music conservatory is also in the works to make available for the first time in Singapore degree programs in the performing arts.

At the heart of the newly structured curriculum is its broad-based and robust character that exposes students to different approaches to knowledge and heightens their skills in core competencies like articulacy and critical thinking. Cross-faculty modules were restructured to be replaced by a formal General Education Requirement in the next academic year.

The newly revised curriculum is also marked by its flexibility and dynamism. In keeping with the new focuses, it provides for customization by students to learn according to their interests and inclinations.

The teaching mode was increasingly strategized to develop self-directed learners attuned to life-long learning. The Department of Real Estate was one of many departments which took this into account by giving greater emphasis to problem-based learning and the leveraging of IT to complement small group teaching in its curriculum revision.

The NUS Business School opened the year with a new undergraduate curriculum with 30 per cent of its contents being made up of courses outside the discipline. Also featured strongly are leadership development and a global perspective with an Asian focus.

Over at the Faculty of Engineering, humanities and basic sciences components were added to the undergraduate curriculum for a more well-rounded education. Teaching was also brought more in line with the Faculty's research focus on knowledge at the cutting-edge. Plans were underway at the Faculty of Arts and Social Sciences to restructure the undergraduate curriculum into three divisions – Asian Studies, Humanities and Social Sciences – to offer students exposure to all three areas.

In line with the greater streamlining of curricula and more course content that are in synch with the real world, several departments underwent name changes to reflect better their focuses and activities. The Department of Electrical Engineering was renamed the Department of Electrical and Computer Engineering while the Department of Mechanical & Production Engineering became the Department of Mechanical Engineering. The Department of Organisational Behavior took on the mantle of the Department of Management and Organisation.

Multidisciplinary programs, an important pillar of NUS broad-based education, continued to expand its portfolio with a versatile offering of courses that combines the intellectual strengths of different disciplines. The Faculty of Arts and Social Sciences set up an Office of Programmes dedicated to the provision of cross-disciplinary courses in newly emerging areas of study. In the broad-based Bachelor of Computing (Computer Engineering) program, students combine science and electrical engineering courses with cross-disciplinary electives in business, humanities or science.

NUS introduced in the year its most comprehensive initiative in holistic teaching to date. The Master of Science (Environment Management) program taught with input from 7 faculties – Design and Environment, Arts and Social Sciences, Business Administration, Engineering, Law, Medicine and Science – is the University's first integrated multi-faculty graduate program.

In keeping with the University's forward and outward-looking outlook, many of the new teaching programs introduced in the year were direct responses to the demands of the new economy workplace. Typical of this genre is the Graduate Certificate in Intellectual Property Law launched by the Faculty of Law to train patent agents or advisors on patent matters.

New courses introduced by the Faculty of Science to address the needs of industry included a Photonics Specialist Manpower Programme and a new module, Physics of the Nanostructure.

Under the Postgraduate Manpower Programme initiated by the Economic Development Board, the Faculty of Engineering introduced three Master of Science programs that are highly pertinent to the needs of Singapore's industry. They are in Wireless Communications, Integrated Circuit Design and Wafer Fabrication/ Liquid Crystal Display.

In a knowledge-based economy where talent is at a premium, more provisions have been built into the curriculum to hothouse bright students. At the undergraduate level, special challenging honors modules are being planned. Fast-track programs introduced in the year included an accelerated Master's degree that enables high-performing students at the NUS Business School to graduate with a master's and honors degree at the same time. In the MBBS-PhD program at the Faculty of Medicine, graduate students work for their medical degree and doctorate at the same time while being trained to be clinicians who are also scientists.

EDUCATION IN THE GLOBAL KNOWLEDGE ENTERPRISE

As a global knowledge enterprise, NUS is breaking down geographical and disciplinary borders to facilitate free exchange of ideas and talents. This gave impetus to the growth of the global classroom where cross-boundary teaching is facilitated by distance learning technology and jointly taught programs.

In the first mode, graduate students from the Faculty of Dentistry and University of Iowa attended a lecture in real-time conducted by Assoc Prof Marcos Vargas of the University of Iowa. Over at the Faculty of Arts and Social Sciences, video-conferencing linked students at the Department of Japanese Studies to their peers at Waseda University in a cross-cultural learning project.

New joint teaching programs continued to connect our students with the best teaching resources in international academe. A common element of these programs is the overseas study or research stint that our students have to undertake at the campuses of our teaching partners. The year's welcome additions in this category included the following:

- Master in Public Management with the John F Kennedy School of Government, Harvard University;
- Joint Master of Science (Chemical Engineering) with University of Illinois at Urbana Champaign;
- Dual Master's Degrees in Logistics with Georgia Institute of Technology;
- Double Master's Degree in Computing with Moscow State University, Russia; and
- Joint PhD Degree with Eindhoven University of Technology

New teaching partners signed up during the year were:

- Beijing University, to jointly award a Dual International Master of Business Administration;
- Massachusetts Institute of Technology, in an expansion of teaching programs under the Singapore-MIT Alliance. The new additions to be jointly taught are Master's and PhD programs in Molecular Engineering of Biological & Chemical Systems and Computer Science;
- King's College (University of London), to jointly conduct a Master of Science (Construction Law and Arbitration);
- *Ecole Superieure d'Electricite*, to jointly conduct a double degree program in Electrical Engineering; and
- *Ecole Nationale des Ponts et Chaussees*, to jointly conduct a double degree program.

In a borderless knowledge community where disciplinary boundaries are porous, the result is more integrated teaching. In line with the *Construction 21* initiative, architecture and civil engineering students now attend common courses together, facilitating exchange of perspectives and holistic approaches to problem-solving.

EDUCATION IN LIFE SCIENCES

A new life sciences curriculum was developed out of the university-wide curriculum review. To be introduced in the next academic year, the new life sciences curriculum will have a broad-based core curriculum with strong fundamentals in the life sciences for first- and second-year students. Subjects will range from concepts of biodiversity through biochemistry, microbiology, molecular and cell biology to genetics and informatics. An emphasis on chemistry will be a feature. Students will specialize only in the third and fourth years focusing on either molecular and cell biology, biomedical sciences or biology or a combination of any two of the above.

With life sciences at NUS drawing on the University's strength as a comprehensive university, many courses in this field will be team-taught by faculty from different departments and disciplines.

Educational initiatives made in the year in this fast-growing area of new knowledge included the introduction of a Minor in Bioengineering focusing on the application of fundamental engineering principles to solve problems in biology and medicine. The Faculty of Science has completed a draft to introduce a biostatistics program. To be based on the leading biostatistics departments in North American universities, the Faculty has started establishing ties with these departments at the University of North Carolina (Chapel Hill) and University of Washington (Seattle).

INTERNATIONAL ACCREDITATION

The quality of NUS' teaching programs continued to be internationally acknowledged with the endorsement of full accreditation. NUS engineering courses in the Bachelor of Technology Programme received, in the year, full accreditation status from the Institution of Electrical Engineers UK and the Institution of Mechanical Engineers UK. The Faculty of Dentistry will add Endodontics and Prosthodontics to the conjoint examinations it is already conducting with the Royal College of Surgery (RCS) Edinburgh for the Master of Dental Surgery degree and membership in RCS Edinburgh.

NUS ANNUAL REPORT 2001

RESEARCH The creation of new knowledge is vital in the global knowledge enterprise. NUS recognizes the creative process has become even more critical in the new knowledge-based economy where innovation is a driver of growth.

RESEARCH

The University gave impetus in the year to the building of resources to strengthen its research focus. As in education, talent nurturing and recruiting were expressed in learning from and engaging the best.

Several eminent scientists were appointed under the Temasek Professorship Programme to head NUS research projects that are strategic to Singapore's development in the new economy. Professor Daniel Wang (Massachusetts Institute of Technology) was appointed to head a project on Protemics in Bioprocessing, Professor CS Bhatia (IBM) a project on Information Storage Materials, Professor Dim-Lee Kwong, (University of Texas, Austin) a project in silicon wafer technology and Professor Wolfang Knoll (*Max-Planck-Institut fur Polymerforschung*) a project in advanced polymeric materials.

Research output in basic and translational research was high both in quantity and quality. This was recognized by the University's collaborators and peers who were unstinting with their accolades. The Centre for Construction Materials and Technology was honored by the American Concrete Institute with an award for its outstanding contributions in research on developments pertaining to concrete materials and design. The Department of Finance and Accounting was placed second in a survey on the finance research productivity of 97 universities in the region by the *Pacific Basin Finance Journal* (June 2001 issue). The ranking was calibrated on publications appearing in 17 finance journals over a 10-year period (1990-1999).

As one of the nation's major powerhouses of innovation and technology, the University continued to receive sustained funding for its research. Main sources of funding received were grants from the government under the NUS operating budget, the National Science and Technology Board, foundations and private sources. Total research funds received in the year was $156 million.

RESEARCH ACTIVITIES

R & D activities were concentrated in 1811 ongoing research projects with a quarter of them coming on stream in the same period.

Multidisciplinary focus drawing on NUS' strength as a comprehensive university continued to be the main thrust of NUS research at the cutting-edge. The synergies arising from the cross-fertilization of ideas and the sharing of equipment proved once again to be an effective channel for NUS to gather the critical mass of talents and resources needed to support its research effort.

The year's strong research pulse reverberated to the University's close links with its affiliated national research institutes. Bonds between the two sectors intensified, bringing added vibrancy to the University's research scene. The Department of Mathematics signed an MOU with the Institute of High Performance Computing to establish a Centre for Industrial Mathematics. The proposed Centre will conduct research in industrial-related problems that can be modeled mathematically.

The research community continued to push the boundaries of their creativity with new research focuses and new levels of excellence broached in existing programs. The following are some of the new activities that surfaced in the year:

- A growing trend in the School of Computing towards more impactful research, such as focuses on embedded systems, media and bioinformatics;
- A publication partnership forged by the Department of History with the Cambridge University Press for its flagship *Journal of Southeast Asian Studies*;
- A newly-formulated strategic focus on micro-systems technology (MST) by the Department of Mechanical Engineering; and
- Heightened research activity in many areas of mathematical sciences. In the works were a new program on the mathematical aspects of string theory and the building up of a core research group in the relatively new field of computational biology and bioinformatics.

RESEARCH IN LIFE SCIENCES

NUS formalized its aspiration to become a major player in life sciences research by setting up the Office of Life Sciences in the year. One if its first initiatives was to launch the Young Scientist Award Programme. Introduced to identify, groom and nurture bright research talents in the life sciences, the award will fund promising scientists at the Assistant Professor level to carry out interdisciplinary research of high impact for three years.

A key example of the University's successful positioning in multidisciplinary research, life sciences research at NUS is completely permeable and without boundaries. The NUS Bioengineering Programme, for example, is hosted by the Faculties of Engineering, Medicine, Science, Dentistry and the School of Computing.

Headway made by the University's researchers in the life sciences was capitalized on to better fulfill their promise. Life sciences research breakthroughs spun off two of the five companies formed under NUS Technology Holdings Pte Ltd in the review year. ES Cell International was developed out of NUS' success in the field of embryonic stem cells research with its collaborators. Lynk Biotechnologies Pte Ltd was set up to commercialize a NUS-developed protein knock-out technology which will improve existing pharmaceutical products and technologies.

NEW RESEARCH CENTERS

The year saw a proliferation in the number of new research facilities set up to bring focus to research excellence in niche areas. Developed in tandem with talent-building, the pair made up twin wings that will propel NUS research to new heights. The facilities which started operations in the review period included:

- A new marine research facility on St John's Island that caters to wet and dry experimental research, making the Tropical Marine Science Institute the first fully integrated marine science institute in the tropics;
- The Research Centre for Nuclear Microscopy housing the world's most advanced high-energy proton microprobe facility;
- A nano technology facility dedicated to producing new generation silicon-generated circuit microchips with large memory capacity; and
- A Compact Range to measure antenna radiation patterns and target radar cross sections.

EXTERNAL LINKS

As a global knowledge enterprise, NUS' engagement with industry partners and the public and private sectors picked up momentum in the year. A total of 99 new Research Collaboration Agreements (RCAs) and Memoranda of Understanding (MOUs) was signed. NUS faculty undertook 1,345 consultancies worth a total of more than $8 million.

NUS' commitment to supporting Singapore's development as a knowledge-based economy was translated into strong R & D ties with public sector organizations. Team-ups with this sector increased by 2 per cent in the year. Joint research was conducted with the Economic Development Board, Land Transport Authority, Housing and Development Board, Maritime and Port Authority of Singapore and DSO National Laboratories amongst others.

Private sector organizations that collaborated with the University in the year included Hewlett-Packard Singapore Pte Ltd, Motorola (S) Pte Ltd, Sembawang Shipyard Pte Ltd, Chartered Semiconductor Pte Ltd, Siemens AG and ST Microelectronics Asia Pacific.

NUS' standing as the preferred R & D partner of industry was validated by the long-term commitment with which many of its industry partners sealed their team-ups. Increasingly, the tie-ups have been translated into the setting up of joint research facilities by both partners. Industry players engaged in such long-term investments with NUS are:

- British Gas Asia Pacific, which set up with NUS the only microturbine cogeneration testbed in the region to expand R & D in microturbine cogeneration applications; and
- Sun Microsystems, which signed a Memorandum of Understanding with NUS-affiliated Institute of High Performance Computing to set up a Centre of Excellence for Computational Structural Genomics. The Centre will form part of Sun's worldwide network of centers of excellence for joint research.

INTERNATIONAL COLLABORATIONS

Mirroring the community's increasingly global mindset, international partnerships saw the greatest growth in research collaborations in the year. Overseas collaborations made up 47 per cent of the 99 new RCAs and MOUs signed. This is a quantum leap from its 19 per cent share of the total makeup over the same period in the last academic year.

New collaborators in the year included the International Society of Prosthetics and Orthotics (ISPO); Duke University Marine Laboratory (USA); Fudan University (China); Cambridge University (UK); Johns Hopkins University (USA) and University of British Columbia (Canada).

RESEARCH ACHIEVEMENTS

NUS research achievements in the year reflected the versatility of the University's research portfolio. Some of the year's achievements were:

- Characterization of a luminescent supramolecule composed of gold and phosphine by researchers at the Department of Chemistry. The compound is the first metallacycle which displays cyclohexane-like ring inversion;
- Publication in the prestigious journals *Topology* and the *Cambridge Studies in Advanced Mathematics* of significant findings made by researchers working in the area of algebraic topology and K-theory;
- A computer-aided diagnostic system developed by the Faculty of Dentistry and School of Computing that was the first to adopt the standard of the Research Diagnostic Criteria for Temporomandibular Disorders (TMD). This makes it the most advanced system for TMD diagnosis;
- The successful demonstration by the Centre for Superconducting and Magnetic Materials that yttria stabilized zirconia oxide (YSZ) can be used as an alternative to silicon dioxide as a gate dielectric material for reducing feature size of semiconductor devices. This was highlighted in *Semiconductor International* (May 2001);
- Invitation by the Joint Genome Institute (JGI) of the United States Department of Energy to NUS-affiliated Institute of Molecular and Cell Biology to complete its research into the sequencing of the fugu fish genome. The latter will be used to annotate the human genome; and
- The use of a technique called quorum quenching to control bacterial infection by NUS-affiliated Institute of Molecular Agrobiology. The findings were published in *Nature*.

NUS ANNUAL REPORT 2001

ENTERPRISE The spirit of enterprise is a defining characteristic of NUS. It is the additional dimension that transforms education and research into a synergistic space of opportunities for creativity, innovation and excellence.

ENTERPRISE

NUS stepped up its commitment to provide a learning and research culture where robust individuals with the boldness to break new ground, the talent to create and a passion to innovate are energized and empowered to translate ideas into ventures.

Following close on the heels of a student incubation center established at the Faculty of Engineering, the School of Computing (SoC) set up similar facilities in the year. Supported by Sun Microsystems and Hewlett Packard, the SoC incubators provided infrastructural and management support to help students and faculty develop ideas to commercial fruition. The SoC facilities have already established a track record in hosting four start-ups.

Two of them have met with considerable success in making the translation from research project to viable business projects. *Friar Tuck*, a constraint-based event scheduling service and solution system, took the winner's medal at the year's *Start-up @ Singapore* competition. An on-line system catering to the storage, management and interchange of digital images over a browser interface was spun off into a company, GeoFoto Pte Ltd, corporatized under NUS Technology Holdings Pte Ltd.

ENTERPRISE IN EDUCATION

On the educational front, the Technopreneurship Minor Programme introduced to Engineering undergraduates in the last academic year was extended to students at the Faculty of Science and the School of Computing. The Programme's modules – entrepreneurial marketing, new product development and new venture creation – can also be taken by Business Administration undergraduates as electives. At the graduate level, these modules are available to MBA and MSc (Management of Technology) students in the Business School as well as graduate students from the Faculties of Engineering, Science and School of Computing.

A start-up consulting practicum course introduced in the Business School gave students invaluable experience in real-world problem solving. Under its aegis, they served as consultants to a Danish internet start-up company and developed a business plan to commercialize its corporate search engine in the Asia-Pacific market.

DEDICATED CENTER

The NUS Center for Management of Innovation & Technopreneurship (CMIT) was actively engaged in business plan competitions, a tool for galvanizing entrepreneurial energy by encouraging students to write a business plan as the first critical step of starting a venture. With the successful launch of its first *Start-Up @ Singapore* competition in the last academic year, CMIT extended its experience by organizing a similar event at the regional level with *Start-Up @ Asia*. At the international level, it was invited by Stanford University to participate in the Global Challenge 2000 Competition, an international competition that brought together winners of business plan competitions from leading universities all over the world.

To step up the fostering of entrepreneurship in the campus community, a Centre for Entrepreneurship will be established in the next academic year to take over and expand on CMIT's portfolio.

ENTERPRISE IN RESEARCH

Eleven patents filed by the Industry and Technology Relations Office (INTRO) were granted. Amongst them was an invention by the Department of Electrical and Computer Engineering for an *Artifact-free Scanning Technique for Charging Samples in Charged Particle Beam Scanning Apparatus.* The discovery by the Department of Biological Sciences of *Small Peptides having Potent Anti-angiogenic* was another patent successfully granted.

NUS research on chitin yielded good gains with the securing of two patents locally and in the United States. One was for a chitin gel that can be used as a wound dressing. The other was for a combination of chitin and hydroxyapatite which can be used as a temporary replacement for damaged defective bones or to help bones to regenerate when combined with living cells. Active research at the Department of Paediatrics led to the filing of 13 patents in Australia, United States and Malaysia.

Work-in-progress to translate newly created knowledge into real-world applications included the following:

- Collaboration by Tropical Marine Science Institute with Akvaplan-niva AS of Norway to further develop for commercialization an artificial nutritional supplement for marine fish larvae trademarked LARVICARE. The feed has been shown to promote larval survival and growth in several marine fish species under both laboratory and field conditions;
- A team up between the Department of Microbiology and Genelabs, a Singapore-based biotech company, to further explore an Enzyme Linked Immunosorbent Assay (ELISA) for detection of Epstein-Barr Virus (EBV) antibodies in the sera of Nasopharyngeal Carcinoma (NPC) patients;
- An MOU signed between the Department of Building and Oy Halton Ltd (Finland) to undertake research and development studies with a view to manufacturing ventilation systems and products that work efficiently in hot and humid climates;
- A Material Transfer Agreement between NUS and Pan Pacific Pharmaceuticals to evaluate the potential of gold complexes developed by NUS researchers as anti-cancer drugs;
- A Research Collaborative Agreement with Aqua Bounty, a Canadian biotechnology company, to develop transgenic fish that are more disease-resistant;
- A research tie-up with the Production Engineering Research Laboratory of Hitachi to establish ultra-precision machining technologies to meet leading-edge hi-tech demands, especially in precision manufacturing and engineering; and
- The adoption by the National Aeronautics and Space Administration (USA) of NUS-developed wireless technology for its research of Mars. The DelphiPad, a tablet-like wireless computer with a large color LCD screen, is co-developed by the Centre for Wireless Communications and Ericsson Cyberlab in Singapore.

NUS ANNUAL REPORT 2001

GLOBAL CAMPUS The global knowledge enterprise is a confluence of cosmopolitan talents, where minds are open and receptive to a myriad of perspectives and approaches. A vibrant outward-looking community, NUS synergizes with the world's best academic, research and entrepreneurial resources.

INTERNATIONALIZATION

As NUS heads towards becoming a global knowledge enterprise it gave fresh impetus to its internationalization drive. Throughout the year, the University lived out its aspiration to be a confluence of local and foreign talents where minds are open and receptive to the richness of cross-cultural exchanges and perspectives. Global benchmarking was the definitive standard as the University took on the challenge of becoming a global player. The University carried out a full program of international engagements covering international outreach, forging win-win strategic alliances and active participation in international academic networks.

The profile of NUS as a cosmopolitan campus has become increasingly visible. Outreach activities were conducted in 10 countries in South Asia, the Middle East and Southeast Asia as well as in Singapore to attract the best talents from home and abroad. A total of 5,100 international applications were received for the academic year. International students made up 22 per cent of the total student population standing at 29,761. At the graduate level, international students made up 64 per cent of the enrolment working for their degrees by research. Strong pull factors accounting for this high component were the University's research-intensive culture and its state-of-the-art facilities.

INTERNATIONALIZATION IN EDUCATION

The international character of NUS quality education is marked by the rich diversity of perspectives it offers. The NUS global classroom is facilitated by distance-learning technologies as well as through experiential cross-campus learning and living. Overseas study stints are built into many of the programs the University teaches with its international partners and in its leadership grooming programs like the University Scholars Program. The main thrust, however, is through its Student Exchange Program where cross-cultural immersion provides enhancement in preparing students for an increasingly globalized world where cross-cultural teamwork and solutions are the operational modes.

A total of 289 students went abroad in the year to experience first hand the intellectual strengths and distinctive cultures of different campuses as part of NUS quality education. At the same time, NUS played host to 359 international students who brought with them a diversity that enriched the intellectual and social life of our campus. Their coming together was a veritable United Nations as we welcomed students from Australia, Canada, New Zealand, United Kingdom, USA, North and South Europe, East Asia and Southeast Asia.

The University signed a total of 29 Student Exchange Agreements in the review period. New exchange partners who came onboard included the University of Edinburgh (UK), Shanghai Jiao Tong University (China); Keio University (Japan), Columbia Law School (USA), and Lund University (Sweden).

True to the spirit of globalization, NUS has made the bold move of signing up a growing number of non-English language institutions as exchange partners. These are mainly French and German universities highly regarded internationally for their niche strengths in science and technology. The names on NUS' list include RWTH Aachen and several of the French *grandes ecoles*.

To sustain the momentum of this uncharted path, the University introduced in the academic year French and German language courses as cross-faculty modules (CFM). This was topped up by language immersion courses in the host countries to prepare students fully for their stints abroad. With the support of the French Embassy in Singapore, 24 students from the French CFM classes underwent such immersion courses at INSA Lyon, CLA Besancon and CEUF Grenoble. At the same time, 23 of their German language counterparts left for Marburg to undergo a six-week language and cultural immersion program under the sponsorship of the German Academic Exchange Service.

The first exchange of students under the AEH-EARN student exchange in NUS took place during the year. The Asia Europe Meeting Education Hubs (AEH) – Education and Research Network (EARN) was established to forge closer ties between Asia and Europe.

CAPTION

An international dimension is part of the NUS learning experience

NUS' double degree program with *Ecole Polytechnique* kicked off with the admission of the first NUS student to the French institution. Miss Chia Wan Ting, a mathematics major from the Faculty of Science, will return to NUS two years later to complete her MSc degree.

The School of Computing gave NUS' internationalization drive a new twist with a Summer Internship Programme. Open to outstanding international students keen to learn and experiment in areas of their interest, the Programme attracted 20 participants from India, Indonesia, Japan and as far away as Romania.

INTERNATIONAL COLLABORATION

Propelled by the University's increasing internationalization, NUS stepped up its ties with members of international academe. It signed a total of 33 Memoranda of Understanding (MOUs) in the review period that will intensify its academic and research collaboration with its peers abroad. New MOUs were signed in the year with the Indian Institute of Information Technology, Bangalore (India); Tsinghua University (China); *Politechnico Di Milano* (Italy) and Cornell University (USA).

Many of the collaborations formed in the year have been great sharing and enriching experiences. The Singapore-Warwick Initiative in Mathematical Sciences (SWIMS), a joint project to promote interaction and research collaboration between the Institute of Mathematics (University of Warwick) and NUS Departments of Mathematics, Statistics and Applied Probability and Computational Sciences, proved such a success that it was extended to 2002.

Attesting to NUS' standing as an important node of research, the year saw major team-ups that were consortium-based. Strong research ties were established between the NUS Centre for Wavelets, Approximation & Information Processing and Wavelets IDR Centre, a consortium of 10 universities and research organizations embracing Princeton, Stanford, Caltech, Wisconsin-Madison and AT&T.

NUS' bioformatics collaboration with Stanford University and Sweden's Karolinska Institute and Uppsala University, a prime example of global interconnectedness, was expanded into a five country tie-up. The new participants are South Africa's University of Western Cape and Australia's University of Sydney. Known now as the Singapore-Stanford-South Africa-Sweden-Sydney S * Life Science Information Alliance, the network has set up two Bioinformatics Learning Labs at NUS that are transforming the way life sciences is taught and researched at NUS.

HIGH INTERNATIONAL PROFILE

NUS' profile as a scholarship and research hub of international repute stood at an all time high in the year. The University was highly visible in international academe. As the venue of a number of high-profile forums like the *10th International Conference on Biomedical Engineering* and *International Symposium on the Science of Surfaces and Nanostructures*, NUS clearly demonstrated that it is the place where the latest in cutting-edge knowledge is happening. Adding to the intellectual buzz and vibrancy on campus was the stream of leading world authorities who made up the year's guest list. Professor Tsui Lap-Chee, a reputed molecular geneticist, was the 53rd Lee Kuan Yew Distinguished Visitor.

The University is in its present enviable position because of the people that make up its community. The high quality of NUS faculty is recognized by their peers in international academe. Many of them served as external examiners, academic consultants, members of International Advisory Panels and on editorial boards of internationally refereed journals during the year. NUS students, too, enjoyed good standing in international student networks. They were well represented at several leading student forums such as the *Harvard Project for Asian and International Relations Conference* (Beijing), *Universitas 21 Student Network Meeting* (Glasgow) and the *European International Model United Nations Conference* (the Netherlands).

The international standing of the University was capped with the election of Professor Shih Choon Fong, NUS President and Vice-Chancellor, as the Vice-Chairman and Chairman-Elect of the Association of Pacific Rim Universities (APRU). A founding member of this consortium of 34 leading universities in the Pacific Rim region, NUS will head the APRU Secretariat from June 2002 when it relocates from the University of Southern California to Kent Ridge.

RESOURCES AND SERVICES

Resources and services are the enablers and facilitators that provide the infrastructural support and complementary services critical to the operations of the University. They are also effective co-ordinators fostering synergy within the diverse NUS intellectual community and with the community at large.

THE CENTRE FOR THE ARTS (CFA)

The year saw CFA embarking on new vistas. The launch of its flagship facility, the University Cultural Centre (UCC), opened new opportunities and challenges for CFA.

New ground was also broken in the year. It joined the Association of Asia-Pacific Performing Arts Centres (AAPPAC) as an associate member. Enlarging its scope of creativity, it established a new film-making group called *nu(Studios)*. In a major outreach initiative, CFA participated for the first time in a formal program to bring the arts to the nation's heartlanders. The realization was *Saturday! @ Clementi Central*, a series of concerts jointly collaborated with Tanjong Pagar Community Development Council and Singapore Polytechnic.

The 18 performing groups under CFA chalked up a 19 per cent increase in the number of their performances bringing the total to 214 for the year. CFA also experienced a 21 per cent rise in membership, a positive indicator of better things to come.

CENTRE FOR DEVELOPMENT OF TEACHING AND LEARNING (CDTL)

CDTL focused on consolidating its efforts to promote quality teaching and learning as well as enhancing pedagogical practice and theory.

The Centre also made new moves to expand and improve its existing services. It made its first foray into conference planning and management with the successful organization of three events. All three made an impact with their very topical subjects dealing with issues of life-long education, problem-based learning and e-education.

It also launched the Professional Development Programme to provide faculty members with less than three years of teaching experience extended practical hands-on guidance on how to teach.

CENTRE FOR INSTRUCTIONAL TECHNOLOGY (CIT)

CIT had a rewarding year in the period under review. Its in-house developed Integrated Virtual Learning Environment (IVLE) won the first prize in the open category of the *E-nnovator Awards 2000*. An e-learning system designed to manage and support training and education over the Internet, IVLE presently supplements the classroom teaching of more than 2,400 courses and reaches out to some 28,000 students.

CIT continued to be the primary facilitator of the NUS global classroom. Providing the latest video-conferencing facilities, it linked our students and faculty with their peers in MIT, Georgia Institute of Technology and Eindhoven University of Technology for academic discussions and jointly taught lessons in real-time.

COMPUTER CENTRE

The Centre continued to direct its initiatives in the academic year to facilitate borderless learning by providing the University with the best computing and communications infrastructure.

The main initiative was the upgrading of the campus network to the fourth generation NUSNET for a more fully integrated IT-intensive environment facilitating voice, data and video traffic. The new network supports gigabit networking performance with enhanced management services. Incorporating Voice over Internet Protocol telephony solutions (VoIP), the upgraded network equips students with the capability to make Internet phone calls using their notebook computers from any of the University's expanded 30,000 point Secure Plug and Play environment.

CAPTION

A wireless-enabled IT intensive environment makes learning at NUS a 24-hour, anytime, anywhere convenience.

Greater facilitation was provided to the research community with the launch of the 22-CPU Compaq GS320 parallel computing system, which increased the computing capacity at the Supercomputing and Visualisation Unit by about four times. The new resource will enable University researchers to carry out more advanced simulation and research work.

As part of its effort to be a better service provider, the Centre implemented a one-stop customer service center as well as *e-support*, an online support portal that offers 24-hour e-services to the NUS community anytime, anywhere.

LIBRARY

The Library's effort to build up its Digital Library continued unabated in the year. Electronic resources recorded a 58.8 per cent increase to 8,031 titles and efforts were made to expand the Chinese and Japanese electronic collections.

New electronic services introduced in the year increased the user-friendliness of the Digital Library. With the introduction of the Wireless Application Protocol, digital library services went mobile in the year. Library users can now use their mobile devices to connect up with the Library's online catalogue and engage in a range of alerting services.

Good progress was made with the Radio Frequency Identification Project introduced in the last academic year. A total of 863,500 books was tagged at year's end using this cutting-edge technology. An enabler of self-service loans, it has made the service available at all NUS libraries except for the C J Koh Law Library, which is undergoing renovation.

The Library's collection as at 30 June 2001 stood at 1,142,811 unique titles consisting of 1,089,259 print titles, 8,031 electronic titles, 18,338 titles of media programs and 27,183 titles of microform resources. Total loan transactions exceeded 1.23 million. The library had a total membership of 50,408 of which 12,434 were external members.

NUS MUSEUMS

The year was a period of transition for NUS Museums as it made preparations to move to its own building at the annex of the University Cultural Centre. The big move will involve the relocation of some 10,000 precious art objects.

In the meantime, the Museums continued to forge ahead with new initiatives. It joined the International Council of Museums and established a conservation department which is in the process of setting up a conservation laboratory. It also initiated a library exchange program with local-based and overseas museums.

Milestones achieved in the year included the selection of its website to be featured by Lightspan's StudyWeb as one of the best educational resources on the web.

OFFICE OF ALUMNI AND COMMUNITY RELATIONS (ACR)

The following sections of ACR had an eventful year. The Development section launched a record number of professorships. The long list included the S Shan Ratnam Professorship in Obstetrics and Gynaecology, the Lim Kim San Professorship in Business Policy, the Kwan Im Thong Hood Cho Temple Professorship in Computing, the Lim Chong Yah Professorship in Economics, the Parkway Professorship in Health Sciences and the Kiang Ai Kim Scholarship Fund.

For the Events Management section, the year's highlight was spearheading the organization of the Commencement ceremonies held on campus.

OFFICE FOR CONTINUING EDUCATION (OCE)

It was an exciting year for OCE as it fine-tuned its courses and explored new avenues of expansion.

Streamlining of content was made in collaboration with the Institute of Systems Science to avoid duplication of courses. The two entities also agreed to work together to cross market information technology programs.

Ground work was undertaken in the year to assess the feasibility of joining the Thales ASEAN Network under the auspices of *Thales Universitie* in France. The Network will link member institutions in Singapore, Malaysia and France to facilitate the conduct of Software Engineering Programmes through distance learning technologies, classroom-based teaching and e-learning.

OFFICE OF ESTATE AND DEVELOPMENT (OED)

OED kept up its focus to develop an attractive physical environment conducive to a thinking and learning community. Two main arterial roads – Lower Kent Ridge Road and Kent Ridge Crescent – were widened in the year to improve traffic circulation and reduce congestion.

The first phase of upgrading works for buildings, facilities, plant and equipment was nearly completed. The second phase of upgrading will focus on improvement works for buildings which are more than 15 years old to bring them to an acceptable standard of finish and appearance.

Several student housing projects were completed in the year, easing the demand arising from increased student enrolment. These included Kuok Foundation House and the new 3000-unit Prince George's Park Residences. The latter introduced a new concept of communal living for undergraduates with clusters of 15 rooms on each floor sharing cooking, dining and living facilities.

CAMPUS COMMUNITY

The importance of the NUS fraternity in providing the continuity that underpins the University was brought into sharper focus in the year with the forging of close ties between the main stakeholders – students, alumni, faculty and staff. This affirmation of ties will grow in importance as the University matures and renews itself with the passing of each cohort. Efforts were stepped up to include the active participation of all constituents in University-wide events.

The Commencement Dinner saw all the groups coming together for the first time to mark the end of graduation celebrations. The National University of Singapore Society, the alumni body, also held celebratory parties throughout the Commencement period to welcome the graduating class of 2000 into the alumni fraternity.

STAFF MATTERS

In addition to the teaching and research initiatives to become a global knowledge enterprise, a major thrust in the year was to raise the level of service provided by all staff. This gave impetus to staff training and development designed to bring out the best in every staff.

Besides increasing the training course-per-staff ratio, one of the critical people strategies was to create a workplace where staff can grow, develop, learn and challenge themselves. This was facilitated by a more structured staff development framework. Major initiatives introduced to enhance the learning environment for staff included:

- A structured framework for staff development was implemented with the following components: Training Needs Analysis, Career Development, Induction, Communication, Monitoring, System Review and Feedback.
- The Induction Programme for new staff was revised. The focus of the revised program was not only on general organization orientation but also on encouraging networking and support groups among new staff.
- More varieties of training methods were introduced to accommodate the different learning styles of staff, which included outdoor experiential learning and self-paced learning where staff can learn on-line at any time, any place and at their own pace.
- Training rooms were upgraded and enhanced to facilitate learning in a conducive environment.

A broad range of professional, managerial, career development and computer courses was provided for staff. The year saw an increase in the number of staff members who benefited from in-house courses on creative problem-solving skills, information technology, critical-enabling skills, work improvement, teamwork and change management. Such training is targeted at enabling them to adapt and meet the challenges of on-going changes within the University. A total of 2,757 staff members attended in-house training programs, 623 attended courses offered locally while 62 were sent on overseas attachments to gain broader exposure.

Under the Senior Tutorship Scheme for young promising academic staff, 14 Senior Tutors joined 34 others at top universities overseas for their graduate studies. Faculty members participated actively in a range of programs including academic exchanges, fellowships and overseas research attachments. A good number of 1,288 attended conferences, 57 went on sabbatical and 561 on study programs.

The increase in staff development initiatives reflected the university's commitment to take staff development forward.

CAPTIONS

With the flux and flow of each cohort, close bonds established between students, alumni, faculty and staff are a mainstay of the NUS community.

ADJUNCT APPOINTMENTS

A total of 134 adjunct appointments was made in the year. This is an increase of 4 per cent over the same period last year. The appointees are successful practitioners and specialists from industry, the professions and research institutes who took up part-time teaching and research at the University. Most of the appointments were made by the Faculties of Medicine and Engineering, arising from their increased collaboration with the research institutes.

The adjunct appointments brought a strong industry perspective to NUS quality education that dovetails with the real-world oriented learning of a global knowledge enterprise.

WORK IMPROVEMENT TEAMS (WITS) AND STAFF SUGGESTION SCHEME (VOICE)

Both WITS and VOICE initiatives continued to receive strong support at NUS. Staff were positive in their use of VOICE, an online Staff Suggestion feedback scheme, to improve work processes and productivity. Their sense of empowerment and ownership was translated into 3,397 suggestions submitted over a period of 12 months. First-time contributors stood at 1,277, a major increase of 26 per cent in participation over the same period last year.

The University fielded six teams at the National Quality Circles Convention and two teams to the PS21 ExCEL Convention. All teams made a mark with positive scorings.

STUDENT MATTERS

Integrated learning and living is the hallmark of the NUS student experience. NUS quality education is complemented by quality campus living that balances intellectual development with social and personal growth. Broad-based holistic education that optimizes talent is expressed on the personal level as well-rounded individuals who give of their best. This positive mentality was displayed by NUS students in both the local and international arenas as befits their membership of a global knowledge enterprise.

On the national front, the versatility of NUS students was mirrored in the range of national awards that came their way as a result of their multitude of interests. They ranged from the National Youth Council Achievement Award/Hong Kong and Shanghai Banking Corporation Youth Environment Award (bestowed for contributions to environmental conservation) to a Merit award garnered at the Tan Kah Kee Young Inventors Competition for innovation; from a music award won at the World Music Contest in Kerkrade (the Netherlands) to Mr Andrew Fang being named Singapore's Sportsman of the Year.

The year, however, belonged to the Law Faculty's international moot court teams. A high-profile group enjoying a well-earned reputation for excellence, the teams went on to sweep a series of awards that made the year a record-breaking one for them. Their pickings this year included winning the prestigious Philip C Jessup International Law Moot Court Competition for the fourth time as well as three other major moot competitions covering different areas of law. These were the 2000 International Maritime Law Arbitration Moot Competition (Brisbane), the Australasian round of the Manfred Lachs Space Law Moot Court Competition (Sydney) and the 2001 International Maritime Arbitration Moot Court Competition (Hong Kong).

Another student group who put NUS on the map were students from the Faculty of Business Administration. With a streak of winnings in three business case competitions, they clearly demonstrated they were on a par with the best in the world. First prize winner at the Scotiabank International Case Competition (University of Western Ontario), they took the runner-up medals at the Marshall International Case Competition (University of Southern California) and McGill International Management Competition (McGill University).

The pursuit of excellence by NUS students is tempered with a strong sense of community. Volunteerism has always been a strong suit of NUS student activities and their community service record speaks volumes for them as individuals. The social calendar of each academic year is dotted with fund-raising events ranging from blood donation drives to hall productions and fun-filled bazaars. This year, a new event, a swimathon was added to the list. The student body's main fund raiser, the NUSSU Rag and Flag Day, raised nearly half a million dollars in the review period.

In keeping with the University's prevailing global mindset, overseas community projects have increasingly become the norm rather than the exception. The spread and scope of engagement have widened and intensified. NUS students could be spotted during the year at Tanzania, Thailand, China, Tibet, Myanmar and Cambodia doing their part for the local community in projects as diverse as developing educational programs, building schools and dispensaries, setting up libraries and raising awareness about the evils of drug consumption.

HALL LIFE

The heartland of campus living, NUS hall life is the center of social interaction and networking on campus. The halls of residence packed into the year a full calendar of community living that enhanced the learning experience making them veritable homes away from home. Many of the activities like Rag Day float-making, hall productions, hall dinners, *xinyao* competitions, inter-hall games, international nights have all become hall traditions. Each hall however goes about them in its own inimitable style, carving out a distinctive culture that is unique. From this shared experience comes the *esprit de corps* that binds generations of its residents, making the halls strong staples of camaraderie.

The high points of each hall during the review period spoke for their individuality.

Eusoff Hall dared to be different. For its annual hall production, it produced a full-length feature film *Jack's Car* instead of the usual stage production. It also brought on-line a service known as the Eusoff Credits System encouraging electronic purchase and payment of hall items and services amongst its residents. The year was also one of continuity for the Hall. With the closure of Eusoff College at Evans Road, it inherited its namesake's crest, signifying the full anchoring of the Eusoffian spirit at Kent Ridge.

Raffles Hall went big and outward in the year. For a hall rich in the diversity of its residents, it brought all its cultural groups together in one gigantic show called *Razzmatazz: A Tribute To Passion*. It also actively engaged its residents with the Singaporean community by encouraging the cultural groups to perform in public venues.

Kent Ridge Hall, usually associated with the musical inclinations of its residents, added another feather to its cap. It took 5 of the 8 awards in the hall category at the Annual Rag Day for its float-making skills.

Several halls celebrated the first academic year of the new millennium with history-making milestones. King Edward VII Hall elected its first female President to head its Junior Common Room Committee. Temasek Hall unearthed a time capsule which was buried 10 years ago. Sheares Hall prepared for its double celebrations next year when it turns 20 and its predecessor, Dunearn Road Hostels, celebrates its 50th anniversary. Residents and alumni came together in the year to work on a book to commemorate the two events.

APPENDIX TO THE PRESIDENT'S REPORT

STAFF SECONDMENT

The following faculty members were on secondment during the academic year in review, serving the country in different capacities:

ASSOCIATE PROFESSOR VIVIAN BALAKRISHNAN (Ophthalmology) – as Chief Executive Officer, Singapore General Hospital

PROFESSOR CHAN HENG CHEE (Political Science) – as Singapore's Ambassador to the United States of America

ASSOCIATE PROFESSOR PAUL CHEUNG PO LO (Social Work & Psychology) – as Chief Statistician, Ministry of Trade & Industry

PROFESSOR HANG CHANG CHIEH (Electrical & Computer Engineering) – as Executive Deputy Chairman, National Science & Technology Board

ASSOCIATE PROFESSOR HO PENG KEE (Law Faculty) – as Minister of State for Home Affairs, Ministry of Home Affairs
and Minister of State for Law, Ministry of Law

ASSOCIATE PROFESSOR HSU LOCKNIE (Law Faculty) – as Legal Consultant, Singapore Trade Development Board

PROFESSOR S JAYAKUMAR (Law Faculty) – as Minister for Foreign Affairs and Minister for Law

PROFESSOR TOMMY KOH THONG BEE (Law Faculty) – as Ambassador-at-Large, Ministry of Foreign Affairs

ASSOCIATE PROFESSOR KONG HWAI LOONG (Medicine) – as Deputy Executive Director, Biomedical Research Council,
National Science & Technology Board

PROFESSOR KUA EE HEOK (Psychological Medicine) – as Chief Executive Officer, Woodbridge Hospital

ASSOCIATE PROFESSOR KON OI LIAN (Biochemistry) – as Director, Medical Services Research Division, National Cancer Centre Singapore Pte Ltd

ASSOCIATE PROFESSOR LIM KHIANG WEE (Electrical & Computer Engineering) – as Director, Science & Engineering Research Council,
National Science & Technology Board

DR TERENCE LOKE MUN LOONG (Mathematics) – as Assistant Manager, Technology Infrastructure Planning, National Science & Technology Board

PROFESSOR ANDREW NEE YEH CHING (Mechanical Engineering) – as Deputy Executive Director, Science & Engineering Research Council,
National Science & Technology Board

DR OOI ENG EONG (Microbiology) – as Senior Registrar, Ministry of Environment

PROFESSOR PANG ENG FONG (Business Policy) – as Singapore's High Commissioner to the United Kingdom

PROFESSOR TAN CHORH CHUAN (Medicine) – as Director of Medical Services, Ministry of Health

PROFESSOR ALINE WONG-KAN LAI CHUNG (Sociology) – as Senior Minister of State for Education, Ministry of Education

PROFESSOR WALTER WOON CHEONG MING (Law Faculty) – as Singapore's Ambassador to Germany

ASSOCIATE PROFESSOR YAACOB IBRAHIM (Industrial & Systems Engineering) – as Senior Parliamentary Secretary, Ministry of Communications &
Information Technology

STAFF ACHIEVEMENTS

NUS faculty are highly regarded by their peers for excellence in their fields of expertise. The following are some of the many whose work were acknowledged in the year:

PROFESSOR CHEN HSIAO YUN, LOUIS (Director, Institute for Mathematical Sciences) was elected as Fellow of the Third World Academy of Sciences (TWAS). Prof Chen is known for his fundamental work on Poisson Approximation which is now known as the Chen-Stein method.

ASSOCIATE PROFESSOR CHOO YOO SANG (Department of Civil Engineering) and DR JU FENG (Department of Mechanical Engineering) were part of a team who co-authored a paper which won the Stanley Gray Award (Offshore Technology) from the Institute of Marine Engineers (UK).

ASSOCIATE PROFESSOR HENG CHYE KIANG (Department of Architecture) was honored with a *Choice* selection by *Choice* magazine for his book on *Cities of Aristocrats and Bureaucrats: The Development of Medieval Chinese Cityscape.*

ASSOCIATE PROFESSOR HSU CHIN-YING, STEPHEN (Department of Preventive Dentistry) was awarded the Foundation Research Award 2001 by the American Academics for Pediatric Dentistry.

PROFESSOR GEORGE P LANDOW (Dean, University Scholars Programme) developed a website, *The Victorian Web*, which was selected for the Learning Award by the Art History Webmasters Association *des webmestres en histoire de l' art* (AHWA – AWHA) Jury 2000.

ASSISTANT PROFESSOR LEE SANG-YONG, TOM (Department of Information Systems) received the Best Paper Award at the European Conference on Information Systems 2000 held in Vienna, Austria.

ASSOCIATE PROFESSOR LU YONG FENG (Department of Electrical and Computer Engineering) was awarded the International Laser Prize,
*The Berthold Leibinger Innovationsprie*s, for his pioneering work in laser microprocessing technology.

ASSOCIATE PROFESSOR NG MAH LEE, MARY (Department of Microbiology) was awarded the Ernst Abbe Award by the Royal Microscopical Society (UK) and Carl Zeiss (Germany). She holds the distinction of being the first Asian as well as the first female researcher to receive the award given in recognition for contributions to light, confocal and electron microscopy education and applications.

ASSOCIATE PROFESSOR TANG YINGCHAN, EDWIN (Department of Marketing) won the Best Journal Paper Award for his article *The Complexity of Channel Evolution in China* published in the *Journal of Management* (1999 – 2000). He received his prize at the Chinese Management Association conference held in Taipei.

ASSOCIATE PROFESSOR YEUNG WAI CHUNG, HENRY (Department of Geography) broke new ground by being the first Asian invited to hold editorial positions in two leading Geography journals, *Environment and Planning A* and *Economic Geography.*

NATIONAL SCIENCE AND TECHNOLOGY AWARDS 2000

PROFESSOR HANG CHANG CHIEH (Department of Electrical and Computer Engineering) was awarded the National Science and Technology Medal for promoting and developing science and technology in Singapore.

ASSOCIATE PROFESSOR SUN YENENG (Department of Mathematics) received the National Science Award for his outstanding contributions in the fields of mathematics and mathematical economics.

ASSOCIATE PROFESSOR ZHANG DONGHUI (Department of Computational Science) was presented with the Young Scientist Award for his new and general methods in time-dependent quantum scattering theory.

PROFESSOR P GOPALAKRISHNAKONE and DR MAUNG MAUNG THWIN (Department of Anatomy) together with
ASSOCIATE PROFESSOR KANDIAH JEYASEELAN and DR ARUNMOSHIARASI ARMUGAM (Department of Biochemistry) received a Ministerial Citation for developing an effective drug for envenomation and inflammatory conditions.

STAFF ACHIEVEMENTS

NATIONAL DAY AWARDS 2000

The following staff members received National Day Awards on National Day, 9 August 2000:

PROFESSOR LIM PIN (Department of Medicine) – Distinguished Service Order

DR KOG YUE CHOONG (Deputy Chairman, NUS Council) – Public Service Medal

PROFESSOR YONG KWET YEW (Director, Office of Estate & Development) – Public Administration Medal (Silver)

MISS WONG MEI LING, MABEL (Senior Assistant Director, Office of University Relations) – Commendation Medal

MRS PHUA SWEE WAH nee CHOO (Senior Laboratory Technologist, Department of Physics) – Efficiency Medal

MISS NEO BEE HOON, JANICE (Secretary Grade I, Office of Human Resources) – Efficiency Medal

MRS LEE YAP ENG nee LOW (Corporate Support Officer Grade III, Office of Human Resources) – Long Service Medal

MR MOHAMED BIN SUIB (Operations Support Officer Grade II, Bursar's Office) – Long Service Medal

MR LEE KOON BOO (Corporate Support Officer Grade III, Office of Estate & Development) – Long Service Medal

MR GAN KIM SENG (Secretary Grade I, Office of Estate & Development) – Long Service Medal

MR LIM AH SENG (Technical Support Officer Grade VII, Office of Estate & Development) – Long Service Medal

MDM YEO LEE LANG, MARIA (Senior Laboratory Technologist, Dean's Office, Faculty of Dentistry) – Long Service Medal

MRS TAN KIN CHOO nee YUE (Secretary Grade I, Graduate School of Dental Studies) – Long Service Medal

MDM LUM YI LEI (Corporate Support Officer Grade I, Department of Mathematics) – Long Service Medal

MR MUTHUSAMY S/O ANNANVY (Operations Support Officer Grade IV, Department of Physics) – Long Service Medal

MR CHOO THEAM FOOK (Senior Laboratory Technologist, Department of Physics) – Long Service Medal

MDM SIOW AH YOON (Corporate Support Officer Grade I, Department of Physics) – Long Service Medal

STAFF STATISTICS

STAFF 2000 – 01

Faculty members	2,711*
Administrative staff	477
Professional staff in Library, Computer Centre and Administrative Departments	225
General staff	2,674
Total	**6,087**

** including 117 visiting staff and 42 staff from Institute of Systems Science*

VISITING STAFF 2000 – 01

New Appointments	74

STAFF CHANGES

a) NEW APPOINTMENTS 2000 – 01

FACULTY/SCHOOL/CENTER	PROFESSOR	ASSOCIATE PROFESSOR	ASSISTANT PROFESSOR	SENIOR LECTURER	*LECTURER	**SENIOR TUTOR	TOTAL
Arts & Social Sciences	2	5	20	2	3	20	52
Business Administration	1	2	5	–	–	7	15
Computing	–	–	3	–	2	17	22
Dentistry	–	–	2	–	–	–	2
Design & Environment	–	–	3	–	–	3	6
Engineering	1	2	11	–	–	7	21
Law	–	–	1	–	–	1	2
Medicine	2	4	11	–	–	2	19
Science	2	3	14	–	2	10	31
University Scholars Programme	–	–	6	–	–	–	6
Ctr for Eng Lang Communication	–	–	–	–	5	–	5
Total	**8**	**16**	**76**	**2**	**12**	**67**	**181**

** including Human Resource Management (HRM) Specialists*
*** including Instructors, Teaching Assistants and Graduate Assistants*
Note: 178 new appointments were also made to various research centers

STAFF STATISTICS

STAFF CHANGES

b) PROMOTIONS 2000 – 01

FACULTY/SCHOOL/CENTER	TO PROFESSORSHIPS	TO ASSOCIATE PROFESSORSHIPS	*TO SENIOR LECTURESHIPS	TOTAL
Arts & Social Sciences	3	16	2	21
Business Administration	1	12	4	17
Computing	–	8	–	8
Dentistry	–	1	–	1
Design & Environment	–	7	–	7
Engineering	2	15	–	17
Law	2	8	–	10
Medicine	1	8	–	9
Science	3	15	–	18
University Scholars Programme	–	–	1	1
Ctr for Eng Lang Communication	–	–	1	1
Total	**12**	**90**	**8**	**110**

** including Senior HRM Specialists*

DISTRIBUTION OF FACULTY MEMBERS (REGULAR CONTRACTS)

BY APPOINTMENT AS AT END OF JUNE 2001

FACULTY/SCHOOL/CENTER	PROFESSOR	ASSOCIATE PROFESSOR	SENIOR LECTURER	ASSISTANT PROFESSOR	*LECTURER	**SENIOR TUTOR	TOTAL
Arts & Social Sciences	14	97	43	145	19	58	376
Business Administration	9	65	4	54	20	16	168
Computing	6	36	6	16	3	53	120
Dentistry	2	9	1	10	–	–	22
Design & Environment	2	28	8	35	1	7	81
Engineering	44	146	9	75	–	25	299
Law	6	31	2	13	–	3	55
Medicine	34	113	8	56	–	17	228
Science	32	121	17	70	6	20	266
University Scholars Programme	1	–	1	9	–	–	11
Ctr for Eng Lang Communication	–	–	4	–	41	–	45
Total	**150**	**646**	**103**	**483**	**90**	**199**	**1,671**

** including Senior HRM Specialists and HRM Specialists*
*** including Instructors, Teaching Assistants and Graduate Assistants*

STAFF STATISTICS

DISTRIBUTION OF FACULTY MEMBERS (REGULAR CONTRACTS)

BY NATIONALITY AS AT END OF JUNE 2001

FACULTY/SCHOOL/CENTER	S'PORE	M'SIA	INDIA	PRC	OTHER ASIAN COUNTRIES	UK	USA/ CANADA	AUST/ NZ	OTHERS	TOTAL
Arts & Social Sciences	183	21	17	20	50	18	45	10	12	376
Business Administration	96	21	4	7	19	1	11	4	5	168
Computing	61	11	9	23	4	–	5	5	2	120
Dentistry	17	2	–	1	2	–	–	–	–	22
Design & Environment	46	12	1	4	4	6	4	–	4	81
Engineering	145	37	28	21	26	4	22	7	9	299
Law	39	8	–	1	–	3	3	1	–	55
Medicine	145	45	8	4	2	7	6	8	3	228
Science	129	34	11	25	9	11	25	13	9	266
University Scholars Programme	2	–	–	–	–	–	7	–	2	11
Ctr for Eng Lang Communication	24	7	–	4	2	2	6	–	–	45
Total	**887**	**198**	**78**	**110**	**118**	**52**	**134**	**48**	**46**	**1,671**

DISTRIBUTION OF RESEARCH STAFF (REGULAR CONTRACTS)

BY NATIONALITY AS AT END OF JUNE 2001

RESEARCH STAFF	S'PORE	M'SIA	INDIA	PRC	OTHER ASIAN COUNTRIES	UK	USA/ CANADA	AUST/ NZ	OTHERS	TOTAL
Research Grants	81	51	42	228	34	4	4	5	14	463
Research Institutes/Centers	115	42	25	68	11	5	6	11	6	289
Faculties	25	10	7	33	4	1	5	3	2	90
Total	**221**	**103**	**74**	**329**	**49**	**10**	**15**	**19**	**22**	**842**

HIGHEST ACADEMIC QUALIFICATION OF FACULTY MEMBERS (2000 – 01)

FACULTY/SCHOOL/CENTER	DOCTORATES	MASTERS	BACHELORS	OTHERS	TOTAL
Arts & Social Sciences	325	50	29	–	404
Business Administration	134	31	11	–	176
Computing	76	24	32	1	133
Dentistry	6	18	1	–	25
Design & Environment	55	23	8	2	88
Engineering	284	15	11	1	311
Law	4	45	7	–	56
Medicine	120	58	57	–	235
Science	265	10	9	–	284
University Scholars Programme	12	1	–	–	13
Ctr for Eng Lang Communication	10	35	–	–	45
Total	**1,291**	**310**	**165**	**4**	**1,770**

Note: Figures include qualifications of visiting staff.

ENROLMENT STATISTICS

SUMMARY TABLE FOR 2000 – 1

	MALE	FEMALE	TOTAL
Full-Time (Undergraduate) students	9,892	11,341	21,233
Part-Time (Undergraduate) students	670	221	891
Higher Degree students	4,724	2,484	7,208
Diploma students	241	188	429
Total	**15,527**	**14,234**	**29,761**

BASIC DATA ON STUDENTS 2000 – 1

Undergraduates	22,124
Postgraduates	
– By Research	3,457
– Coursework	3,751
Diplomas	429
Total	**29,761**

ENROLMENT STATISTICS

UNDERGRADUATE ENROLMENT BY COURSE AND YEAR OF STUDY AS AT 10TH OCTOBER 2000

FULL-TIME	YEAR	MALE	FEMALE	TOTAL
Arts & Social Sciences	1	504	1,212	1,716
Arts & Social Sciences	2	452	1,304	1,756
Arts & Social Sciences	3	366	1,115	1,481
Arts	4	71	154	225
Social Sciences	4	84	181	265
Sub-Total		**1,477**	**3,966**	**5,443**
Business Administration	1	174	326	500
Business Administration	2	185	403	588
Business Administration	3	141	268	409
Business Administration	Hons	132	162	294
Sub-Total		**632**	**1,159**	**1,791**
Dentistry	1	16	18	34
Dentistry	2	23	11	34
Dentistry	3	23	10	33
Dentistry	4	21	17	38
Sub-Total		**83**	**56**	**139**
Engineering	1	826	255	1,081
Chemical Engineering	1	97	112	209
Computer Engineering	1	74	28	102
Electrical Engineering	1	2	1	3
Environmental Engineering	1	14	22	36
Mechanical Engineering	1	5	3	8
Chemical Engineering	2	96	93	189
Civil Engineering	2	143	62	205
Computer Engineering	2	100	26	126
Electrical Engineering	2	377	149	526
Environmental Engineering	2	15	13	28
Mechanical Engineering	2	287	75	362
Chemical Engineering	3	116	69	185
Civil Engineering	3	136	53	189
Computer Engineering	3	67	13	80
Electrical Engineering	3	354	102	456
Environmental Engineering	3	13	20	33
Mechanical Engineering	3	243	74	317
Chemical Engineering	4	86	76	162
Civil Engineering	4	138	46	184
Computer Engineering	4	48	10	58
Electrical Engineering	4	316	78	394
Environmental Engineering	4	15	15	30
Mechanical Engineering	4	225	56	281
Sub-Total		**3,793**	**1,451**	**5,244**
Law/Approved Graduate Law	1	55	98	153
Law/Approved Graduate Law	2	62	78	140
Law/Approved Graduate Law	3	72	79	151
Law	4	59	95	154
Total		**248**	**350**	**598**

ENROLMENT STATISTICS

FULL-TIME	YEAR	MALE	FEMALE	TOTAL
Medicine	1	129	89	218
Medicine	2	124	75	199
Medicine	3	131	69	200
Medicine	4	120	58	178
Medicine	5	107	45	152
Sub-Total		**611**	**336**	**947**
Pharmacy	1	11	77	88
Pharmacy	2	19	52	71
Pharmacy	3	30	70	100
Pharmacy	4	6	24	30
Sub-Total		**66**	**223**	**289**
Science	1	477	869	1,346
Science	2	303	685	988
Science	3	270	594	864
Science	4	103	147	250
Sub-Total		**1,153**	**2,295**	**3,448**
Computing/Computer Science	1	496	288	784
Computing/Computer Science	2	372	234	606
Computing/Computer Science	3	301	149	450
Computer Science	4	67	17	84
Computer Engineering	1	48	25	73
Sub-Total		**1,284**	**713**	**1,997**
Architecture	1	51	68	119
Architecture	2	47	69	116
Architecture	3	54	62	116
Architecture	Hons	1	0	1
Sub-Total		**153**	**199**	**352**
Building/Real Estate	1	106	131	237
Building	2	56	50	106
Building	3	50	85	135
Building	4	42	82	124
Real Estate	2	52	74	126
Real Estate	3	37	84	121
Real Estate	4	27	61	88
Sub-Total		**370**	**567**	**937**
Industrial Design	1	10	16	26
Industrial Design	2	12	10	22
Sub-Total		**22**	**26**	**48**

ENROLMENT STATISTICS

PART-TIME	YEAR	MALE	FEMALE	TOTAL
B.Tech. (Chem.Eng.)	1	31	15	46
B.Tech. (Chem.Eng.)	2	19	13	32
Sub-Total		**50**	**28**	**78**
B.Tech. (Electronics Eng.)	1	84	37	121
B.Tech. (Electronics Eng.)	2	54	13	67
B.Tech. (Electronics Eng.)	3	74	10	84
B.Tech. (Electronics Eng.)	4	58	12	70
Sub-Total		**270**	**72**	**342**
B.Tech. (Mech. & Mfg.)	1	125	13	138
B.Tech. (Mech. & Mfg.)	2	57	13	70
B.Tech. (Mech. & Mfg.)	3	71	7	78
B.Tech. (Mech.)	4	26	2	28
B.Tech. (Mfg.)	4	16	5	21
Sub-Total		**295**	**40**	**335**
B.Bldg. (Constr.Econs.)	1	5	11	16
B.Bldg. (Constr.Econs.)	2	4	11	15
Sub-Total		**9**	**22**	**31**
B.Bldg. (Constr.Mgt.)	1	17	7	24
B.Bldg. (Constr.Mgt.)	2	10	9	19
Sub-Total		**27**	**16**	**43**
B.R.E. (Prop.Mgt.)	1	6	14	20
B.R.E. (Prop.Mgt.)	2	6	10	16
Sub-Total		**12**	**24**	**36**
B.R.E. (Valuation)	1	2	5	7
B.R.E. (Valuation)	2	5	14	19
Sub-Total		**7**	**19**	**26**
Grand-Total		**10,562**	**11,562**	**22,124**

ENROLMENT STATISTICS

GRADUATE STUDENT ENROLMENT 2000 – 1

BY RESEARCH (AS AT 30 JUNE 2001)

FACULTY/INSTITUTE/SCHOOL	MALE	FEMALE	TOTAL
Arts & Social Sciences	136	151	287
Business Administration	77	62	139
Dentistry	4	4	8
Engineering	1,116	358	1,474
Law	10	5	15
Medicine	202	204	406
Science	381	233	614
School of Computing	233	78	311
School of Design & Environment	28	30	58
Centre for Financial Engineering	1	4	5
Institute of Materials Research & Engineering	9	6	15
Institute of Molecular Agrobiology	10	7	17
Institute of Molecular & Cell Biology	17	21	38
Kent Ridge Digital Labs	14	3	17
National University Medical Institutes	7	11	18
Regional Language Centre	1	0	1
Singapore-MIT Alliance	22	12	34
Total	**2,268**	**1,189**	**3,457**

GRADUATE STUDENT ENROLMENT 2000 – 1

BY COURSE WORK OR COURSE WORK & DISSERTATION (AS AT 30 JUNE 2001)

FACULTY/INSTITUTE/SCHOOL	DEGREE/DIPLOMA	MALE	FEMALE	TOTAL
Arts & Social Sciences	Grad.Dip.Social Work	5	4	9
	M.A. (Chinese Stud.)	8	32	40
	M.A. (English Studies)	35	175	210
	M.A. (SE Asian Stud.)	24	28	52
	M.P.M.	11	2	13
	M.P.P.	16	16	32
	M.Soc.Sci. (Appl.Econs.)	14	12	26
	M.Soc.Sci. (Appl.Psychology)	7	18	25
	M.Soc.Sci. (Appl.Sociology)	19	47	66
	M.Soc.Sci. (Econs.)	18	21	39
	M.Soc.Sci. (Social Work)	7	24	31

ENROLMENT STATISTICS

FACULTY/INSTITUTE/SCHOOL	DEGREE/DIPLOMA	MALE	FEMALE	TOTAL
Business Administration	Asia-Pacific Executive MBA	56	15	71
	Asia-Pacific Executive MBA (conducted in Chinese)	92	21	113
	Dip.Bus.Admin.	6	0	6
	Grad.Dip.Bus.Admin.	38	22	60
	Joint MBA/LLM	2	5	7
	M.B.A.	139	66	205
	M.B.A. (conducted in Chinese)	79	45	124
	M.Sc. (Applied Finance)	44	25	69
	M.Sc. (Asia Pacific Human Resource Mgt.)	14	27	41
	M.Sc. (E-Business)	27	12	39
	M.Sc. (Fin.Eng.)	83	30	113
	M.Sc. (Marketing)	10	9	19
	M.Sc. (Mgt. of Tech.)	126	35	161
Engineering	Grad.Dip.Aviation Mgt.	8	4	12
	Grad.Dip.Env.Eng.	15	22	37
	Grad.Dip. (DTSC)	1	0	1
	M.Sc. (Chem.Eng.)	31	11	42
	M.Sc. (Civil Eng.)	122	32	154
	M.Sc. (Elect.Eng.)	195	42	237
	M.Sc. (Env.Eng.)	41	28	69
	M.Sc. (Ind.& Sys.Eng.)	131	33	164
	M.Sc. (Mat'l Sc. & Eng.)	36	26	62
	M.Sc. (Mech.Eng.)	119	4	123
	M.Sc. (Mechatronics)	28	2	30
	M.Sc. (SHE)	42	16	58
	M.Sc. (Transp.Sys. & Mgt.)	26	6	32
	NUS-UIUC M.Sc. (Chem.Eng.)	5	6	11
Law	Grad.Dip.Law	11	12	23
	Grad.Dip.Sing.Law	17	23	40
	Joint LL.M.	4	1	5
	LL.M.	18	17	35
	M.C.L.	1	1	2
	Postgraduate Dip.Law	0	1	1
Science	Grad.Dip.Analytical Chemistry	21	12	33
	Grad.Dip.Math	22	16	38
	M.Sc. (Clinical Pharmacy)	3	7	10
	M.Sc. (Mathematics)	9	2	11
	M.Sc. (Physics)	5	2	7
	M.Sc. (Statistics)	22	17	39

ENROLMENT STATISTICS

FACULTY/INSTITUTE/SCHOOL	DEGREE/DIPLOMA	MALE	FEMALE	TOTAL
School of Computing	M.Comp.	61	24	85
	M.Sc. (Comp. & Info.Sci.)	5	1	6
School of Design & Environment	M.A. (Urban Design)	4	6	10
	M.Arch.	69	72	141
	M.Sc. (Bldg.Sc.)	56	12	68
	M.Sc. (Project Mgt.)	60	24	84
	M.Sc. (Real Estate)	36	25	61
Graduate School of Dental Studies	M.D.S. (Endodontics)	2	3	5
	M.D.S. (Oral & Maxillofacial Surg.)	4	2	6
	M.D.S. (Orthodontics)	4	2	6
	M.D.S. (Prosthodontics)	2	2	4
Graduate School of Medical Studies*	M.Med. (Anaesthesia)	8	11	19
	M.Med. (Internal Medicine)	18	3	21
	M.Med. (Obst. & Gynae.)	5	2	7
	M.Med. (Paediatrics)	4	7	11
	M.Med. (Psychiatry)	3	1	4
	M.Med. (Surgery)	6	5	11
	M.Med. (Otorhinolaryngology)	2	0	2
	M.Med. (Orthopaedics)	8	0	8
	M.Med. (Ophthalmology)	13	9	22
	M.Med. (OM)	5	3	8
	M.Med. (Family Medicine)	19	12	31
	M.Med. (Diagnostic Radiology)	1	0	1
	M.Clinical Embryology	8	12	20
	M.Med. (PH)	5	6	11
	Grad.Dip.Geriatric Med.	10	3	13
	Grad.Dip.Occup.Med.	12	3	15
	Grad.Dip.Psycho.Med.	13	9	22
	Grad.Dip.Basic Ultrasonography (Obst. & Gynae.)	6	8	14
	Grad.Dip.Family Practice Dermatology	18	23	41
Institute of Systems Science	Grad.Dip.Systems Analy.	38	26	64
	M.Tech. (Knowledge Eng.)	109	27	136
	M.Tech. (Software Eng.)	206	75	281
Regional Language Centre	M.A. (Appl.Ling.)	2	9	11
Singapore-MIT Alliance	S.M. (AMM&NS)	11	3	14
	S.M. (HPCES)	38	11	49
	S.M. (CS)	7	3	10
	S.M. (MEBCS)	6	5	11
Total		**2,697**	**1,483**	**4,180**

** Figures for the Graduate School of Medical Studies are enrolment figures for courses conducted throughout the academic year 2000 – 1 (i.e. from July 2000 to June 2001).*

ENROLMENT STATISTICS

PERCENTAGE BREAKDOWN OF GRADUATE STUDENT ENROLMENT

BY RESEARCH

Engineering	42.64%
Science	17.76%
Medicine	11.75%
Arts & Social Sciences	8.31%
School of Computing	9.00%
Others (See Below)	10.54%

OTHERS

Business Administration	4.02%
Dentistry	0.23%
Law	0.43%
School of Design & Environment	1.68%
Centre for Financial Engineering	0.14%
Institute of Materials Research & Engineering	0.43%
Institute of Molecular Agrobiology	0.49%
Institute of Molecular & Cell Biology	1.10%
Kent Ridge Digital Labs	0.49%
National University Medical Institutes	0.52%
Regional Language Centre	0.03%
Singapore-MIT Alliance	0.98%
Total	**10.54%**

PERCENTAGE BREAKDOWN OF GRADUATE STUDENT ENROLMENT

BY COURSE WORK

Engineering	24.69%
Business Administration	24.59%
Arts & Social Sciences	12.99%
Institute of Systems Science	11.51%
School of Design & Environment	8.71%
Others (See below)	17.51%

OTHERS

Law	2.54%
Science	3.30%
School of Computing	2.18%
Graduate School of Dental Studies	0.50%
Graduate School of Medical Studies	6.72%
Regional Language Centre	0.26%
Singapore-MIT Alliance	2.01%
Total	**17.51%**

GRADUATE STATISTICS

FIRST DEGREE GRADUATES 2000 – 1

FACULTY/DEGREE	MALE	FEMALE	TOTAL
Arts & Social Sciences			
B.A.	382	1,190	1,572
B.A. (Hons)	69	155	224
B.Soc.Sci. (Hons)	83	175	258
Sub-Total	**534**	**1,520**	**2,054**
Business Administration			
B.B.A.	141	279	420
B.B.A. (Hons)	91	89	180
Sub-Total	**232**	**368**	**600**
Dentistry			
B.D.S.	19	16	35
Sub-Total	**19**	**16**	**35**
Engineering			
B.Eng.	816	280	1,096
B.Tech. (Elect.)	62	13	75
B.Tech. (Mech.)	35	2	37
B.Tech. (Mfg.)	21	6	27
Sub-Total	**934**	**301**	**1,235**
Law			
LL.B.	58	96	154
Sub-Total	**58**	**96**	**154**
Medicine			
M.B.,B.S.	97	42	139
Sub-Total	**97**	**42**	**139**
Science			
B.Sc.	213	496	709
B.Sc. (Hons)	102	140	242
B.Appl.Sci.	43	118	161
B.Sc. (Pharm.)	17	46	63
Sub-Total	**375**	**800**	**1,175**

GRADUATE STATISTICS

FACULTY/DEGREE	MALE	FEMALE	TOTAL
School of Computing			
B.Comp.	165	104	269
B.Comp. (Hons)	2	0	2
B.Sc. (Comp. & Info.Sci.)	19	12	31
B.Sc. (Comp. & Info.Sci.) (Hons)	63	17	80
Sub-Total	**249**	**133**	**382**
School of Design & Environment			
B.A. (Arch.)	53	57	110
B.A. (Arch.) Honours	1	0	1
B.Sc. (Building)	43	81	124
B.Sc. (Real Estate)	27	61	88
Sub-Total	**124**	**199**	**323**
Grand-Total	**2,622**	**3,475**	**6,097**

HIGHER DEGREE AND DIPLOMA GRADUATES (2000/2001)

FACULTY/SCHOOL/INSTITUTE	DEGREE/DIPLOMA	MALE	FEMALE	TOTAL
Arts & Social Sciences	Grad.Dip.English Studies	2	2	4
	Grad.Dip.Social Research	5	4	9
	Grad.Dip.Social Work	10	21	31
	M.A.	11	20	31
	M.A. (Chinese Stud.)	12	18	30
	M.A. (English Studies)	15	49	64
	M.A. (SE Asian Stud.)	16	21	37
	M.P.P.	13	14	27
	M.Soc.Sci.	10	3	13
	M.Soc.Sci. (Appl.Econs.)	23	11	34
	M.Soc.Sci. (Appl.Sociology)	1	9	10
	M.Soc.Sci. (Econs.)	13	9	22
	M.Soc.Sci. (Social Work)	0	2	2
	Ph.D.	2	4	6
Sub-Total		**133**	**187**	**320**
Business Administration	Dip.Bus.Admin.	2	1	3
	Grad.Dip.Bus.Admin.	31	21	52
	Asia-Pacific Executive M.B.A.	20	6	26
	Asia-Pacific Executive M.B.A. (conducted in Chinese)	33	7	40
	Joint MBA/LLM	4	0	4
	M.B.A.	86	36	122
	M.B.A. (conducted in Chinese)	98	49	147
	M.Sc. (Applied Finance)	23	10	33
	M.Sc. (Asia-Pacific Human Resource Mgt.)	6	11	17
	M.Sc. (Mgt. of Tech.)	93	35	128
	M.Sc. (Financial Engineering)	36	12	48
	M.Sc. (Marketing)	9	21	30
	M.Sc. (Management)	18	20	38
	Ph.D.	4	2	6
Sub-Total		**463**	**231**	**694**

GRADUATE STATISTICS

FACULTY/SCHOOL/INSTITUTE	DEGREE/DIPLOMA	MALE	FEMALE	TOTAL
Dentistry	M.Sc.D.	0	0	0
	Ph.D.	1	0	1
Sub-Total		**1**	**0**	**1**
Engineering	Grad.Dip.Aviation Mgt.	8	0	8
	Grad.Dip.Env.Eng.	4	6	10
	Grad.Dip. (DTSC)	23	1	24
	M.Eng.	279	68	347
	M.Sc. (Chem.Eng.)	9	2	11
	M.Sc. (Civil Eng.)	94	21	115
	M.Sc. (Elect.Eng.)	156	24	180
	M.Sc. (Env.Eng.)	21	21	42
	M.Sc. (Ind. & Sys.Eng.)	68	10	78
	M.Sc. (Mat'l Sc. & Eng.)	20	13	33
	M.Sc. (Mechatronics)	33	0	33
	M.Sc. (Mech.Eng.)	60	7	67
	M.Sc. (SHE)	24	8	32
	M.Sc. (Transp.Sys. & Mgt.)	11	3	14
	Ph.D.	42	9	51
Sub-Total		**852**	**193**	**1,045**
Law	Grad.Dip.Law	5	4	9
	Grad.Dip.Sing.Law	15	22	37
	Postgraduate Dip.Law	0	0	0
	Joint LL.M.	0	1	1
	LL.M.	14	15	29
	M.C.L	1	1	2
Sub-Total		**35**	**43**	**78**
Medicine	M.D.	2	0	2
	M.Sc.	9	26	35
	Ph.D.	11	9	20
Sub-Total		**22**	**35**	**57**
Science	Grad.Dip.Analytical Chemistry	7	6	13
	Grad.Dip.Math	2	3	5
	M.Sc.	65	57	122
	M.Sc. (Mathematics)	3	0	3
	M.Sc. (Pharm.)	4	2	6
	M.Sc. (Statistics)	5	3	8
	Ph.D.	35	17	52
Sub-Total		**121**	**88**	**209**
Graduate School of Dental Studies	M.D.S. (Oral & Maxillofacial Surg.)	0	0	0
	M.D.S. (Orthodontics)	0	3	3
Sub-Total		**0**	**3**	**3**

GRADUATE STATISTICS

FACULTY/SCHOOL/INSTITUTE	DEGREE/DIPLOMA	MALE	FEMALE	TOTAL
Graduate School of Medical Studies	Grad.Dip.Basic Ultrasonography	5	4	9
	Grad.Dip.Psychotherapy	13	9	22
	Grad.Dip.Family Practice Dermatology	7	13	20
	Grad.Dip.Occupational Medicine	8	1	9
	M.Med. (Family Medicine)	16	12	28
	M.Med. (Obstetrics & Gynaecology)	2	2	4
	M.Med. (Occupational Medicine)	4	3	7
	M.Med. (Public Health Medicine)	4	6	10
	M.Med. (Anaesthesiology)	4	8	12
	M.Med. (Diagnostic Radiology)	0	0	0
	M.Med. (Internal Medicine)	0	0	0
	M.Med. (Ophthalmology)	9	7	16
	M.Med. (Paediatric Medicine)	3	7	10
	M.Med. (Psychiatry)	2	1	3
	M.Med. (Surgery)	4	2	6
	M.Med. (Otorhinolaryngology)	1	0	1
	M.Med. (Orthopaedic Surgery)	3	0	3
	M.Clin.Embryology	3	7	10
Sub-Total		**88**	**82**	**170**
School of Computing	M.Comp.	15	16	31
	M.Sc	37	12	49
	M.Sc. (Comp. & Info.Sci)	23	3	26
	Ph.D.	3	2	5
Sub-Total		**78**	**33**	**111**
School of Design & Environment	M.A. (Urban Design)	3	5	8
	M.Arch.	33	24	57
	M.Sc. (Estate Mgt.)	6	4	10
	M.Bldg.Sc	0	1	1
	M.Sc. (Bldg.Sc.)	28	3	31
	M.Sc. (Project Mgt.)	13	6	19
	M.Sc. (Real Estate)	11	9	20
	M.Sc. (Building)	9	1	10
	Ph.D.	0	0	0
Sub-Total		**103**	**53**	**156**
Institute of Materials Research & Eng	M.Eng.	1	0	1
Sub-Total		**1**	**0**	**1**
Institute of Molecular & Cell Biology	D.Sc.	1	0	1
	M.Sc.	2	2	4
	Ph.D.	7	0	7
Sub-Total		**10**	**2**	**12**
Institute of Systems Science	Diploma in Systems Analysis	39	24	63
	M.Tech. (Knowledge Eng.)	21	10	31
	M.Tech. (Software Eng.)	54	33	87
Sub-Total		**114**	**67**	**181**
Kent Ridge Digital Labs	M.Sc.	2	1	3
Sub-Total		**2**	**1**	**3**
National University Medical Institute	M.Sc.	1	2	3
	Ph.D.	1	0	1
Sub-Total		**2**	**2**	**4**

GRADUATE STATISTICS

FACULTY/SCHOOL/INSTITUTE	DEGREE/DIPLOMA	MALE	FEMALE	TOTAL
Regional English Language Centre	M.A. (Appl.Ling.)	1	5	6
Sub-Total		**1**	**5**	**6**
Singapore-MIT Alliance	M.Eng. (SMA)	5	5	10
	S.M. (AMM & NS)	11	3	14
	S.M. (HPCES)	15	4	19
Sub-Total		**31**	**12**	**43**
Total		**2,057**	**1,037**	**3,094**

INTERNATIONAL VISITORS

HE MR TOLUED AHMAD
High Commissioner
Pakistan High Commission
Singapore

PROF NICULAE NAPOLEON ANTONESCH
Rector
University of Ploiesti
Romania

THE HONOURABLE MR PETER BEATTIE, MP
Premier & Minister for Trade
Queensland, Australia

HE DR HADIF AL DHAHIRI
Vice-Chancellor
United Arab Emirates University
UAE

HE MR MICHEL FILHOL
French Ambassador
French Embassy
Singapore

DR RODERICK D FRASER
President
University of Alberta
Canada

DR SHIRLEY ANN JACKSON
President
Rensselaer Polytechnic Institute
Troy, New York
USA

PROF HANS PETER JENSEN
Vice-Chancellor – Technical University of Denmark &
Deputy Chairman – Danish College of Vice-Chancellors
Denmark

DR EDILBERTO DE JESUS
President
Far Eastern University
Philippines

HE MR JORGEN ORSTROM MOLLER
Ambassador
Royal Danish Embassy
Singapore

PROF PAN YUNHE
President
Zhejiang University
China

DR MARTHA PIPER
President
University of British Columbia
Canada

PROF DR ING. DRES GUNTER PRITSCHOW
Rector
University of Stuttgart
Germany

MR WARSITO RASMAN
Rector
Wijaya Kusuma Surabaya University
Indonesia

HE MR VOLKER SCHLEGEL
German Ambassador
German Embassy
Singapore

PROF P B SHARMA
Vice-Chancellor
Rajiv Gandhi Technological University
India

DR MICHAEL STEVENSON
President & Vice-Chancellor
Simon Fraser University
Canada

PROF JAN-ERIC SUNDGREN
President
Chalmers University of Technology
Sweden

PROF MICHAEL E THOMAS
Provost/Vice President
Georgia Institute of Technology
USA

PROF WANG CHENG
Vice-President
Huazhong University of Science & Technology, Wuhan
China

PROF WANG YIQUEN
President
Yansuan University
China

DR OTTO WIESHEU
Bavarian State Minister
Economic Affairs, Transport & Technology
Germany

DR IR H G J DE WILT
President
Eindhoven University of Technology
The Netherlands

BENEFACTIONS

Total donations received in the year for the period 1 July 2000 to 30 June 2001 amounted to $49,056,881.25. The following list sets out the donations of $25,000 or more received by the University during the same period. The University records its thanks to all donors.

NAME OF DONOR	AMOUNT RECEIVED $
Government of Singapore	26,905,986.09
Singapore Totalisator Board	6,229,183.77
Ong Tiong Tat Executor of the Estate of Koh Choon Joon Deceased	2,145,730.00
National Kidney Foundation	2,002,430.56
Lee Foundation, Singapore	1,680,555.06
Parkway Healthcare Foundation	1,500,000.00
Singapore Press Holdings Ltd	1,012,586.79
Wong Hock Boon (Emeritus Prof)	600,000.00
PSA Corporation Limited	538,500.00
Chartered Semiconductor Manufacturing Ltd	396,500.00
Shaw Foundation Pte	235,000.00
Lee Foundation, States of Malaya	210,000.00
Sung Wing Heun (Dr)	154,165.00
Children's Cancer Foundation	150,394.50
Kwan Im Thong Hood Cho Temple	148,000.00
Development Bank of Singapore Ltd	115,000.00
Various Donors (Singapore Police Force)	113,856.05
Sung Siew Khim nee Yap	110,000.00
Glaxo Wellcome Manufacturing Pte Ltd	104,000.00
National University of Singapore Society	103,328.40
Alumni Association	100,530.00
ExxonMobil Singapore Pte Ltd	100,050.00
Du Pont Singapore Pte Ltd	100,000.00
Lien Foundation	100,000.00
Oversea-Chinese Banking Corporation Ltd	100,000.00
Singapore Bus Services Limited	100,000.00
United Overseas Bank Ltd	100,000.00
Ministry of Education	65,758.72
ExxonMobil Asia Pacific Pte Ltd	57,200.00
Keppel Corporation Ltd	55,000.00
Tan Kah Kee International Society	55,000.00
Estate of Chao Tzee Cheng	50,422.68
Allgreen Properties Limited	50,000.00

NAME OF DONOR	AMOUNT RECEIVED $
Esso Singapore Pte Ltd	50,000.00
Johnson & Johnson International	50,000.00
Koh Tiak Chye (Mr)	50,000.00
Kuok (Singapore) Ltd	50,000.00
NLC Construction Pte Ltd	50,000.00
Overseas Union Bank Ltd	50,000.00
Pidemco Land Limited	50,000.00
Singapore Technologies Engineering Ltd	50,000.00
Times Publishing Ltd	50,000.00
Lim Siew Ming Arthur (Prof)	46,200.00
Anonymous Donor	43,405.50
Bex. Com Pte Ltd	40,000.00
Singapore Rubber Millers Association	40,000.00
The Hokkien Foundation Singapore Hokien Huay Kuan	40,000.00
Singapore Pools Pte Ltd	36,000.00
Institute of Molecular Agrobiology	35,000.00
Motorola Foundation	34,636.00
Defence Science & Technology Agency	34,000.00
Singapore Tourism Board	32,448.34
National University Hospital (S) Pte Ltd	32,025.00
Astrazeneca Singapore Pte Ltd	30,810.75
Joseph Tan Jude Benny Anne Cho	30,800.00
Hewlett Packard Singapore (Pte) Ltd	30,000.00
Singapore Labour Foundation	30,000.00
Tech Semiconductor Singapore Pte Ltd	30,000.00
The Building and Estate Management Alumni (Bema)	30,000.00
Bechtel Foundation	28,704.00
Singapore Power Ltd	26,500.00
Andermatt Investments Pte Ltd	25,000.00
Kiang Ai Kim (Prof)	25,000.00
Kiang Peck Wan (Mrs)	25,000.00
Sincere Watch Limited	25,000.00
Suntec City Development Pte Ltd	25,000.00
The Sanwa Bank Foundation	25,000.00