Vision
Towards a Global Knowledge Enterprise
A leading global university centred in Asia, influencing the future

Mission
To transform the way people think and do things through education, research and service

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* This report covers the Academic Year 2009/2010 (August 2009 to July 2010)
President’s Message

It gives me great pleasure to present this report on NUS for the academic year 2009-10. The pages that follow capture our community’s quest for excellence – faculty, staff, students, alumni and friends – in pursuit of our vision of becoming a leading global university centred in Asia.

We have much to be proud of as NUS continues to flourish and grow. NUS has nurtured and retained faculty who have achieved international eminence as scholars, while competing with leading universities to recruit the best minds. We have made much progress in enhancing and in several cases, transforming the quality of the education we offer. In addition, many members of our University community have also contributed to country and society through their outstanding service and accomplishments.

As we reflect on what we have achieved, we must not forget to keep our singular focus on what we have to continue to do. We must constantly challenge ourselves to push the boundaries of excellence with imagination and strategic boldness. Are we stretching our students sufficiently and giving them the opportunities to discover and grow, so that they can achieve more than they had thought possible? Is the research we pursue of the highest quality, addressing important questions and making an impact? Is our NUS community becoming even more dynamic, vibrant and connected to our University? Are members of NUS making their mark and contributing significantly in our globalised world?

We start the new academic year with several major initiatives which will help us advance in all these dimensions. I would like to particularly highlight NUS’ new University Town. Two of the four Residential Colleges, the Graduate Residence and other state-of-the art facilities will be opened next year, providing our students and community many exciting new opportunities to excel. In addition, the opening of the National Research Foundation’s Campus for Research Excellence and Technological Enterprise – which is co-located at University Town – will enable our faculty and students to interact and work with world-class researchers from some of the world’s best universities.

Colleagues and friends – may the excellence we strive for as a University continue to be the hallmark of our community and take us to the forefront in global education and research.

Tan Chorh Chuan
President
Raising Our International Profile

- The **NUS Global Asia Institute (NUS-GAI)** invited luminaries to be Associates to promote its mission and involve NUS-GAI in key academic projects and research. The Associates are: Dr Tan Khee Giap (Adjunct Senior Fellow, Institute of Policy Studies, Lee Kuan Yew School of Public Policy), Prof Peter Rogers (Gordon McKay Professor of Environmental Engineering and Professor of City and Regional Planning, Harvard University), Prof K N Satyanarayana (Indian Institute of Technology, Madras, India), Dr Bindeshwar Pathak (Founder, Sulabh International, Social Service Organisation) and Prof Ryosuke Shibaski (Director, Center for Spatial Information Science, University of Tokyo).

- Former United Nations Secretary-General and Nobel Laureate Prof Kofi Annan delivered his first public lecture titled “Asia and Africa: Past Lessons, Future Ambitions” in his capacity as the inaugural Li Ka Shing Professor of the Lee Kuan Yew School of Public Policy. Close to 1,000 guests attended the lecture at the University Cultural Centre. Prof Annan was also hosted to lunch by NUS President Prof Tan Chorh Chuan at the University.

- NUS President Prof Tan Chorh Chuan attended the meeting of the Global University Leaders Forum at the 40th **World Economic Forum 2010 Annual Meeting** in Davos-Klosters, Switzerland. A member of the WEF’s Global Agenda Council on Pandemics, Prof Tan was also invited to speak at a panel discussion on “Germs and Globalisation”.

- The Duke-NUS Graduate Medical School Singapore hosted a conference in December 2009 to inaugurate the **Programme in Emerging Infectious Diseases**. Close to 250 doctors, scientists and public health officials from Singapore and overseas converged to discuss issues on global emerging infectious diseases and the prevention and control of such diseases.
• His Royal Highness Prince Andrew, the Duke of York, KG graced the Commonwealth Scholarship and Fellowship Plan (CSFP) 50th Anniversary reception at the University to celebrate the CSFP's long-standing tradition of recognising and promoting the highest level of intellectual development. NUS will offer two graduate scholarships under the CSFP, the first institution in Singapore to do so, to encourage talent development and research collaborations between Singapore and the Commonwealth countries.

• Senior Minister and Coordinating Minister for National Security Prof S Jayakumar launched the Centre for International Law (CIL), which is a collaboration between NUS, the Attorney-General's Chambers and the Ministry of Foreign Affairs. The Centre aims to be an intellectual hub and a thought leader for the teaching, research and development of international law and policy in the region.

• The Department of Pharmacy’s inaugural “Educating Pharmacists@Asia” symposium brought together 14 leading experts from nine universities to share insights on “Educating Future Pharmacists for Patient-Centric Services and Research”. The two-day symposium, which also marked the 105th year of pharmacy education in Singapore, involved more than 75 participants from 10 countries around the world.

• The Lee Kuan Yew School of Public Policy hosted the annual Asia Vision 21 conference, together with the Harvard University Asia Center and ASH Center for Democratic Governance and Innovation at Harvard Kennedy School. It carried the theme “Values, Conflicts and Change in Asia”. Launched in 1999, the Asia Vision 21 conference brings together government officials, business leaders and scholars from the United States and Asia to examine long-term issues and concerns facing Asia.
• The Logistics Institute-Asia Pacific (TLI-Asia Pacific) launched Asia Pacific's first Sustainable Supply Chain Centre in partnership with leading logistics company DHL. Hosted at TLI-Asia Pacific, the Sustainable Supply Chain Centre of Asia Pacific will play a leading role in developing new solutions and best practices in sustainable supply chains and addressing challenges specific to the region.

• The 8th ASEAN Youth Cultural Forum, hosted by NUS for the first time, was organised by the ASEAN University Network (AUN) to enhance and strengthen mutual understanding, friendship and cooperation among ASEAN youths. Close to 100 participants from 16 AUN member universities attended lectures, workshops and field trips where they explored the continuing relevance of tradition in the context of Asia’s relentless progress towards global cosmopolitanism.

• NUS offered two new international summer programmes called Semester at Sea and the Mayan Route. The Semester at Sea is a shipboard programme for global study abroad operated by the non-profit Institute for Shipboard Education in conjunction with the University of Virginia. Two NUS students set sail for the first time on the Summer 2010 voyage which stopped at Canada, Spain, Italy, Croatia, Greece, Turkey, Egypt, Morocco and the US. The Mayan Route is a four-week summer programme in the south of Mexico, where students attend lectures at the Tecnológico de Monterrey and learn about the history and culture of the Mexican state of Chiapas.

• To enhance student exchange experience, the Peer Advising Programme was initiated to facilitate the integration of inbound exchange students (to NUS) as well as ease the preparation process for outbound exchange students (from NUS). Peer Advisors, comprising students who have been on exchange, advise and organise events for students so that they can maximise their exchange experience.

• A new internship scheme called the NUS-EUSA programme was introduced to provide students an opportunity for internship placements in New York or Boston in the US. EUSA is an international, non-profit study abroad organisation that places nearly 2,000 students in comprehensive academic internship programmes each year, spanning North America and Europe. It involves a broad spectrum of industries including finance, media and communications, healthcare and education, and NGOs.
Making a Global Impact

• NUS President Prof Tan Chorh Chuan was elected to the Association of Pacific Rim Universities (APRU) Steering Committee, which provides leadership for the consortium, at the 13th APRU Annual Presidents Meeting. Hosted by the California Institute of Technology, the annual meeting was attended by 24 university presidents from around the world. Prof Tan is also the current chairman of the International Alliance of Research Universities (IARU).

• NUS was ranked 3rd amongst the leading universities in Asia in the 2010 Quacquarelli Symonds (QS) Asian University Rankings (AUR). Published annually, the QS AUR ranks Asia’s top 500 universities on criteria such as the quality of research through citations and the proportion of international staff and students.

• The University attained 14th placing in the inaugural Nature Asia-Pacific Publishing Rankings 2009, based on the newly established Nature Asia-Pacific Publishing Index. The Index tracks research published by over 400 institutions from the Asia-Pacific region in Nature Publishing Group’s portfolio of some 30 highly cited Nature-branded journals within a 12-month period. NUS is the only university in Singapore listed in the top 15.

• The NUS Logistics Institute-Asia Pacific (TLI-Asia Pacific) clinched the Education & Training Award at the first Supply Chain Asia Logistics Awards 2009 for its leadership role in education and training in Asia’s supply chain and logistics industry. TLI-Asia Pacific also secured the Best Education Course Provider at the Asian Freights and Supply Chain Awards 2010, marking the institute’s eighth consecutive win since 2003.

• NUS is the only Asian university ranked 8th among the top 10 in a study, Bibliometric Profiles of Management Research at the Erasmus University 1999-2006, conducted by the Center for Science and Technology Studies (CWTS) at Leiden University, the Netherlands in October 2009.

• The Lee Kuan Yew School of Public Policy is among the three Singapore think tanks which were on the list of 29 “research centres of excellence” in Asia, recognised by the New York-based Rockefeller Foundation in December 2009.

• The NUS Business School was rated first among all business schools in Asia, 25th in the Eduniversal Global Top 100 Business Schools, and was awarded five Palmes, which is the highest category in the Eduniversal 2009 Rankings.
The Asia-Pacific Executive Master of Business Administration (APEX) Programme offered by the NUS Business School was ranked 11th globally in the Financial Times Executive MBA (EMBA) Rankings 2009. It rose nine spots from its previous standing of 20th position. The programme was also ranked 25th for ‘Career Progression’, a big jump from its previous position of 53rd.

The Financial Times rated the CEMS Master in Management Programme the top programme in the world in October 2009. The NUS Business School, being a full academic member of CEMS (previously known as the Community of European Management Schools and International Companies), was the only school in Asia to be awarded this distinction. CEMS is a strategic alliance of leading business schools and multinational companies reputed to provide the highest standards of teaching and research.

The NUS Business School attained the European Quality Improvement System (EQUIS) accreditation in December 2009, joining other premier business schools such as London Business School and Judge Business School at the University of Cambridge. EQUIS, which is supported by an international body of academics and professionals, is a leading international system of quality assessment, and accreditation of higher education institutions in management and business administration.
Our Students

ENROLMENT FOR ACADEMIC YEAR 2009/2010

Total enrolment : 35,154
Undergraduates : 25,168
Graduate students : 9,986
International students : 11,755

<table>
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<tr>
<th>Faculty/School/Institute</th>
<th>Undergraduate</th>
<th>Graduate</th>
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</thead>
<tbody>
<tr>
<td>Arts &amp; Social Sciences</td>
<td>5,559</td>
<td>897</td>
</tr>
<tr>
<td>Business</td>
<td>2,196</td>
<td>580</td>
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<tr>
<td>Computing</td>
<td>1,359</td>
<td>555</td>
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<tr>
<td>Dentistry</td>
<td>178</td>
<td>67</td>
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<tr>
<td>Design &amp; Environment</td>
<td>1,712</td>
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<tr>
<td>Duke-NUS Graduate Medical School Singapore</td>
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<td>Engineering</td>
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<td>2,895</td>
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<tr>
<td>Integrative Sciences &amp; Engineering</td>
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<tr>
<td>Law</td>
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<td>189</td>
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<tr>
<td>Medicine</td>
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<tr>
<td>Music</td>
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<td>10</td>
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<tr>
<td>Public Policy</td>
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<tr>
<td>Science</td>
<td>4,520</td>
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<tr>
<td>Joint multi-disciplinary programmes</td>
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<td>–</td>
</tr>
<tr>
<td>Institute of Systems Science</td>
<td>–</td>
<td>648</td>
</tr>
<tr>
<td>Singapore-MIT Alliance</td>
<td>–</td>
<td>162</td>
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<tr>
<td>The Logistics Institute-Asia Pacific</td>
<td>–</td>
<td>19</td>
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<tr>
<td>Risk Management Institute</td>
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<td>244</td>
</tr>
<tr>
<td>Total</td>
<td>25,168</td>
<td>9,986</td>
</tr>
</tbody>
</table>

GRADUATION STATISTICS: CLASS OF 2010

Bachelor degrees : 6,049
Total higher degrees : 3,355
• Graduate Diplomas : 338
• Master degrees : 2,499
• Ph.D degrees : 518
STUDENTS MAKING A DIFFERENCE AROUND THE WORLD

- **Amoz Hor Jin Yi (Arts and Social Sciences)** won the Outstanding Delegate Award at the Princeton Interactive Crisis Simulation Conference.

- **Neha Prem Prakash (Arts and Social Sciences) and Wong Wei Ming (Computing)** represented Singapore as Youth Fellows at the International Communication Union Youth Forum in Geneva, Switzerland.

- Thirteen NUS athletes represented Singapore at the 25th Southeast Asian Games held in Laos in December 2009 and garnered 4 Gold, 4 Silver and 2 Bronze medals. Among these, **Ong Jun Hong (Business)** won a Gold medal in the Men’s 10m Air Rifle Team category while **Jasmine Ser Xiang Wei (Business)** won a Gold medal in the Women’s 50m Rifle 3 Positions Individual category. **Zhang Jin (Business)** won a gold medal in the individual Air Rifle competition and a second gold for the Air Rifle team.

- **Anderson Quah Shu Chip, Ritchie Goenawan, Jonathan Loh and Lai Wai Kit (Business)** were the first runner-up team in the Champions Trophy Case Competition organised by the University of Auckland Business School, New Zealand.

- **Huang Chung-En, Geetali Kumar and Rahul Mahesh Gupta (Business)** were the winners of the inaugural NUS Asian MBA Stock Pitch Competition.

- **Team Mentor Dr Sai Yayavaram (Business)** together with his winning team comprising **Vincent Low Kah Kee, Chan Fun Ruey, Meghna Kiran Desai (Business) and Jonathan Ong Hock Choon (Engineering)** won the prestigious Scotiabank International Case Competition, Canada.

- **Team Greenatics** comprising **Lai Wai Kit, Lock Hui Min, Ooi Tong Wei and Ritchie Goenawan (Business)** emerged the winner of the 2010 edition of Peak Time Worldwide Competition for business students at the Stockholm School of Economics in Riga, Latvia.

- **Toh Yongrui, Caroline Ng Shi Yun, Hong Dongsheng and Chen Zhaonan (Business)** were the first runner-up team in the Thammasat Undergraduate Business Challenge held in Bangkok, Thailand. The team was also the first runner-up in the NUS-DBS International Case Competition.

- **Business students Yeung Chia Li, Huang Chung-En, Shashwat Dhakal, Alexander Freberg and Arthur Leung Yi Cheong** emerged champions at the Asian round of Venture Capital Investment Competition in Hyderabad, India.

- **Claudia Szabo (Computing)** was conferred the ACM Special Interest Group on Simulation and Modeling Best Ph.D. Student Paper Award for her paper “A Time-Based Formalism for the Validation of Semantic Composability”, which she co-authored with Assoc Prof Teo Yong Meng at the Winter Simulation Conference 2009, in the US.
Apoorv Agrawal (Computing) represented NUS and Singapore at the Harvard National Model United Nations (HNMUN) 2010 at Harvard University, US. HNMUN is one of the most reputed political conferences which provides a world-class political simulation environment.

A team of Computing students John Yap Yin Gwee, Cao Yuanying, Rosalie Hooi Chet Yeu, Tan Jian Wei, Eugene Seah Zhu En together with Charles Pang T-How (Engineering) was presented with the “Best Long Machinima award (School)” for the film “The Homecoming” and “Best TVC award (School)” for the film “Smoking is Good” at the SHOOOT Fiesta 2009, an initiative which received support from the Ministry of Information, Communications and the Arts and Creative Community Singapore.

Ho Swee Tiang (Dentistry) was granted the First Award by the Dentsply Asia/ South East Asia Association for Dental Education Student Clinician Programme in Thailand.

Tiffany Loy Kai Ti (Design and Environment) won the Bombay Sapphire Designer Glass Competition, Singapore.


Betty Tsai’s (Engineering) work on multilayer thin films at nanoscale won her the top prize at the American Institute of Chemical Engineers Western Regional Conference in the US.

A team led by Harrif Santo comprising Kwa Chin Soon, James Wijaya and Liu Lihui (Engineering) won first prize at the Asia Pacific Economic Cooperation – Introducing and Demonstrating Earthquake Engineering in Schools (APEC- IDEERS) competition. The second runner-up was an Engineering Science Programme team led by Siah Sin Cheng with team members Li Peifeng, Melvin Fong and Cai Dingyan.
• Olivier Lambercy (Engineering) won the Best Presentation Award for his paper “Rehabilitation of Grasping and Forearm Pronation/Supination with the Haptic Knob” at the 11th IEEE International Conference on Rehabilitation Robotics in Japan.

• Kevin Wong Jiayao, Muhammad Ariff Mahmud Munshi, Edmund Khoo Pek Chua, Chua Tsin Li and Phoong Yoke Xi (Engineering) clinched second prize at the Idea to Product Global Competition, Cockrell School of Engineering Global Championship at the University of Texas in Austin, US.

• Jason Teo Kian Jin (Engineering) and NUS alumnus Maria Linawaty won first prize at the European Design Competition for their invention of the Smart2oon Solar Management System.

• Bai Zhiyong (Engineering) and Tay Shijia (Business) emerged champions of the Tata Crucible Campus Quiz, Singapore.

• Kent Ridge Urban Concept Eco-car 2 (KRUCE 2), which was designed and built by a team of engineering students, emerged as the Overall Champion in the Urban Concept category of the first Shell Eco-Marathon Asia 2010, held in Malaysia. It also clinched three other awards including the Autodesk Innovative Design Award, Safety Award and Technical Innovation Award in the competition, which saw the participation of some 80 teams from 10 Asian countries.

• Dominic Tan Wei’An, Muhammad Aidil B Zulkifli and Zanetta Joan Sit Ying Li (Law) won the Asia Pacific Regional Finals of the prestigious Manfred Lachs Space Law Moot Court Competition in Singapore.

• Marcus Lim Tao Shien (Law/Business) won the Best Speaker award at the inaugural tri-university business schools debate at the Discover Europe Fair 2009.

• Pauline Chan Ng Poh Lin, Chen Qingyan, Melissa Chua Hui Xin, Linus Lau Jian Fa, and Thng Zheng Xian (Medicine) won the Inter Medical School Physiology Quiz in Malaysia. Melissa won the first individual prize at the Quiz.

• National triathlete Mok Ying Ren (Medicine) came in first at the Singapore Biathlon 2010.

• Abigail Sin (Music), winner of an unprecedented number of international competitions, was named the region’s first Young Steinway Artist. She joins an elite group of 18 Young Steinway Artists from around the world.
• **Sun Yi (Music)** was the recipient of the Encouragement Prize at the International Marimba Competition in Austria.

• **Wu Dai Dai (Music)** clinched second prize at the 21st Gisborne International Music Competition, New Zealand.

• Three music students received accolades at the 2009 National Piano & Violin Competition, Singapore. They were: **Azariah Tan** who won first prize in the Piano Senior Category, **Li Zhen** who clinched the first prize in the Piano Artist Category and **Zhao Meng Chan** who won first prize in the Violin Artist Category.

• **Amarendu Nandy (Public Policy)** was the first student to earn a Ph.D. degree from the Lee Kuan Yew School of Public Policy. His thesis topic was Essays in International Migration.

• **Sriganesh Lokanathan, Amit Verma, Alejandro Gonzales and Marianne Marker (Public Policy)** clinched the Best Microeconomics of Competitiveness Student Paper for their paper titled “Ecotourism in Malaysia” at the Institute for Strategy and Competitiveness at Harvard Business School, US.

• **Gwynne Lim Shimin (Science)** won the prestigious International Fulbright Science and Technology Award 2009, the second Singaporean to have received a Fulbright scholarship.

• A team of science students, led by **Herman Teo Jia Han** and comprising **Cheng Khor Yng, Genevieve Heng Li Huang, Hoong Mei Hui, Huang Weiling, Lam Ying Feng, Lee Pooi San, Vanda Lim Li Xin, Lim May Ping, Jeanne Lim Shuying, Vanessa Quek, Saputra Anthony, Sng Jingting, Alina Tee Hui Teng and Yeo Ya Ting**, was the Grand Winner for its concept of the dragon brand bird’s nest ice cream at the Food Product Concept Competition organised by the Singapore Food Manufacturers’ Association.

• **Yu Peigen, Bing Zhujun, Cynthia Chen Huizi, Chung Hui Ling, Dai Qing Qing, Huang Yunle, Ip Pui Ying, Lee Hui Ling, Sim Yanling, Steffiana Yuliani Wijaya, Tan Qing Wen, Tan Wan Ping and Fenella Teng Wenhui (Science)** also won the Most Innovative Award for Flossy Bites, a cracker containing crispy pork floss and crunchy sunflower seeds as filling, at the Food Product Concept Competition, Singapore.

• **Mandy Ow Yen Ling (Science)** was the first runner-up at the 3rd Annual International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Student Research Competition, at the ISPOR 14th Annual Meeting in the US.

• **Shaikh Mohammed Ishaque (Science)** represented Singapore in the Novartis Biotechnology Leadership Camp at the Novartis Institute for Biological Research in the US.
• **Liu Chang** (*Science*) won the 2009 Ray Wu Prize awarded by the Ray Wu Memorial Fund for Excellence in Life Sciences, China.

• **Flag Day 2009**, the University’s annual charity drive held in conjunction with Rag Day, raised S$443,375.35 for beneficiaries from 20 Voluntary Welfare Organisations under the Community Chest, Singapore.

• The **NUSSU Volunteer Action Committee** was conferred the Medal of Commendation at the Singapore Youth Award 2009 presentation ceremony held at the Istana.

• **Kent Ridge Hall** launched its 30th anniversary with a charity run which raised close to S$60,000 for the Children’s Cancer Foundation, Singapore.

• NUS was the overall champion at the **24th Triennial Intervarsity Games**, Singapore, which saw the participation of some 635 athletes and officials from the University of Hong Kong, Universiti Malaya, Universitas Indonesia, Macau University, Fudan University and NUS.

• NUS emerged the overall champion at the **Singapore Universities Games**, an annual competition organised by the Singapore Universities Sports Council.

• **Kent Ridge Hall’s** float “Kravings” was voted the second most favourite float at the Chingay Parade 2010, Singapore.

• **KR Rockers** from Kent Ridge Hall emerged Champion in the Band Category of the Talent Quest 2010 Competition, Singapore.

• The **NUS Women’s Dragon Boat Team** won the Prime Minister’s Challenge Trophy at the Singapore Dragon Boat Festival 2010.
Our Faculty and Staff

THE NUS COMMUNITY

Total faculty and staff : 9,081
Faculty members : 2,402
Research staff : 2,391
Exec & Prof staff : 1,869
General staff : 2,419

RECIPIENTS OF THE NUS UNIVERSITY AWARDS 2010

Outstanding Educator Award

Assoc Prof Phil Chan Aik Hui
(Science)

Dr Narayanan Ganapathy
(Arts and Social Sciences)

Outstanding Researcher Award

Prof Ong Chong Kim
(Science)

Prof Phoon Kok Kwang
(Engineering)
Young Researcher Award

Prof Simon Chesterman (Law)

Assoc Prof Dagomir Kaszlikowski (Science/Centre for Quantum Technologies)

Dr Paul MacAry (Medicine/Life Sciences Institute)

Outstanding Service Award

Adjunct Prof J Y Pillay (Public Policy)
FACULTY AND STAFF MAKING A DIFFERENCE AROUND THE WORLD

- **NUS President Prof Tan Chorh Chuan** was conferred the Degree of Doctor of Science, Honoris Causa, from Loughborough University’s Vice-Chancellor and President Prof Shirley Pearce for his contributions in shaping developments in medical education, healthcare, biomedical sciences research and translational and clinical research in Singapore.

- **Assoc Prof Paulin Straughan (Arts and Social Sciences)** was appointed as Nominated Member of Parliament for a period of 2½ years.

- **Associate Professorial Fellow Ann Wee (Arts and Social Sciences)** was awarded the inaugural Outstanding Lifetime Volunteer award by the Ministry of Community Development, Youth and Sports, Singapore.

- **Prof Brenda Yeoh (Arts and Social Sciences)** was appointed a member of the Ramphal Commission on Migration and Development for two years from October 2009. This is one of the first two Commissions on international policy issues promoted by the Ramphal Centre in London, UK.

- **Prof Henry Yeung (Arts and Social Sciences)** was ranked first in the top 50 cited human geographers in the *Journal of Economic Geography* *(Volume 10)*, placing him in the league of prominent human geographers such as Nigel Thrift, Peter Taylor, Billie Turner and Michael Goodchild.

- **Assoc Prof Thompson Teo (Business)**, who is Chair of the Logistics Scholarship Committee, was ranked top 15 in the Most Prolific Researcher List for his publications in European journals according to the *Journal of the Association for Information Systems*. He was also ranked top 42 globally, with reference to the Hirsch family of indices or H-index.

- **Dr Rahul Jain (Computing/Centre for Quantum Technologies)** together with a team of research collaborators from Canada, received the Best Paper Award for their paper “QIP = PSPACE” at the 42nd Association for Computing Machinery Symposium on Theory of Computing 2010 in the US.

- **Prof Mohan Kankanhalli (Computing)** was named Editorial Board Member of the Year for his work with *Multimedia Systems Journal*, a prestigious publication in multimedia research.
• **Prof Ling Tok Wang** *(Computing)* was named the Association for Computing Machinery (ACM) Distinguished Scientist. ACM is the world’s largest educational and scientific computing society.

• **Assoc Prof Pan Shan Ling** *(Computing)* was named Associate Editor of the *Information Systems Research* journal.

• **Prof Tan Chew Lim** *(Computing)* and Dr Lu Shijian from the Institute for Infocomm Research (I²R), emerged winners at the 2009 Document Image Binarization Contest, beating 35 research groups worldwide.

• **Prof Tan Kian Lee** *(Computing)* was appointed Editor-in-Chief of leading journal *The International Journal on Very Large Data Bases* from 2009 to 2015.

• **Assoc Prof Keson Tan** *(Dentistry)* is the first Singaporean to receive the William R Laney Award, one of the highest honours bestowed on dental implant clinicians and researchers internationally from the Academy of Osseointegration, US.

• **Prof Heng Chye Kiang** *(Design and Environment)* won first prize in collaboration with Archiland in the international urban design competition for a business district for Xiqing District, Tianjin, China.

• **Adjunct Assoc Prof Richard Ho** *(Design and Environment)* was awarded the URA Heritage Award 2009 for his project on the National University of Singapore Society Bukit Timah Guild House.

• **Prof Low Sui Pheng** *(Design and Environment)* was invited to be a Member of the International Scientific Committee of the International Conference on Sustainable Development and Environmental Protection: Strategies and Procedures for Developing Nations, Institute for Environmental Research and Development, Nigeria. He was also appointed Regional Editor (Southeast Asia) of the *International Journal of Construction Management*, published by the Chinese Research Institute for Construction Management.

• **Prof Ong Seow Eng** *(Design and Environment)* was appointed a Fellow candidate of the Weimer School of Advanced Studies in Real Estate and Land Economics, US, from 2010 to 2011.

• **Assoc Prof Chandra Sekhar** *(Design and Environment)* was conferred the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Distinguished Service Award at the ASHRAE Annual Meeting in the US.

• **Assoc Prof Belinda Yuen** *(Design and Environment)* was invited by the Prime Minister’s Court, Kingdom of Bahrain to be part of the international jury panel for the Shaikh Khalifa Bin Salman Al Khalifa Habitat Award, which recognises outstanding efforts at city and country levels in urban development.
• **Assoc Prof Adrian Cheok** (*Engineering*) and Engineering students, Dilrukshi Abeyrathne, Hou Junsong, Kasun Karunanyaka, Michelle Narangoda, Nimesha Ranasinghe, James Teh Keng Soon and Thang Wei Wang were awarded the first prize (Information and Communication Technologies Track) at the “Innovation Circus”, Municipality of Milan, Chamber of Commerce, Alintec, and “Nova-Sole 24 ore”, Milan, Italy for their “Petimo” project, which is a social networking robot for children.

• **Prof Chew Yong Tian** (*Engineering*) was awarded the Federation of Engineering Institutions of Asia and the Pacific Engineer of the Year 2009 Award for outstanding contributions to the engineering profession in the Asia Pacific region.

• **Prof Choo Yoo Sang** (*Engineering/Centre for Offshore Research and Engineering*), is the first Asian to be named Lloyd's Register Educational Trust (LRET) Professor.

• **Prof Neale Chung Tai-Shung** (*Engineering*) received the IChemE Innovation and Excellence Award in Energy and in Water Management and Supply by the Institute of Chemical Engineers, UK.

• **Prof Ge Shuzhi** (*Engineering*) received the title of World Class University Professor by the Ministry of Education (Science and Technology) through Pusan National University, South Korea, for his contributions to the study of intelligent control and sensor fusion.

• **Prof Goh Thong Ngee** (*Engineering*) was awarded the prestigious Harrington/Ishikawa Medal for 2010 by the Walter L Hurd Foundation and the Asia Pacific Quality Organization (APQO) for his outstanding contributions to the advancement of quality in the Asia Pacific region.

• **Prof Kam Pooi Yuen** (*Engineering*) was conferred the Institute of Electrical and Electronics Engineers Fellowship (2010), US, for his contributions in receiver design and performance analysis for wireless communications.

• **Prof Lee Tong Heng** (*Engineering*) was conferred the title of World Class University Expert Panel Professor by Pohang University of Science and Technology, South Korea in recognition of his contributions to the study of intelligent control research and development.

• **Prof Lian Yong** (*Engineering*) is the first academic in Asia to be appointed Editor-in-Chief of the *IEEE Transactions in Circuits and Systems II* for two years from January 2010.

• **Prof Andrew Nee** (*Engineering*) was appointed Vice-President (Elect) at the senate meeting of the Paris-based International Academy for Production Engineering (CIRP). He will be President of CIRP from August 2011, making him the first ethnic Chinese and Singaporean to be elected President in CIRP's 60-year history.
• **Assoc Prof Ong Soh Khim** (*Engineering*) is the first Singaporean woman to be presented with the prestigious 2009 Emerging Leader Award (Academia) by the US Society of Women Engineers.

• **Prof Poo Aun Neow** (*Engineering*) was conferred the title of Honorary Fellow by the Institution of Engineers Singapore, the institute’s most prestigious title.

• **Prof Mustafizur Rahman** (*Engineering*) was presented with the William Johnson International Gold Medal for his lifetime achievements in Materials Processing Research and Teaching during the Advances in Materials and Processing Technologies conference in Malaysia.

• **Prof Wang Chien Ming** (*Engineering*) received the prestigious Lewis Kent Award from the Institution of Structural Engineers, the world’s largest membership organisation dedicated to the art and science of structural engineering.

• NUS researchers won five out of 11 awards conferred by President S R Nathan at the inaugural President’s Science and Technology Awards. The NUS recipients were:
  - President’s Science Award: **Prof Donald Tan** (*Medicine*), **Prof Roger Beuerman** (*Medicine*), **Assoc Prof Aung Tin** (*Medicine*)
  - President’s Technology Award: **Prof Jacob Phang** (*Engineering*), **Mr Alfred Quah** and **Mr Goh Szu Huat** (*Engineering alumni*) and **Mr Chua Choon Meng** of SEMICAPS Pte Ltd
  - President’s Science and Technology Medal: **Prof Miranda Yap** (*Engineering*)
  - Young Scientist Award: **Dr Yu Haifeng** (*Computing*)

• **Assoc Prof Simon Tay** (*Law*) was appointed Co-Chair of Asia Society’s Global Council by the Asia Society’s Board of Trustees, US.

• **Adjunct Assoc Prof Roy Chan** (*Medicine*) received the Queen Elizabeth II Gold medal for service to public health and health promotion from the Royal Society for Public Health, London, UK.
• **Adjunct Assoc Prof Chew Chin Hin (Medicine)** is the first Singaporean to be elected to the Mastership of the American College of Physicians, Philadelphia, US.

• **Prof James Goh Cho Hong (Medicine)** was elected the new Secretary-General of the International Federation for Medical and Biological Engineering.

• **Prof Daniel Goh Yam Thiam (Medicine)** was appointed the International Governor for the American College of Chest Physicians (ACCP) for three years and will assist the International Regent to oversee international Fellows in Singapore, as well as recommend potential candidates to become ACCP members.

• **Prof H. Phillip Koeffler (Medicine)**, Senior Principal Investigator at the Cancer Science Institute Singapore, NUS and **Prof David Bruce Matchar (Duke-NUS)**, Inaugural Director and Programme Director for Health Services and Systems Research, were two of three clinician scientists who received the prestigious Singapore Translational Research Investigator Awards in 2009.

• **Prof Edmund Lee (Medicine)** was appointed Fellow of the Japanese Society for the Study of Xenobiotics.

• **Dr Victor Wang Tzong-Jin (Medicine)** was granted the Young Orthopaedic Investigator Award for his paper titled “A minimally invasive technique of cartilage repair in the human knee combing microfracture and mesenchymal stem cell”.

• **Prof John Wong (Medicine)** won the prestigious SASS Foundation Award in recognition of his outstanding contributions in advancing the field of Hematology Oncology.

• At the National Medical Excellence Awards 2009 presented by the Singapore Ministry of Health:
  • **Prof Michael Chee Wei Liang (Duke-NUS)** won the National Outstanding Clinician Scientist Award
National University Health System Deputy Chief Executive and Dean of the Yong Loo Lin School of Medicine Prof John Wong Eu Li (Medicine) received the National Outstanding Clinician Award.

Prof Chew Chong Lin (Dentistry) and Prof Low Poh Sim (Medicine) were among the three recipients to be granted the National Outstanding Clinician Mentor Award.

Adjunct Assoc Prof Durreen Shahnaz (Public Policy) was selected as Asia Society’s Asia 21 Young Leaders for 2009.

Prof Lee Hian Kee (Science) won the 2009 Federation of Asian Chemical Societies Foundation Lectureship Award in China.

Assoc Prof G V Shivashankar (Science) was elected a Fellow of the Indian Academy of Sciences in India.

Dr Grant Sklar (Science) won the inaugural American College of Clinical Pharmacy's Adult Medicine Practice and Research Network Clinical Practice Award.

Prof Navjot Sodhi (Science) received the Distinction in Teaching by Harvard University, US.

Adjunct Dr Victor Tong Joo Chuan (Science) received the Singapore Youth Award (Science & Technology).

Both Prof Shen Zhuowei and Prof Paul Matsudaira (Science) were conferred the title of Distinguished Professor by NUS in recognition of their contributions in the areas of research in mathematics and cell biology respectively.

Dr Melissa Jane Fullwood (Duke-NUS) and Ms Le Thi Nguyet Minh, an NUS graduate and a researcher at the Genome Institute of Singapore, received the first-ever L’Oreal Singapore For Women In Science National Fellowships.

Prof Ranga Krishnan (Duke-NUS) received the Award for Research in Geriatric Psychiatry from The American College of Psychiatrists.
Support from Our Benefactors

In the Academic Year 2009/2010, the University received S$107 million in new gifts and pledges from 9,086 donors, including 5,351 alumni.

- The Raffles Museum of Biodiversity Research received pledges of S$45 million from the Lee Foundation and two anonymous donors to develop a new museum of natural history. Alumni and friends including the Shaw Foundation collectively also made gifts of S$1 million to the same initiative. The new museum will be named the Lee Kong Chian Natural History Museum.

- The Lee Kuan Yew School of Public Policy received S$23.8 million in gifts and pledges from various donors including Dr Chang Yung-fa, Mr Kuok Khoon Hong ('72), Mr Martua Sitorus, Mr Tay Lian Wee, Mr Teo Kim Yong ('77), Boustead Singapore, Golden Agri International, HSH Properties, Kewalram Singapore, the Lippo Group, Spice Global Holdings, Wilmar International and Wii Pte Ltd.

- NUS Global Asia Institute received a total of S$20 million through a pledge made by the GSK-EDB Trust and a gift from Dr Wee Cho Yaw (Hon DLitt '08).

- Duke-NUS Graduate Medical School Singapore received S$13 million in pledges from the Goh Foundation and Ngee Ann Kongsi.

- University Town received a total of S$3 million in gifts and pledges from 10 members of the NUS Board of Trustees led by Chairman Mr Wong Ngit Liong ('65) and Trustee Ms Olivia Lum ('85) as well as from Mr Kuok Khoon Hong ('72).

- The University received S$4 million in gifts and pledges for scholarships and student financial aid from intellectual property law pioneer Ms Ella Cheong, Dr Sylvia Goh ('54), former NUS Trustee Mr James Loh and his wife Mrs Natalie Loh, Mrs Ngiam Wu Po Kin Jean, the family of the late Mr Wan Boo Saw ('48) and his wife Mdm Annie Tan, the Fok Chu On Family Charitable Foundation and Kwan Im Thong Hood Cho Temple.

- Hong Kong-based investment company Lee Hing Development, US-based John Templeton Foundation, Tsao Foundation and Viva Foundation collectively made gifts and pledges of S$3.1 million to support various research programmes at the University.

- The University also received additional S$7.2 million for various purposes from key supporters NUS Trustee Prof Saw Swee Hock ('56), King Baudouin Foundation and retired businessman Mr William D Dearstyne, Lee Foundation, NUS America Foundation and Temasek Foundation.
Connecting with Our Alumni

• **Homecoming 2010**, which featured numerous activities including talks, workshops and a concert, was held on two separate days – at Bukit Timah Campus on 8 July 2010 and Kent Ridge Campus on 10 July 2010. Three significant events organised during Homecoming 2010 were the 50th anniversary celebration of Class of 1960 and for the first time, the 5th and 15th anniversary reunions for the Class of 2005 and 1995 respectively.

![Homecoming 2010](image1.jpg)

• The **UM-NUS Inter-University Tunku Chancellor Golf Tournament 2010**, a much anticipated golfing event between the golfing communities of NUS and Universiti Malaya (UM), was held from 18-20 May 2010 at the Sentosa Golf Club and Warren Golf and Country Club. A total of 140 golfers from NUS and UM, led by NUS Chancellor President S R Nathan and UM Chancellor His Royal Highness Tuanku Azlan Shah respectively, participated in the event. President Nathan also hosted a dinner at the Istana following the golf tournament to honour the enduring bond between the golfing fraternities of the two universities.

![Golf Tournament](image2.jpg)
NUS President Prof Tan Chorh Chuan launched the 15th NUS Overseas Alumni Chapter in Chengdu, China on 5 May 2010. With 10 per cent of the University’s alumni living, working and studying abroad, the establishment of overseas chapters is important for NUS to expand its global presence. There are now three overseas chapters in China alone, with 12 others at strategic locations around the world.

The Class of 1984 held a successful 25th anniversary reunion on 21 November 2009 at the NUSS Kent Ridge Guild House. The reunion, which was organised by volunteers and supported by the NUS Alumni Office to commemorate 25 years of friendship amongst NUS alumni, was attended by 240 people. Guest-of-Honour NUS Deputy President (Academic Affairs) and Provost Prof Tan Eng Chye, from the Class of 1984 (Science), graced the occasion.

The University paid tribute to 20 alumni who have contributed significantly to both their alma mater and society at large, at the NUS Alumni Awards 2009, which was held at the Shaw Foundation Alumni House on 10 November 2009. The Eminent Alumni Awards, the highest honour for NUS alumni, were conferred on Senior Minister and Coordinating Minister for National Security, Prof S Jayakumar, and Chairman of Temasek Holdings, Mr S Dhanabalan.

A new platform with enhanced features was added to AlumMAIL, a complimentary, lifelong email service which identifies alumni as members of the NUS family, connecting them with their alma mater and with one another. Alumni now enjoy 10GB of email storage and up to 25GB of online storage, improved contact and calendar management, real-time chat and other office productivity features on their AlumMAIL accounts.
Moving Ahead with New Education Initiatives

- The Centre for Social Entrepreneurship and Philanthropy at the NUS Business School was launched to advance social entrepreneurship and philanthropy research and education, as well as enhance the community development efforts of the University. The Centre also co-runs a Volunteer Service Management Programme with YMCA Singapore to provide training for managers, executives and volunteers of non-profit organisations in Singapore.

- The Department of Architecture at the School of Design and Environment restored two 150 year-old townhouses in Malacca, a S$1.5 million gift from Ms Agnes Tan, daughter of the late Tun Tan Cheng Lock, who had purchased the two townhouses in memory of her late father. The restored townhouses were opened by the Governor of Malacca in September 2009 as a new centre for Asian architectural and urban heritage and a resource centre to promote research in this field.

- The Green Hostels@South West, a collaborative effort between South West CDC, Students Against Violation of the Earth (SAVE) and participating NUS Halls, was launched to raise environmental awareness among tertiary students, in particular hostel residents, and to encourage individual participation in energy conservation.

- The NUS Business School conducted the Liuzhou-NUS Advanced Government Management programme in March 2010 to provide participants with insights into government, urban management and planning, marketing and community engagement.

- The Lee Kuan Yew School of Public Policy Executive Programme office conducted the Public Administration and Management programme to the Master in Public Administration students of the Kazakhstan Academy and the first batch of the Master of Public Policy students of the National School of Public Policy under the Academy of Public Administration. It also collaborated with the Government of Tatarstan to design and deliver a programme for senior officials on fiscal decentralisation in federal systems among other areas.
The Yong Loo Lin School of Medicine developed an innovative educational management process whereby hubs for the various clinical disciplines in the curriculum were formed. The NUS Wiki platform MedWiki, used for undergraduate medical curriculum review, allows nominated faculty members and clinicians from NUHS and other teaching hospitals to update their educational blueprints and lesson plans. It supports greater ownership and facilitates curriculum review for standardisation across the teaching hospitals.

QuestionSMS, an opt-in service that enables lecturers to receive questions and feedback through the short message service (SMS) during lectures and seminars on a web browser, was introduced. The QuestionSMS service, which will not interrupt the flow of the lecture, will allow the lecturer to create simple polls. This new initiative was submitted to the APRU Education and Research Technology Forum hosted by the University of Southern California.

The NUS Career Centre established the Singapore Business Federation-NUS Global Internship and Mentorship (GIM) programme to provide students with global internship opportunities. A collaboration with the Singapore Business Federation (SBF), the GIM programme offers students cross-cultural exposure, mentorship by senior management, training in global competencies and networking opportunities at SBF events through internship attachments in SBF-registered companies with regional or overseas operations.

Nagasaki University and NUS’ Yong Loo Lin School of Medicine inked an MOU to advance the study of infectious diseases. There will also be an exchange of academic and technical information between the two institutions as well as exchange of students, faculty, researchers and administrative staff. Collaborative research projects in disciplines of mutual interest and joint academic and scientific activities will be further implemented.

The Centre for Health Policy and Management, a joint initiative between the Yong Loo Lin School of Medicine, NUS Business School and the Lee Kuan Yew School of Public Policy, commenced with the recruitment of its Director Dr Jeremy Fox on 17 May 2010. The Centre aims to provide world class scholarship in areas such as optimal healthcare resource allocation for an aging population, determining the value of medical care, research and education and cost effectiveness of specific interventions, especially in chronic disease management.
• NUS’ Faculty of Science and Harvey Mudd College (HMC) have signed MOUs for two global clinic projects from June 2010 to May 2011. The projects are ‘Solid Buffer System’, co-sponsored by BioRad, and ‘Cost Effective Portable Food Processing Plant for Tropical Fruits and Vegetables’, co-sponsored by Operation Hope Foundation. Selected students from both NUS and HMC will undergo a six-week intensive summer programme (three weeks in HMC and three weeks in NUS) to prepare them for the technicalities of the projects as well as to encourage bonding among team members.

• The Duke-NUS Graduate Medical School Singapore has established a Graduate Training Programme that will award Ph.D. degrees in Integrated Biology and Medicine. Commencing in Academic Year 2010/2011, the programme has a target intake of 10 students per year. It will support the Singapore Bioscience Initiative in training students to advance research capabilities and provide graduates the best opportunities for postdoctoral training and careers in research and education.

• The School of Computing inked a Memorandum of Intent with the Infocomm Development Authority of Singapore (IDA), and the Department of Computer Science, Brown University to coordinate efforts on the concurrent degree programme in BComp (Computational Biology) and a Computational Biology track in Scientiae Magister from Brown University. IDA will grant scholarships to top students admitted into the programme under its National Infocomm Scholarship scheme.

• The Centre for English Language Communication was awarded a grant of over S$450,000 for the project “Capability-building of English language curriculum developers for professional communication for university faculty in ASEAN universities”. The 3-year project, which involves seven universities in the region, aims to enhance the quality of professional and business communication teaching materials and the teaching of English language in Indonesia, the Philippines, Singapore and Vietnam through curriculum development.

• The Department of Medicine at the Yong Loo Lin School of Medicine worked with four medical students to create a teaching mannequin for abdominal palpation, which is nicknamed the “NUS Tummy Dummy”. The Department led 40 students through a module using the mannequin.

• The Department of Mechanical Engineering at the Faculty of Engineering initiated an undergraduate design collaboration with the College of Engineering, Peking University (PKU) in Academic Year 2009/2010. Three design project teams, comprising NUS and PKU students, worked on their projects for a short intensive period both in Beijing and Singapore.
• The Lee Kuan Yew School of Public Policy collaborated with the NUS Business School to offer a Master of Public Administration and Management programme to mid-level and senior government officials as well as executives from state-owned enterprises. Conducted in Mandarin, the programme will equip students with the necessary skills to perform in a variety of public service fields across all levels of government, in the international arena and private sector. The programme was officially launched by His Excellency Dr Li Yuanchao, Member of the Political Bureau and Secretariat of the Communist Party of China (CPC) Central Committee and Minister of the Organisation Department of the CPC Central Committee.

• The Yong Loo Lin School of Medicine offered a new specialisation in Health Policy and Management for the Master of Public Health programme. The specialisation will provide future leaders in public health with the knowledge and skills to address policy and management issues.

• The Cancer Science Institute of Singapore offered a Ph.D. programme in Cancer Biology, which focuses on the training of cancer researchers in a translational and multi-disciplinary environment. It aims to produce graduates who are all-rounders in post-doctoral research, academia and clinical science.

• The Alice Lee Centre for Nursing Studies offered a Master of Science (Nursing) programme and a Ph.D. in Nursing programme to provide research training and a pathway to a Ph.D. programme for nurses who have attained a Bachelor’s degree.

• The School of Computing launched two special programmes in Computer Science under its revamped Computer Science undergraduate curriculum. The Von Neumann programme is catered for students who wish to pursue a technical career in a high-end computing engineering centre of large information and communication technologies companies while the Turing programme prepares students who are keen on a research career in computing.

• University Town will be launched in August 2011 with two Residential Colleges and a Graduate Residence. Prof John Richardson has been appointed Master of the residential college which will house the University Scholars Programme, with Prof Wang Gungwu as Rector; whilst Assoc Prof Gregory Clancey will be the Master of the second residential college, with Prof Tommy Koh as Rector.
• **Commencement 2010** saw the pioneer graduates for:

  - Bachelor of Arts with Honours  
    (NUS – University of North Carolina, Chapel Hill Joint Degree Programme)
  
  - Master of Business Administration  
    (S3 Asia Double Degree MBA)
  
  - Master of Landscape Architecture
  
  - Bachelor of Arts (Architecture)/Master of Landscape Architecture  
    (Concurrent Degree Programme)
  
  - Bachelor of Engineering (Engineering Science)
  
  - Bachelor of Laws/Master of Public Policy  
    (Concurrent Degree Programme)
  
  - Master of Laws – Master of Public Policy  
    (NUS Faculty of Law – Lee Kuan Yew School of Public Policy  
    Double Degree Programme)
  
  - Doctor of Philosophy (Public Policy)
  
  - Master of Clinical Investigation
  
  - Doctor of Philosophy (Physics)  
    (NUS – Australian National University Joint Degree Programme)
  
  - Master of Science (Science Communication)  
    (NUS – Australian National University Joint Degree Programme)
  
  - Master of Science (Pharmaceutical Sciences and Technology)
  
  - Doctor of Philosophy (Computation and Systems Biology)  
    (Singapore-MIT Alliance)
JOINT, CONCURRENT AND DOUBLE DEGREE PROGRAMMES LAUNCHED IN ACADEMIC YEAR 2009/2010

Joint Degree Programme

• Joint Bachelor of Arts between Faculty of Arts and Social Sciences, NUS, and University of North Carolina at Chapel Hill

Concurrent Degree Programmes

• Bachelor of Computing (Computational Biology) Honours, School of Computing, Bachelor of Science (Computational Biology) Honours, Faculty of Science, NUS, and Scientiae Magister in Computational Biology, Brown University

• Master of Science in Logistics and Supply Chain Management, The Logistics Institute – Asia Pacific, NUS, and Georgia Institute of Technology

• Bachelor of Science (Honours) in Life Sciences, Faculty of Science, NUS, and Master of Research in Molecular Biophysics (M.Res.), King’s College, London

Double Degree Programmes

• Master in Public Policy, Lee Kuan Yew School of Public Policy, NUS, and Master in Public Administration, Peking University

• Master of Business Administration, School of Business, and HEC School of Management, Paris

• Master of Science in Hydraulic Engineering and Water Resources Management, Faculty of Engineering, NUS, and Master of Science in Civil Engineering with Hydraulic track, Delft University of Technology

SECOND MAJOR OFFERED FOR DOUBLE MAJOR PROGRAMMES IN ACADEMIC YEAR 2009/2010

• Recording Arts & Sciences, Yong Siew Toh Conservatory of Music

NEW GRADUATE DEGREE PROGRAMMES LAUNCHED IN ACADEMIC YEAR 2009/2010

• Master of Science in Quantitative Finance (Coursework), Faculty of Science

• Master of Science in Hydraulic Engineering and Water Resources Management, Faculty of Engineering

• Master of Public Administration & Management, Lee Kuan Yew School of Public Policy and School of Business
Making Great Strides in Research

- Singapore's fifth Research Centre of Excellence, the Singapore Centre on Environmental Life Sciences Engineering (SCELSE), was established as a joint collaboration between NUS and Nanyang Technological University. SCELSE, which aims to be the world leader in microbial biofilm research and control, will build on NUS’ and NTU’s strengths in life sciences and environmental engineering respectively.

- The Keio-NUS Connective Ubiquitous Technology for Embodiments (CUTE) Centre, which aims to be among the world’s top five labs in interactive media, was officially opened by NUS Chancellor President S R Nathan. A partnership between NUS’ Interactive and Digital Media Institute and Keio University’s Graduate School of Media Design, the CUTE Centre will offer educational and research opportunities in interactive digital media.

- The NUS Centre for Aquatic Science Research (subsequently renamed Aquatic Science Centre at Sungei Ulu Pandan), one of the initiatives by the Singapore-Delft Water Alliance, was inaugurated by the Prime Minister of the Netherlands, His Excellency Dr Jan Peter Balkenende, together with the Chairman of NUS’ Board of Trustees, Mr Wong Ngit Liong. The Centre will serve a dual role as an urban freshwater research centre and a public education facility. Dr Balkenende also unveiled the Albert Winsemius Lane, named in honour of the late Dr Albert Winsemius, who was an economic advisor to Singapore from 1961 to 1984.

- The Growing Up in Singapore Towards Healthy Outcomes (GUSTO) Study, a long-term cohort study involving Singaporean mothers-to-be, was launched by the Yong Loo Lin School of Medicine in October 2009. GUSTO aims to discover effective prevention and early intervention strategies to reduce the burden of metabolic diseases, including obesity and Type 2 Diabetes Mellitus. It is the focus of the “Developmental Origins: Singapore” programme which was awarded the $S$25 million Translational and Clinical Research Flagship Grant by the National Research Foundation.

- The Research Collaboration Agreements for seven research projects that were coordinated by the School of Design and Environment (SDE)’s Centre for Sustainable Asian Cities were signed between NUS and four government agencies, the Urban Redevelopment Authority, Housing and Development Board (HDB), Land Transport Authority and the National Parks Board. The research projects, which will be carried out with the support of a $S$7 million grant from the Ministry of National Development (MND) Research Fund, aim to develop new urban planning and design solutions to help Singapore achieve economic, social and environmental development in a balanced and sustainable manner. SDE also inked an agreement with HDB to embark on Singapore’s first Township Climatic Study in Punggol Town. Coordinated by MND, HDB and NUS, the study will be conducted by HDB Building Research Institute (HDB BRI) and SDE.
• The School of Design and Environment signed a Memorandum of Cooperation with World Future Foundation Ltd (WFF), a philanthropic foundation incorporated in Singapore and established by social entrepreneur and real estate tycoon Dr Feng Lun, to promote research on environmental sustainability. The areas of cooperation include a Vertical City Exhibition, a book series on the study of High Capacity Vertical Cities and an International Student Design Competition for Vertical City.

• The National University Cancer Institute, which was inaugurated in February 2010, will provide comprehensive oncology care to adult and child patients in one facility under one holistic programme. The scientists at the Institute will conduct translational clinical research in collaboration with the Cancer Science Institute of Singapore and A*STAR.

• The Khoo Investigator Development Programme (KID) Programme at the Duke-NUS Graduate Medical School Singapore aims to enhance the career development of individuals who wish to become clinician investigators in patient-oriented research. Each KID mentee will receive clinical research mentoring by a team of senior disease and biostatistical/design experts in the areas of cardiology, psychiatry, ophthalmology, radiology, neurosurgery, general surgery, and accident/emergency medicine.

• The Singapore Ministry of Defence inked an MOU with NUS and Nanyang Technological University to establish the Temasek Research Fellowship, a three-year post-doctoral research fellowship for outstanding researchers to conduct defence technology research at NUS. Research will be conducted in the areas of science and technology which include Advanced Materials, Cognitive Sciences, Cyber Security and Electromagnetics.

• The NUS Faculty of Engineering and the Land Transport Authority (LTA) inked a Memorandum of Collaboration to conduct research on sustainable urban mobility. This is part of the S$150 million contributed by LTA towards its Land Transport Innovation Fund to catalyse the collaborations and joint research with various industry partners and academic institutions.

• NUS’ Institute of Real Estate Studies developed a new price index called the Singapore Residential Price Index for the private non-landed residential property market in Singapore. The index is the first of its kind to be developed by a local academic institution.

• NUS’ Centre for International Law (CIL) officially launched a first-of-its-kind searchable database of the Association of Southeast Asian Nations (ASEAN) and International Law documents at Maxwell Chambers. Known as the CIL Documents Database, this new online platform contains more than 320 selected ASEAN and International Law documents, based on their importance to international law policies for the ASEAN region.
• The Tropical Marine Science Institute partnered the Singapore Land Authority to promote the use of a **Singapore Satellite Positioning Reference Network (SiReNT)** **GPS reference station** for engineering, recreational and scientific activities. The new SiReNT Pulau Semakau Reference Station promises higher accuracy of data collection and greater opportunities for research in environmental monitoring and management around the southern islands of Singapore.

• The National University Health System and **Harvard University’s Beth Israel Deaconess Medical Centre** signed an MOU to pave the way for American and Singaporean doctors, scientists and medical students to work together in areas of research, education and clinical care.

• The **Plasmonics and Advance Imaging Technology Laboratory (P&AIT)**, which focuses on interdisciplinary research in science and technology at the nanoscale level, was officially opened on 10 September 2009. The P&AIT Laboratory houses the Helium Ion Microscope, the first to be showcased in Asia, which opens new doors in nanoscale imaging.

• To encourage the development of novel research ideas, NUS and the Singapore Millennium Foundation (SMF) have launched the **SMF-NUS Research Horizons Award**. A total funding of S$2.8 million, co-funded by NUS and SMF, has been set aside to accelerate the development of paradigm-changing research ideas from conception to implementation.

**SOME OF OUR SIGNIFICANT RESEARCH FINDINGS AND PROJECTS**

• **Dr Wang Hongyan (Duke-NUS)** found that fruit fly protein PP2A (protein phosphatase 2A) suppresses brain tumour formation and controls the balance of self-renewal and differentiation of neural stem cells. Her finding was published in the scientific journal *Development*.

• **Assoc Prof Michael Brown** and graduate student **Mr Lu Zheng (Computing)** together with Assistant Professor of Radiology, George Shih, of the Weill Cornell Medical Center, devised a medical imaging software using the Nintendo Wii gaming system remote for radiology examination. The work was presented at the American Roentgen Ray Society, an annual conference for radiologists in 2009.

• A research team headed by **Prof Richard Liew (Engineering)** created the Steel-Concrete-Steel (SCS) “sandwich” system which proves to be superior in terms of impact and fatigue performance. More cost effective and environmentally-friendly than conventional stiffened steel plate structures, the SCS “sandwich” system is particularly suitable for applications where high structural stiffness and extreme loading are needed.
• A team led by Assoc Prof Ren Ee Chee (Medicine) demonstrated how tumour suppressor gene p53 can regulate the many biochemical pathways in a cell. Their study was published in the official journal of the US National Academy of Sciences’ Proceedings of the National Academy of Sciences of the United States and also featured as a research highlight in the October 2009 issue of Nature Reviews Cancer.

• Dr Liu Xiaogang, Dr Zhang Chun, Dr Wang Feng, Dr Lu Yunhao and Ms Wang Juan together with Assoc Prof Hong Minghui (Engineering) worked with scientists from A*STAR, NTU and King Abdullah University of Science and Technology (KAUST) on a new synthetic strategy for controlling the properties of ultra-small luminescent nanocrystals. Their findings were published in the prestigious Nature journal.

• A research project, spearheaded by student Ms Andie Ang Hui Fang under the guidance of Assoc Prof Rudolf Meier (Science), revealed that the population of banded leaf monkeys has been growing in Singapore’s forests, contrary to popular belief that they were on the verge of extinction.

• A team led by Senior Principal Investigator Dr Lee Soo Chin (Cancer Science Institute of Singapore) discovered a novel combination of drugs which will potentially halve therapy costs and decrease the side effects of treatment for advanced breast cancer patients. The research was published in leading cancer journal Annals of Oncology April 2010 issue.

• Dr Rahul Jain (Centre for Quantum Technologies/Computing) and fellow colleagues from Canada solved a question which had been unanswered for 10 years. The researchers showed that Quantum Interactive Proofs do not have extra power over Classical Interactive Proofs, that is ‘quantum verification efficiently in time’ equates ‘classical solution efficiently in space’.

• Dr Emmanuel Christophe and his research team (Centre for Remote Imaging, Sensing and Processing) have brought remote sensing to the next level with the Interferometric Synthetic Aperture Radar (InSAR). CRISP is the only agency in the region after Japan to have successfully produced interferometric maps over equatorial regions. This technology, which has the ability to measure subtle changes, can be used to monitor natural hazards such as earthquakes and volcanic eruptions.

• The Solar Energy Research Institute of Singapore received a funding of S$2 million from the Economic Development Board, under the Clean Energy Research programme, to work on a system to decrease energy usage of air-conditioners by using solar thermal energy.
Assoc Prof Hong Yunhan (Science) and his team of researchers produced the world’s first haploid embryonic stem cells and semi-cloned fish “Holly”. The researchers’ work was published in the highly acclaimed *Science* magazine.

Assoc Prof Yu Hao, Assoc Prof Yang Daiwen and Dr Liou Yih-Cherng (Science) and Ph.D. student Mr Liu Chang discovered that the plant version of Pin1 controls the flowering time of plants. This is the first time that scientists have managed to turn on the flowering “switch” in plants. Their study was published in the January 2010 issue of *Molecular Cell*.

A team led by Prof Manjunatha Kini (Science) found that Haditoxin, a novel protein in the venom of the King Cobra (*Ophiophagus hannah*), offers great potential as a lead compound in the understanding and treatment of a variety of neurological and neurodegenerative diseases. The findings were published online in the prestigious *Journal of Biological Chemistry* and selected as the Paper of the Week.

Five new research projects addressing issues critical to Asia’s future have been awarded grants from NUS Global Asia Institute’s first grant call. They are:

- **Tackling Type 2 Diabetes Mellitus in Asia – A Multidisciplinary and Multi-Sectoral Initiative** by Prof Chia Kee Seng (Medicine)
- **Estimating and Projecting Urbanisation and City Growth** by Prof Gavin Jones (Asia Research Institute/Arts and Social Sciences)
- **Asian Cities as Centres of Global Modernity** by Dr Misha Petrovic (Arts and Social Sciences)
- **Mapping the Technological and Cultural Landscape of Scientific Development** by Philip Cho (Asia Research Institute)
- **Asian Cities: Liveability, Sustainability, Diversity and Spaces of Encounter** by Assoc Prof Tracey Skelton (Arts and Social Sciences)
Three research programmes from NUS were awarded up to S$10 million each in funding from the National Research Foundation on the recommendation of the International Evaluation Panel for its Competitive Research Programme Funding Scheme. The three projects are:

- **Tailoring Oxide Electronics by Atomic Control** by Prof Thirumalai Venkatesan (*Engineering*)
- **Frontiers in Magnetic Recording Research: Vision for 10 Terabits per square inch** by Prof Charanjit Singh Bhatia (*Engineering*)
- **Adult and Induced Pluripotent Stem Cells for Neurological Disorders and CNS Repair** by Prof George Augustine (*Duke-NUS*)

Eight NUS research projects received proof-of-concept grants from the National Research Foundation with each project receiving up to S$250,000. These projects are:

- **Partial Breast Reconstruction using a Nanofibrous Scaffold following Breast-conserving Surgery** by Dr Chan Ching Wan (*Medicine*)
- **Improvement in Yield of Haemotopoietic Stem Cells (HSCs) via Automation and Optimisation of the Umbilical Cord Blood (UCB) Collection Process with Further Stem Cells’ Characterisation** by Dr Tang Kok-Zuea (*Engineering*)
- **CDH17 Marker as a Novel Target for Liver and Stomach Cancer Therapies** by Assoc Prof John Luk (*Medicine*)
- **Fluorescent-tagged Antimalarials as Commercial Molecular Probes to Diagnose Drug Resistance and to Study Diseases** by Dr Kevin Tan (*Medicine*) and Dr Martin J Lear (*Science*)
- **Development of a Novel Bioabsorbable Drug-Eluting Ventilation Tube for Chronic Middle Ear Infection** by Assoc Prof Lynne Lim (*Medicine*)
- **Development of Efficient Methods for the Production of Biodiesel from Grease** by Assoc Prof Li Zhi (*Engineering*)
- **High Frequency Graphene Transistors** by Dr Yang Hyunsoo (*Engineering*)
- **Creating a Comprehensive Lexical Index of Documents from the World Wide Web (WWW)** by Dr Anindya Datta (*Computing*)
Fostering the Spirit of Enterprise

- The inaugural InnovFest 2010, a festival of innovation and entrepreneurship-related events was launched to boost investment, technology transfer and networking opportunities within Asia’s finance, business and technology communities. Its Technology Commercialisation Forum 2010 and networking dinner The Enterprise Connection drew about 300 industry stakeholders, investors and entrepreneurs from around the world.

- Two awards supported by the National Research Foundation (NRF) under the University Innovation Fund (UIF), were given out during InnovFest to encourage the development and commercialisation of ideas generated within the University. The Xtra Chapter Challenge Programme is a competitive fellowship that offers Ph.D. students the opportunity to explore the commercial feasibility of their ideas or inventions. The Innovation/Entrepreneurship Practicum Grant provides funding of up to S$10,000 per project to students who wish to develop their innovative ideas further.

- The Economic Development Board awarded NUS a $20 million grant under the Research Centre Funding Scheme, through the Environment and Water Industry Programme Office, for the development of the Singapore-Peking-Oxford Research Enterprise (SPORE). NUS will partner Oxford University and Peking University in an education, research and industry collaboration for water eco-efficiency.

- The NUS Industry Liaison Office (ILO) facilitated the signing of an MOU between the Media Development Authority, Tsinghua University and NUS to set up the S$10 million NUS ExTreme Search Tsinghua (NeXT) research centre. NeXT will conduct cutting-edge research in the areas of extreme live media and multilingual forum search.
ILO was appointed as the Technology Transfer Office for the Campus for Research Excellence And Technological Enterprise, Singapore-MIT Alliance for Research and Technology and the Media Development Authority in 2009.

Two NUS spin-off companies BioMers Products LLC and tenCube Pte Ltd have successfully raised third party funding. BioMers, a materials company that focuses on aesthetic orthodontic solutions, successfully closed a round of funding from Nanostart Asia. tenCube, the provider of the WaveSecure mobile security service, secured US$ 1 million in strategic investments from One97 Communications, a leading telecommunications application services provider in India.

McAfee Inc., the world’s largest dedicated security technology company based in California, acquired tenCube Pte Ltd in August 2010. tenCube was founded by four NUS graduates Darius Cheung, Varun Chatterji, Rishi Israni and Indradeep Biswas, who had won the Start-up@Singapore Business Plan Competition 2006.

NUS licensed a patent “Focal modulation microscopy for molecular imaging of tissue” to Carl Zeiss, a leading company for optical and electron imaging technology and equipment, for an invention conceived by researchers from the Faculty of Engineering. This is one of the largest licensing deals for NUS to date.

The University also licensed a patent “Cooling device for electronic components” to Gatekeeper Laboratories Pte Ltd, for another invention from the Faculty of Engineering. Gatekeeper, founded by NUS mechanical engineering students, uses this technology to produce a next generation CPU cooler that will outperform current coolers in the market.

The NUS Entrepreneurship Centre initiated the InnoAge Forum series in 2009 to explore technology innovations that can address the needs of the elderly. The InnoAge Forum seeks to tap on the creative energies of university and polytechnic communities, and share ideas on how they can accelerate the commercialisation of innovations and creation of high tech spin-offs for the aged in Singapore and globally.

NUS Enterprise partnered with Action Community for Entrepreneurship (ACE) to organise the Global Entrepreneurship Week 2009 (GEW 2009). The GEW events collectively engaged 19,600 participants in over 40 events, a significant increase from the 11,500 participants at the inaugural event in 2008.
The national-level Start-Up@Singapore (S@S) Business Plan Competition 2010, organised by the NUS Entrepreneurship Society, attracted a total of 270 participating teams and 780 participants this year. The winner was an NUS-Singapore Management University alumnus team for their soy-based frozen dessert entry. The winner of S@S 2009, Zimplistic Inventions, won the third prize in the highly competitive Intel® + UC Berkeley Technology Entrepreneurship Challenge, a joint project between Intel Corporation and the Lester Center for Entrepreneurship and Innovation at UC Berkeley.

A total of 208 students embarked on the NUS Overseas Colleges and innovative Local Enterprise Achiever Development (iLEAD) programmes in Academic Year 2009/2010.

NUS Overseas Colleges’ Experience India! Programme attracted an unprecedented 39 students who interned at small start-ups, iconic Indian companies as well as local not-for-profit organisations and international organisations. The students were involved in projects which spanned the IT, biotech, entrepreneurship development, media and advertising, rural business process outsourcing and ecotourism sectors.
Enhancing Our Campus

- The University Town project was awarded the second highest rating of GoldPlus at the Building and Construction Authority (BCA) Green Mark awards ceremony in October 2009. The project was lauded for maximising its sustainability potential by integrating green concepts into the master planning and building design. These concepts include conserving and encouraging the growth of a natural habitat with a diverse range of flora and fauna; increasing interaction between campus users and the surrounding environment; and providing sheltered walkways and dedicated bicycle lanes to reduce reliance on automobiles.

- NUS secured the NEA 3R Fund of up to $26,000 from the National Environment Agency, which will help boost its efforts to improve the recycling infrastructure and enhance the 3R culture among the campus community. Under the NUS Recycling Master Plan, there will be a consolidation of recyclables collection system along with more recycling points on campus. The University seeks to reduce or recycle 540 tons of waste over a period of three years. NUS’ recycling rate has risen consistently from 2.7% in Academic Year 2005/2006 to 15.1% in Academic Year 2009/2010.

- The construction of a flagship building for the NUS Business School, the Mochtar Riady Building, was completed in November 2009. The nine-storey building, with a five-storey atrium, houses the Dean’s Office, faculty and departmental offices, administrative offices for the undergraduate and graduate programmes, executive-style classrooms, break-out rooms and dining spaces. The building was awarded the BCA Green Mark Gold Award by the Building and Construction Authority for the environmental-friendly features and sustainability initiatives that were incorporated in its design.
• The new **Faculty of Dentistry** building, designed to provide an avenue for expansion especially in graduate education and training as well as the upgrading of teaching facilities, was completed in December 2009. Other facilities in the new building include dental clinics and laboratories, an X-ray facility, seminar and tutorial rooms for both undergraduate and graduate students.

• A total of 376 rooms at **Raffles Hall** was renovated under a comprehensive building regularisation and upgrading plan. Completed in January 2010, the rooms and other facilities were upgraded with new fittings to enhance the comfort of the residents while the building exterior was refurbished to give it a fresh look.

• The **Yusof Ishak House** was given a fresh façade in September 2009 with more interaction space to meet the needs of the students. A new timber-decked Plaza with Teflon fabric rooftop was built to cater to student events and activities and to inject more vibrancy within the vicinity. Other amenities include a new Student Lounge with a roof garden, dance and jamming studios, a Computer-Based Learning Centre as well as additional training rooms and a Societies’ Area for the various NUS student societies. Floor-to-ceiling glass walls for the offices of the NUS Students’ Union and various clubrooms have also been added to create a sense of openness and space.
“The best way for us to respond to the challenges of the future, is to drive ourselves to stay well ahead of the curve, to further strengthen our position in research and as a leader in education for the future.”

Prof Tan Chorh Chuan
President, National University of Singapore