Passion, a willingness to try, an eagerness to learn and a commitment to contribute to society can help one excel regardless of the challenges faced. NUS President Professor Tan Chorh Chuan exhorted fresh graduates to embrace these crucial attributes, which were demonstrated by Honorary Graduate Madam Halimah Yacob, Speaker of the Singapore Parliament.

During her speech, Prof Tan praised the Class of 2016 for their wide-ranging achievements. He believes that the academic rigour, experiential and global learning, and real-world relevance of an NUS education would serve them well in a fast-changing economic landscape, which would open up new and exciting frontiers.

Dean of NUS Law Professor Simon Chesterman delivered the citation on Madam Halimah, who graduated with a Bachelor of Laws degree from NUS in 1981, a Master of Laws degree from NUS in 1986, and a Master of Laws degree from Harvard University in 1991.

As a law student, Madam Halimah was a tireless advocate for workers and workers’ rights. She has served as Minister of State at the Ministry of Social and Family Development, and the Ministry of Community Development, voluntering her time to become a lawyer, and dedicating her life to serving society. Prof Tan pointed out.

During the ceremony of NUS Commencement 2016 on 7 July, undergraduate and graduate students, NUS President Dr Tony Tan Keng Yam congratulated the more than 10,000 graduands from NUS for their outstanding performance.

The job market is becoming more challenging with growing competition and rapid changes. However, fresh graduates should stay positive and keep up their enthusiasm for life, NUS President Professor Tan Chorh Chuan advised.

The journey ahead may not be an easy one, but you will just have to find unconventional ways to get around, so go for it!"
New NUS overseas college in Munich

The agreement signing marks an important milestone for NUS and Duke University.

It might not be a case of “frog went a-counting” in the English nursery rhyme, but the NUS FrogWorks’ personal flying machine did woo much interest, including that of royalty’s.

His Royal Highness Prince William, Duke of Cambridge, checked out the team’s new improved Snowstorm exhibited at the technology event Founders Forum in London, UK, from 15 to 16 June. A pilot and fellow flight enthusiast, Prince William was fascinated by the aircraft. He spent half an hour sitting in it and trying out the controls while sharing his passion for flying.

“The Prince met our team during his tour of the Demo Tent at the Founders Forum. Himself a helicopter pilot, he immediately understood our business proposition, which is to give members of the general public unique flying experiences. He was amazed to see that this is possible now... eager to hear the technical details... and appreciated the engineering solutions developed by the students,” said Associate Professor Martin Henz from NUS Computer Science and NUS Engineering.

Together with Dr Rangarajan Jagadeesan from NUS Engineering, Assoc Prof Henz supervises the project under FrogWorks, a design and prototyping studio in NUS Engineering’s Design-Centric Programme (DCP). The team received an invitation to display Singapore’s first personal flying machine at the Founders Forum this year. Assoc Prof Henz, Dr Jagadeesan and seven FrogWorks students flew to London and joined the initiator of the project, Dr Joerg Weigl, a former NUS lecturer now based in Germany.

Snowstorm captured the attention of the some 3,000 top digital and technology entrepreneurs, corporate CEOs and investors at the event. Live demonstrations and one-on-one sessions showed off the personal aircraft’s power and potential. Interest surrounding the commercialisation of the machine’s technology was significant.

“We did our best to explain the purpose and motivation behind Snowstorm to the attendees of the Forum... we managed to achieve what we initially set out to do, build good connections with other founders and potential investors,” said Year 3 Electrical Engineering student Zulfar B Adran. He added that Prince William was captivated by Snowstorm and encouraged them to further develop the device for the consumer market.

Duke-NUS partnership reinforced

The Signing of the Phase III Agreement reafirms the strength of the Duke-NUS collaboration. It also reflects the robust confidence our stakeholders have in Duke-NUS and its role in transforming medical education, research and clinical care,” said Duke-NUS Dean Professor Thomas Coffman. He thanked stakeholders, partners, faculty, staff and students for playing a part in the School’s phenomenal successes.

The funding agreement will further enable Duke-NUS to build on its strengths in innovative medical education and research. The School will also continue to partner Singapore’s National Health Research Institute to develop the SingHealth Duke-NUS Academic Medical Centre as an institution for quality clinical delivery, education and translational research.

Mapping entrepreneurship connections

Connections among technology entrepreneurs in Singapore have been growing at an average of 24 per cent annually over the last five years, helping to sustain the development of the local start-up ecosystem.

Singapore Tech Entrepreneurs’ Network Map, a research project by NUS Enterprise and Endeavor Insight illustrates that these connections — investments, mentorship, inspiration, employee spinouts and serial entrepreneurship — link entrepreneurs, investors, incubators, government agencies and other facilitators.

Building upon the TechSG information platform developed by NUS Enterprise, the study aggregated views from more than 200 entrepreneurs who have founded some 335 Singapore firms.

It revealed that more than half the start-up founders educated in Singapore had gone through a local university accelerator programme, with a quarter of them hailing from the NUS Overseas Colleges (NOC) programme.

Project co-leader Professor Wong Poh Kam, Director of NUS Entrepreneurship Centre, noted that almost one-third of the NUS alumni-founded companies were started by those who went on the NOC programme.

NOC alumni also demonstrated greater connectivity on all dimensions than other founders. Much of the growth seen in the country’s tech scene can be traced back to several influential entrepreneurs, including NUC alumni Darius Cheung and Royston Tay, who have inspired a new generation of entrepreneurs.

Prince William meets NUS’ personal flying machine

Duke-NUS Medical School (Duke-NUS) has marked an important milestone with the Phase III Agreement signing by Duke University and NUS. Guests-of-Honour Singapore Minister for Health Gan Kim Yong and Acting Minister for Education (Higher Education and Skills) Ong Ye Kung graced the occasion on 2 June.

Duke University’s Chancellor for Health Affairs Professor Eugene Washington and NUS Deputy President and Provost Professor Tan Eng Chye were signatories of the accord. Vice-Chancellor for Duke-NUS Affairs Professor Michael Merson and Chairman of Duke-NUS’ governing board Mr Kai Nargolwala witnessed the ceremony.

The latest Overseas College will see undergraduates and graduate students experiencing entrepreneurship at TUM

Duke-NUS have inked a collaboration agreement for the Joint Master of Science Degree Programme in Industrial Chemistry.

The agreement signing marks an important milestone for NOCs and Duke University.

The latest NUS Overseas College will see undergraduates and graduate students experiencing entrepreneurship at TUM.

The NUS students are now able to have first-hand entrepreneurial experience in Munich with the setting up of the University’s latest NUS Overseas College (NOC) in Germany.

The recent Memorandum of Understanding between NUS and Technische Universität München (TUM) will offer undergraduates and graduate students from both universities experiential and classroom learning in entrepreneurship.

NUS President Professor Tan Chorh Chuan and TUM President Professor Wolfgang A Herrmann signed the agreement at NUS on 22 June, together with NDC Director Associate Professor Teo Chee Leong and TUM Asia Managing Director Dr Markus Waechter.

Prof Tan pointed out that the collaboration will expose students to “deeper tech engineering types of programmes, to be part of a very unique engineering-based innovation culture”. TUM’s leading research in engineering and science has given rise to 13 Nobel laureates since 1927, he noted.

Highlighting the almost 20-year relationship between the two universities, Prof Herrmann said, “With both institutions truly dedicated to entrepreneurship education, the NOC programme is an excellent opportunity to further deepen our strong collaboration ties.”

Another agreement was inked to extend the partnership among NUS, TUM and the German Institute of Science and Technology – TUM Asia Pte Ltd (GIST-TUM Asia) for the Joint Master of Science Degree Programme in Industrial Chemistry.

The agreement signing yesterday between NUS and TUM President Professor Tan Chorh Chuan (left) and TUM President Professor Wolfgang A Herrmann.

The latest Overseas College established by NUS Enterprise, the information platform developed by NUS Enterprise, the information platform established by NUS Enterprise, the information platform
The collective spirit of giving

More than $472,000 was collected through NUS Students’ Union (NUSSU) Rag and Flag this year, the highest amount in five years. The fund would aid 23 beneficiaries in Singapore.

Rag and Flag is an annual NUS tradition which traces its roots to Welfare Week in 1957. On Flag Day, the students collect donations from the public for various beneficiaries, followed by Rag Day, which showcases performances from the students to show appreciation for the donations. Rag Day on 2 August saw some 7,000 students raise funds from the public across Singapore. This was followed by Rag Day four days later, where they put up colourful and dazzling performances.

Theme “Big World, Bigger Dreams”, Rag Day featured well-choreographed performances, which were complemented with multi- themed props creatively constructed by students using recycled materials, in celebration of the diversity and vibrancy of the NUS community.

Members of NUS Management, including NUS President Professor Tan Chorh Chuan, and NUS Deputy President (Academic Affairs and Foresight) Professor Tan Eng Chye joined in the activities as a pledge of support.

NUSSU President Loo Wing Weng stressed that participating in Rag and Flag is “a rite of passage for all NUS freshmen”. He noted, “This experience will serve to foster teamwork, empathy and compassion among our fellow students.”

For the first time in Rag history, the six Halls of Residence at NUS came together to put up a spectacular extravaganza.

Exploring the journey through the past, present and future of time and space, the performers enthralled spectators with an intriguing production which raised questions about social norms and future possibilities for humanity.

Since 2000, NUS students have raised more than $7 million in donations through the annual NUSSU Flag Day. They have been receiving the Community Chest Special Events Gold or Platinum Award for their dedicated efforts since 2003.

The Freshmen Inauguration Ceremony was held on 1 August over two sessions to welcome some 2,800 freshmen into NUS.

NUS President Professor Tan Chorh Chuan advised the students to inculcate the interest and ability to continually learn, unlearn and relearn. He also underscored the importance of building strong personal and interpersonal qualities.

The Ceremony ended with a recital of the student pledge and NUS song.

Rag Day 2016 awards

Gold
- Yong Loo Lin School of Medicine
- NUS Business School
- Faculty of Science
- Faculty of Law
- Eusoff Hall

Silver
- Kent Ridge Hall
- Sharses Hall
- King Edward VII Hall
- Department of Pharmacy
- Faculty of Dentistry
- School of Design & Environment
- Faculty of Engineering

Bronze
- University Scholars Programme
- Faculty of Arts & Social Sciences
- School of Computing
- Raffles Hall
- Temasek Hall

Platinum Award
- Kent Ridge Hall

(Facing-breaking amount of $199,615.60 raised through Flag)

Friend of the Community Award
- Department of Pharmacy

Despite taking part at the 2016 World Famous Universities Dragon Boat Invitational Race for the first time, the NUS Dragon Boat men’s team performed admirably to win two races at the event in Daqing, China from 18 to 19 June.

The NUS team competed in the 12-crew category across three racing distances — 200m, 500m and 2,000m. The paddlers topped the 200m competition convincingly, crossing the finishing line some six seconds before the next team. The 500m race saw a close fight between NUS and Northeast Petroleum University, with the Singapore boat reaching the goal less than a second before its rival.

The NUS team’s Vice Captain Year 3 Arts & Social Sciences student Kenryan Soh commented, “Faced with strong competition from the host as well as unfamiliar race conditions, which included racing in a different boat in cold weather, we are extremely proud to emerge champions for the 200m and 500m races as we have trained really hard throughout the season.”

He added that the team’s debut in such a major overseas event definitely provided a good eye-opening experience for all the members.

The ASEAN University Games 2016 (AUG) held from 10 to 19 July 2016 closed with a spectacular and colourful show at NUS Town Green on its last day.

The Guest-of-Honour at the closing ceremony was Ms Sim Ann, Senior Minister of State, Culture, Community & Youth, and Finance. She witnessed the formal handover of the AUG flag by Dr Tan Eng Liang, Chairman of the Organising Committee and Professor Dato’ Dr Abdullah Mohamad Said, President of the ASEAN University Sports Council, to Dr Thien Ann, President of the Myanmar University Sports Federation.

Myanmar will be hosting the next Games.

The biennial Games aims to promote ASEAN solidarity and build rapport between the youth athletes of the various ASEAN countries. This was the third time Singapore hosted AUG since it began in 1981.

An estimated 1,500 participants from 11 different countries competed in 16 sports at the Games. Singapore’s 274-strong contingent, with 95 athletes from NUS, won a total of 73 medals — 24 gold, 20 silver and 29 bronze. Thirty-seven of the medal tally were procured by NUS athletes at teams with NUS members, in sports such as archery, canoeing, athletics, table tennis, shooting, fencing, waterpolo, football and rugby.

One of the big winners from NUS was national paddler Mervyn Toh, who clinched five gold medals in canoeing in the men’s 500m K1, 500m K2, 500m K4 and 200m K4 events.

The handing over of the AUG flag at the closing ceremony

NUS NEWS

ASEAN University Games ends on a high note

NUS paddlers in the 500m race

Dr Thien Wi, President of the Myanmar University Sports Federation. Myanmar will be hosting the next Games.

The handing over of the AUG flag at the closing ceremony

NUS NEWS

ASEAN University Games ends on a high note

NUS paddlers in the 500m race
Yale-NUS campus architecture accolade

Yale-NUS campus has received the prestigious International Architecture Award 2016 presented by The Chicago Athenaeum: Museum of Architecture and Design and The European Centre for Architecture, Art Design and Urban Studies. The award is one of the most extensive global architecture award programmes honouring excellence in Public Architecture in the fields of Art and Design and Urban Studies.

The Award is one of the most extensive global architecture award programmes honouring excellence in Public Architecture in the fields of Art and Design and Urban Studies. The award-winning entries will be showcased in an exhibition that premieres in Istanbul, Turkey from 2 to 30 September 2016, followed by a roving exhibition across Europe called “The City and the World”.

Yale-NUS College is among some 130 awe-worthy projects hundreds submitted for this year’s annual global Awards program from architecture firms across the world. Designed by Forum Architects of Singapore and US-based Pelli Clarke Pelli Architects, the 63,000m² Yale-NUS College campus has won the International Architecture Award 2016.

“NUS Because” lauded

The University's three-year admissions publicity campaign themed ‘NUS Because’ has won over the International Public Relations Association (IPRA), garnering the IPRA Golden World Awards for Excellence in Public Relations 2016 in the Corporate Communications – Inhouse category. The campaign, which ran from 2012 to 2015, featured the distinctiveness of an NUS education and its diversity of learning experiences. The central message responded to the perennial question of prospective students: Why NUS?

Conceptualised in-house by NUS Corporate Relations, the campaign highlighted bold but versatile taglines such as “Because classroom go beyond four walls” and “Because you care.”

Publicity platforms included the NUS website, web banners, social media, a marketing booklet, videos, print advertisements as well as other above- and below-the-line publicities materials.

An independent survey showed that the campaign resonated well among prospective students and influencers.

Honouring our Eminent Alumnus the late Mr S R Nathan (1924 – 2016)

Mr S R Nathan graduated with a Diploma in Social Studies with Distinction in 1949 from the University of Malaya, NUS’ predecessor institution. Mrs Ann Wee, the longest-serving President of the NUS Alumni Association in 2005. He was presented with the Distinguished Alumni Award in 2007. NUS President Professor Tan Chorh Chuan, who had worked closely with Mr Nathan during his tenure as NUS Chancellor, said, “Mr Nathan’s distinguished achievements as a civil servant, ambassador and statesman is an inspiration to all of us.” He added that the NUS community has benefited tremendously from Mr Nathan’s visionary leadership, and he had always generously made time for students.

Mr Nathan was conferred the Honorary Doctor of Letters by the University in 2012 for his contributions to Singapore and his leadership, guidance and support to NUS during his Chancellorship.

In 2013, Mr Nathan lent his support to set up the 5 R Nathan Professorship in Social Work. He then raised funds to establish the Lee Tan Professorship in Biodiversity for the Lee Kong Chian Natural History Museum (LKCNHM) at NUS. Mr Nathan was instrumental in reviving the Raffles Museum as the LKCNHM.

That same year, the Institute of Policy Studies at NUS’ Lee Kuan Yew School of Public Policy set up the 5 R Nathan Fellowship for the Study of Singapore. Last year, Mr Nathan was presented with the Distinguished Arts and Social Sciences Alumni Award (Lifetime Achievement).

Mr Nathan’s State Funeral Service was held on 26 August at the University Cultural Centre.

A student of distinction

Mr S R Nathan graduated with a Diploma in Social Studies with Distinction in 1949 from the University of Malaya, NUS’ predecessor institution. Mrs Ann Wee, the longest-serving Head of Programme in the Raffles Museum as the LKCNHM.

“NUS Because” admissions publicity campaign has won the IPRA Golden World Awards for Excellence in Public Relations 2016.
Lee Hsien Loong: Embrace globalisation

Despite the recent spate of troubling developments around the world, Singapore Prime Minister Lee Hsien Loong expressed optimism about the future and noted that “this is a time generally of peace and prosperity.”

Globalisation has delivered considerable benefits to South Asia, China and the world, and “the way forward is more distribution of the benefits to South Asia, China and the world,” he believes. However, there must also be “more distribution of the benefits of globalisation to those who have not enjoyed it or those who may be at risk of its side effects,” he stressed.

As to his response to an increasingly fragmented world, the Prime Minister recognised that many people longed for the “good old days” they perceived to be safer. “You may wish that your own market is more secure and those unfair competitors were not present. But if everybody seeks to benefit from the links with the subcontinent, he said, adding that India too has a role to play in this region.

To further elevate Singapore’s garden city image, vertical and skyrise greenery now adorns architecture. Efforts to preserve the island’s rich biodiversity see the conservation of Kranji marshes and Pulau Ubin to protect endangered flora and fauna. Mr. Lawrence Wong, Singapore Minister for National Development, said the development of arts and culture has to be participative, organic and grounded, instead of top down.

The audience asked the Minister questions ranging from preventing stratification and people falling through the cracks to the impact of different ideologies. He revealed some of the government’s measures on promoting inclusiveness and inculturating a lifelong learning mindset.

Providing examples from NUS and Singapore, he added that these shifts include building a more adaptable workforce, offering different educational pathways, focusing on lifelong and experiential learning, and creating a formidable “Brain Trust” where individuals from different disciplines can be brought together to create value and tackle the country’s important issues.

Lee Hsien Loong: Blueprint for building a distinctive Singapore

“Creating a distinctive Singapore for the next 50 years is an endeavour that all of us have to be a part of,” Mr. Lawrence Wong, Singapore Minister for National Development, underscored this caveat when he shared the country’s roadmap at the Kent Ridge Ministerial Forum 2016, held at NUS University Town on 11 August.

He listed four key areas in national development — building a distinctive global city, homes for citizens, preserving greenery and biodiversity, and forging a distinctive culture and identity.

Being a global city will help Singapore stay competitive, attract investments and create jobs, pointed out Mr Wong. To achieve this goal, a second Central Business District is taking shape in Jurong, which will become a gateway to the vibrant western hub, complete with a high-speed railway and recreational facilities. Existing ports, to be relocated in Tuas, will further free up prime waterfront land that will be crafted into the Greater Southern Waterfront for commercial and residential uses.

On housing, fresh residential projects are coming up in Punggol, while a technology cluster integrating Singapore Institute of Technology and the Business Park there will facilitate interaction between businesses and the institute. Mr Wong also unveiled that the new Tengah township designed as a “forest town”, with a green corridor linking the western and central catchment areas.

Education partnership promotes growth in economy, society

The increasing expectations placed on universities require substantial changes in the way they think and operate, said NUS President Professor Tan Chorh Chuan at the “Partnership in Education” plenary on 19 July. While examining the role of the university in economic and societal advancement during the session at the South Asian Diaspora Convention 2016 organised by NUS’ Institute of South Asian Studies, he stated that universities are coming up in Punggol, while a technology cluster integrating Singapore Institute of Technology and the Business Park there will facilitate interaction between businesses and the institute.

Mr. Lawrence Wong, Singapore Minister for National Development

Hailing the local culture the “soul of our nation,” Mr Wong lauded the growing support for Singapore content in homegrown movies and music. He said the development of arts and culture in Singapore has to be participative, organic and grounded, instead of top down.

He added that ideas of public flats and green spaces are available for all Singaporeans. "That has always been our basis of developing our city; that it cannot be stratified, that we don’t want a city that is exclusive or where only some people feel it’s for them and others feel left out,” he said. He highlighted that even in high-end places such as Marina Bay Sands, common spaces are available for all Singaporeans.

Providing examples from NUS and Singapore, he added that these shifts include building a more adaptable workforce, offering different educational pathways, focusing on lifelong and experiential learning, and creating a formidable “Brain Trust” where individuals from different disciplines can be brought together to create value and tackle the country’s important issues.

Education partnership promotes growth in economy, society

The increasing expectations placed on universities require substantial changes in the way they think and operate, said NUS President Professor Tan Chorh Chuan at the “Partnership in Education” plenary on 19 July. He was examining the role of the university in economic and societal advancement during the session at the South Asian Diaspora Convention 2016 organised by NUS’ Institute of South Asian Studies.

We are all moving into a very different future, Prof Tan said, based on the commoditisation of information, which has allowed content to be readily available, commoditisation of skills, where technology is levelling the playing field, and commoditisation of complex thinking, where artificial intelligence is capable of performing tasks we thought only humans could master. This changing nature of work underscores the importance of upskilling our workforce in order to stay near the front of the curve.

“Universities, because of our focus on education, knowledge and preparing for the future, are therefore well placed to, and should, be key economic drivers of societal and economic advancement but this requires major shifts in the way that universities teach and do their work,” said Prof Tan.

To further elevate Singapore’s garden city image, vertical and skyrise greenery now adorns architecture. Efforts to preserve the island’s rich biodiversity see the conservation of Kranji marshes and Pulau Ubin to protect endangered flora and fauna. Mr. Lawrence Wong, Singapore Minister for National Development, said the development of arts and culture has to be participative, organic and grounded, instead of top down.

We should be mature and wise enough to know that the fault lines exist. Be patient in allowing things to evolve but at the same time work at enlarging our common space.

He also added that ideas of public flats and green spaces are available for all Singaporeans. "That has always been our basis of developing our city; that it cannot be stratified, that we don’t want a city that is exclusive or where only some people feel it’s for them and others feel left out,” he said. He highlighted that even in high-end places such as Marina Bay Sands, common spaces are available for all Singaporeans.

Providing examples from NUS and Singapore, he added that these shifts include building a more adaptable workforce, offering different educational pathways, focusing on lifelong and experiential learning, and creating a formidable "Brain Trust" where individuals from different disciplines can be brought together to create value and tackle the country’s important issues.

The audience asked the Minister questions ranging from preventing stratification and people falling through the cracks to the impact of different ideologies. He revealed some of the government’s measures on promoting inclusiveness and inculturating a lifelong learning mindset.

Mr Wong agreed to a student’s proposal that public buildings and economic icons be made more accessible to every citizen regardless of social background. “That has always been our basis of developing our city; it cannot be stratified, that we don’t want a city that is exclusive or where only some people feel it’s for them and others feel left out,” he said. He highlighted that even in high-end places such as Marina Bay Sands, common spaces are available for all Singaporeans.

He also added that ideas of public flats in the city centre are being explored.
Hybrid drugs battle resistant malaria

Malaria killed some 438,000 people in 2015, and remains a world health crisis. Antimonials combination therapy, currently the best malaria treatment, faces a big problem with resistant strains of the disease confirmed recently in Southeast Asia.

The parasite responsible for causing malaria can become mutated such that drugs used for treatment become ineffective, allowing the parasite to continue to live and reproduce.

To address this worrying issue, Associate Professor Brian Dymock from NUS Pharmacy and Associate Professor Kevin Tan from NUS Microbiology and Immunology jointly developed a series of hybrid drugs that attack the resistance mechanisms of the parasite, destroying it at the same time.

This dual-acting mechanism includes a killing factor derived from chloroquine, an old drug which the parasite has become resistant to, and a “chemoreversal” agent that blocks the mutated component.

The new hybrid drugs wiped out malaria strains grown in the laboratory and parasites from patients in Thailand who were unresponsive to old drug which the parasite has become resistant to, and a “chemoreversal” agent that blocks the mutated component.

The pursuit for efficacy is laudable, but when it becomes a quest for unrealistic perfection.

Maladaptable or “bad” form of perfectionism when one cannot tolerate imperfections and mistakes. NUS researchers discovered that controlling parents pushed their children to become overly critical of themselves, and this tendency could worsen over the years.

In a five-year study on primary students in Singapore, scientists from NUS Psychology observed that children showing high or increased level of self-criticalness also suffered from greater depression or anxiety symptoms.

This project is unique as it linked parental intrusiveness to self-criticalness among primary schoolers, unlike other work on maladaptive perfectionism focusing predominantly on adolescents and college students.

The psychologists recruited seven-year-old children from 10 primary schools in Singapore. They were assessed together with their parents on a variety of measures, such as child temperament characteristics and parent-child interaction. The children's maladaptive perfectionism levels were evaluated at ages 8, 9 and 11 to determine the extent to which they became overly critical over time.

When parents become intrusive in their children’s lives, it may signal to the children that what they do is never good enough.

As a result, the child may become afraid of making the slightest mistake and will blame himself or herself for not being ‘perfect’.

Over time, maladaptive perfectionist behaviour may be detrimental to the child’s well-being as it increases the risk of the child developing symptoms of depression, anxiety and even suicide in very serious cases, said Assistant Professor Ryan Hong, who headed the study.

In the first year of the study, parental intrusiveness was assessed using a game played by the child to assess the parent’s degree of interference during the child’s self-soothing attempts. The results showed that 60 per cent of the 263 children studied had high or increasing self-criticalness, and 78 per cent demonstrated high levels of socially prescribed perfectionism. Both forms co-occurred in 59 per cent of the children.

According to the researchers, this behaviour may be detrimental to the child’s well-being as it increases the risk of the child developing symptoms of depression, anxiety and even suicide.

A single therapy could have several advantages against drug-resistant malaria, being more realistic high expectations of oneself.

The team embedded a powerful magnetic memory chip on a flexible plastic material to obtain a malleable memory component, critical for the development of flexible and lightweight devices. These can be deployed in wide-ranging applications such as automotive, healthcare electronics, robotics and avionics systems.

Invented by NUS engineers, current high-performance memory chips fabricated on soft substrates face the hurdle of reduced efficiency. The group overcame this problem by adopting magnetoresistive random access memory (MRAM) which uses a magnesium oxide magnetic field to store data. MRAM outperforms conventional dynamic random access memory chips by up to 1,000 times, consumes less power and retains data after the power is cut off.

In a fresh approach, the magnetic memory chip was grown on a silicon surface, and then the underlying silicon etched away. A transfer printing technique allowed the chip to be implanted on a flexible plastic surface instead of the usual rigid silicon.

Tests showed that the device’s magnetoresistance, which measures performance, hitting 300 per cent compared to below 100 per cent for existing commercial MRAM products, said Assoc Prof Richards. Complemented by other enhanced features, the flexible magnetic chip can achieve much higher data transfer rates.

Published in Advanced Materials on 6 July 2016, the technology has been granted in at least 18 South Korea patents. Besides applying their technique in various electronic components, the investigators plan to explore tie-ups with industry partners.

Asian heart study unveils regional differences

A small piece of seemingly nondescript film set is key to the electronics landscape. Invented by NUS engineers, the “smart” plastic promises to boost data storage and processing power, painting existing scenarios of flexible and wearable electronics.

Creation of the world’s first magnesium oxide-based magnetic memory fabricated on a flexible surface was led by Associate Professor Yang Hyunsoo of NUS Electrical and Computer Engineering, in collaboration with researchers from Yonsei University in South Korea, Ghent University in Belgium and Singapore’s Institute of Materials Research and Engineering.

The team embedded a powerful magnetic memory chip on a flexible plastic material to obtain a malleable memory component, critical for the development of flexible and lightweight devices. These can be deployed in wide-ranging applications such as automotive, healthcare electronics, robotics and avionics systems.

Invented by NUS engineers, current high-performance memory chips fabricated on soft substrates face the hurdle of reduced efficiency. The group overcame this problem by adopting magnetoresistive random access memory (MRAM) which uses a magnesium oxide magnetic field to store data. MRAM outperforms conventional dynamic random access memory chips by up to 1,000 times, consumes less power and retains data after the power is cut off.

In a fresh approach, the magnetic memory chip was grown on a silicon surface, and then the underlying silicon etched away. A transfer printing technique allowed the chip to be implanted on a flexible plastic surface instead of the usual rigid silicon.

Tests showed that the device’s magnetoresistance, which measures performance, hitting 300 per cent compared to below 100 per cent for existing commercial MRAM products, said Assoc Prof Richards. Complemented by other enhanced features, the flexible magnetic chip can achieve much higher data transfer rates.

Published in Advanced Materials on 6 July 2016, the technology has been granted in at least 18 South Korea patents. Besides applying their technique in various electronic components, the investigators plan to explore tie-ups with industry partners.
New deans for Computing, Design and Environment

The University has appointed two eminent academics — Professor Mohan Kankanhalli and Professor Lam Khee Poh — as new Deans of its Schools of Computing, and Design and Environment, respectively.

Prof Kankanhalli has taken over the baton from Professor David S Rosenbaum effective 1 July 2016, while Prof Lam succeeded Professor Hang Chye Kiang on 18 July 2016.

Formerly NUS Vice Provost (Graduate Education), Prof Kankanhalli was responsible for matters relating to Masters and PhD programmes including funding, curriculum, strategy and policy. The Provost’s Chair Professor of Computer Science at NUS Computing focuses on research in multimedia computing, information security, image/video processing and social media analysis. He also directs the Sensor-enhanced Social Media Centre which conducts fundamental exploration of social cyberphysical systems.

Prof Lam

He aims to make the school a thought leader in more areas of computing research that will bring increased international recognition while contributing to national priorities like Smart Nation, Cybersecurity, Analytics, Robotics and Healthcare.

Prof Lam has been a faculty member of the School of Architecture at Carnegie Mellon University (CMU) in the US since 2003 and served as Project Director in CMU’s Consortium for Building Energy Innovation. Prior to joining CMU, he was an academic staff at NUS Architecture, with a joint appointment in the Departments of Architecture and Building from 2000 to 2003.

Prof Lam’s expertise lies in life-cycle building information modeling and computational design support systems for total building performance analysis and building diagnostics. He was the building performance consultant for several major award winning projects in both the private and public sectors in Singapore, China and the US.

Prof Lam looks forward to engaging with colleagues to pursue a sustainable and resilient habitat for Singapore, founded upon the core values of the School of Design and Environment, rooted in the natural and the built environment context.

Singapore’s marine science research capabilities is poised to take off with a new $25 million national Marine Science Research and Development Programme (MSRDP) funded by the Singapore National Research Foundation, with NUS as collaborator.

MSRDP will focus on R&D in marine science and engage the industry in promoting environmental and marine sustainability. By leveraging Singapore’s location in a region rich with marine biodiversity, it aims to advance marine science research in the country by building up relevant R&D and expertise that address future strategic demands.

The programme will be led by Programme Director Professor Peter Ng Kee Lin from NUS Biological Sciences, who is also Head of the Lee Kong Chian Natural History Museum. Comprising selected research projects lasting three to five years, it will be governed by a Steering Committee helmed by Professor Ho Teck Hua, NUS Deputy President (Research & Technology).

The island nation’s marine ecosystem, under stress from shipping activities, continued urbanisation and climate change, needs innovative ideas in marine science for better management and conservation.

MSRDP aims to cultivate local talent in marine science by training research scientists, engineers and PhD students in the field. Internships and collaborative partnerships with industry for technology development and applications will be established. Projects aligned with national initiatives will also be jointly pursued with government agencies, while an outreach component will inform the public of the research outcomes.

St John’s Island Marine Laboratory, Singapore’s only offshore marine research facility, will join in to further the programme’s objectives.

Three research themes and one enabling technology theme for MSRDP have been determined: Marine Ecosystems and Biodiversity; Environment Impact and Monitoring; Coastal Ecological Engineering; and Marine Technology and Platforms.

Private gift to solar energy research

The hope is that a student will focus on the research of groundbreaking sustainable technologies to enhance the use of solar energy in Singapore, and to use that understanding to make the world a better place.

NUS and SERIS should be an “innovator and exporter” of research and development.

Mr Sanjay Kirpalani, Chairman of Renewsys, an Enpe Group enterprise

Mr Kirpalani became the first private donor to contribute towards solar research at NUS by establishing the Renewsys-Enpe Group PhD Scholarship at the Solar Energy Research Institute of Singapore (SERIS). The scholarship will support postgraduate students to pursue research in this field. Internships and Collaborative partnerships with industry for technology development and applications will be established. Projects aligned with national initiatives will also be jointly pursued with government agencies, while an outreach component will inform the public of the research outcomes.

St John’s Island Marine Laboratory, Singapore’s only offshore marine research facility, will join in to further the programme’s objectives.

Three research themes and one enabling technology theme for MSRDP have been determined: Marine Ecosystems and Biodiversity; Environment Impact and Monitoring; Coastal Ecological Engineering; and Marine Technology and Platforms.
World’s lightest paragliding trike takes off

Following the remarkable reception of the personal flying aircraft Snowstorm at the recent Founders Forum in London (page 5), NUS Engineering’s Design-Centric Programme (DCP) is taking to the skies again with its latest paragliding machine.

Christened The Delta, the world’s lightest paragliding trike was unveiled on 26 July at University Town.

The design and prototyping studio FrogWorks — founded by and for NUS students and housed in DCP — built the machine for the National Geographic Channel’s Machine Impossible series after producers of the show approached DCP with the challenge of building a flying vehicle on a shoestring budget within a tight three-month timeframe.

The Delta was aired soaring off in Malaysia during an episode of the show on 28 July.

The contraption incorporates a simple but robust system housing a custom-designed chassis with lightweight aluminium and carbon fibre frame. Two back wheels, a front wheel connected to the steering and a seat allow a pilot to control the machine. Two rear-mounted carbon fibre propellers operating on lithium batteries power the off-the-shelf paraglider which provides lift.

The 49kg machine, batteries included, is able to carry one person of up to 75kg. Upon hitting the speed of 30km per hour, the craft lifts off and thereafter cruises at 36km per hour. A 10-minute flying time allows it to cover a distance of up to 6km.

Safety features include a roll cage and five-point harness to protect the pilot, fibreglass rod suspension to cushion the landing, barrier nets between the pilot and propellers, safety belts and engine kill-switches in case of an emergency during flight.

“We had a great learning experience as we went about tackling various aspects of the project, from constructing the physical frame to designing and implementing the aircraft’s electric energy system and pilot safety system. It was an engineering challenge we greatly relished,” said Year 4 NUS Engineering student Chan Wai Yang.

Associate Professor Martin Henz from NUS Computer Science and NUS Engineering co-supervised the project with Dr Rangarajan Jegadeesan, lecturer at the NUS Engineering Design and Innovation Centre.