SAFE AND SUSTAINABLE

A LOOK AT THE EVOLUTION OF THE NUS CAMPUS AND THE THINKING THAT GUIDES IT.

SMART, SAFE, AND SUSTAINABLE

THE USE OF TRANSFORMATIONAL TECHNOLOGY IS KEY TO MAKING OUR INFRASTRUCTURE MORE FUNCTIONAL, ELEGANT, AND IN HARMONY WITH THE ENVIRONMENT.

PROFESSOR YONG KWET YEW, NUS SENIOR VICE PRESIDENT (CAMPUS INFRASTRUCTURE)

DEBATING THE MERITS OF A TECH-DRIVEN TEMPLATE FOR TOMORROW

THE BREAD WINNERS

MS PRANOTI NAGARKAR (ENGINEERING '03)
MR RISHI ISRANI (COMPUTING '03)

OF FINANCIAL STABILITY, UNIVERSITIES, AND THE FUTURE

MR JOHN WILTON, NUS DEPUTY PRESIDENT (ADMINISTRATION AND FINANCE)
A GIFT FOR A HIGHER CAUSE

Born in Bangalore, India, Mr Gnanapragasam Louis came to Singapore to carve out a living for himself and his family. He was a self-taught builder working under the British Army and eventually set out on his own as a building contractor. He constructed several iconic buildings in Singapore and Malaysia, such as the Novena Church in 1950 and the Assunta Hospital in Petaling Jaya, Selangor, Malaysia in 1956. Through hard work and judicious investments in property, he made his fortune and supported his children’s local and overseas education, as well as the education of his relatives in India.

“My father held a firm belief that education is critical in enabling one to find his or her place in the world. He taught us and our relatives to embrace the gift of education to reach our full potential,” shared Ms Wendy Marilyn Louis.

To honour him, his wife and daughter, Mrs Ellen G Louis and Ms Wendy Marilyn Louis respectively, have made a bequest to the National University of Singapore’s Faculty of Arts and Social Sciences to establish the GL Louis Programme in Religious Studies. The programme will explore the phenomenon of religions through a professorship, PhD scholarships and events such as lectures, conferences, seminars and workshops.

“My husband always felt that it is impossible to understand our neighbours without fully understanding the religions that inform their world views. I hope this gift can be a step forward in fostering a greater understanding and harmony of the different religions between people.” said Mrs Ellen G Louis.
NUS IS ASIA’S TOP INSTITUTION FOR AAAI CONFERENCE

The University has established itself as one of the world’s leading research institutions in the field of artificial intelligence.

A RECENT STUDY conducted by Microsoft has revealed that NUS is among the top-performing institutions at one of the world’s most prestigious artificial intelligence (AI) conferences.

The conference is hosted by The Association for the Advancement of Artificial Intelligence (AAAI), and is held annually with the purpose of promoting innovative research in AI and the free exchange of ideas between authorities in the field.

Founded 40 years ago, the AAAI is an international, non-profit, scientific society with over 4,000 members of the most prolific experts in AI, with several members being recipients of the coveted Turing Award which is often described as the Nobel Prize of computing.

On 18 January, Microsoft published the results of an investigation into the institutional trends of AAAI conferences over the last 25 years and it was discovered that NUS ranked 13th worldwide based on all accepted papers by the AAAI.

NUS has had 146 papers accepted since 1994 (21 papers in 2019), outdoing other esteemed Ivy League universities such as Cornell and Brown, and ranking as the highest Asian academic institution (as of 12 February).

NUS also ranked 13th for the number of citations attributed to AAAI papers, with its papers being referenced in over 2,009 academic publications, again making it the top-performing Asian institution in this study.

Professor Ho Teck Hua (Engineering ’85), NUS Senior Deputy President and Provost and Executive Chairman of AI Singapore, a national programme to boost Singapore’s AI capabilities, was heartened by the findings. “With the digital revolution changing the way we live, work and play, results such as these affirm the University’s international reputation in leading the charge for AI innovation. Ultimately, the cutting-edge work being undertaken by our researchers and shared at conferences like AAAI is helping to build an inclusive Singapore by encouraging, enabling and enhancing the contributions of businesses to the social, vocational and educational uplifting of Singaporeans in need of assistance,” said Professor Ho.

“The university’s international reputation in leading the charge for AI innovation is heartened by the findings. “With the digital revolution changing the way we live, work and play, results such as these affirm the University’s international reputation in leading the charge for AI innovation. Ultimately, the cutting-edge work being undertaken by our researchers and shared at conferences like AAAI is helping to build an inclusive Singapore by encouraging, enabling and enhancing the contributions of businesses to the social, vocational and educational uplifting of Singaporeans in need of assistance,” said Professor Ho.

NUS APPOINTS THREE NEW PRO-CHANCELLORS

These distinguished individuals will lend their experience when presiding over University matters and events.

THE UNIVERSITY HAS ANNOUNCED the appointment of three new NUS Pro-Chancellors – Mr Gautam Banerjee, Chairman of Blackstone Singapore; Mrs Theresa Foo, Chairman of Singapore Business Federation Foundation; and Mr Teo Siong Seng, Chairman of Singapore Business Federation. The appointment, made by Singapore President and NUS Chancellor Madam Halimah Yacob (Law ’78), took effect from 1 January 2019 for a term of three years.

Pro-Chancellors act on behalf of the Chancellor during the Chancellor’s absence from the University, and preside at the annual Commencement ceremonies. Mr Banerjee, Mrs Foo and Mr Teo will join Dr Chan Sek Keong (Law ’61) – who was appointed in 2015 – and Mr Po’ad Mattar (Accountancy ’71) – who was appointed in 2012 – in the University’s Chancellory.

“We welcome Mr Gautam Banerjee, Mrs Theresa Foo and Mr Teo Siong Seng to NUS as Pro-Chancellors. They are all leaders in their respective fields who have contributed significantly to the Singapore community. I look forward to their support in Chancellory matters, and their participation at NUS events,” said Madam Halimah.

A Fellow of the Institute of Chartered Accountants, England and Wales and the Institute of Certified Public Accountants, he has served on various Boards, including Singapore Airlines International, as well as Chairman and CEO of PIL’s Pacific International Lines (Pte) Ltd (PIL) – one of the largest ship owners and operators in Southeast Asia – concurrently Chairman of the Singapore Business Federation, as well as Chairman and CEO of PIL’s listed subsidiary Singamas Container Holdings Ltd, Hongkong. He is also the Honorary President of the Singapore Chinese Chamber of Commerce & Industry and a former Nominated Member of Parliament. In 2010, Mr Teo was awarded the Public Service Medal.

“The University also announced that Mr Ngiam Tong Dow (Arts ’59) and Dr Cheong Siew Keong (Doctor of Letters ’82) have stepped down, after serving as Pro-Chancellors since 2000. Mr Stephen Lee Ching Yen had earlier stepped down to assume a new appointment at another local university.

“We would like to thank Mr Ngiam Tong Dow and Dr Cheong Siew Keong for their dedicated service to NUS as our Pro-Chancellors for close to two decades. Their advice and guidance have been invaluable. We would also like to thank Mr Stephen Lee and wish him all the best in his new appointment,” said NUS President Professor Tan Eng Chye (Science ’85).

This article was first published on 25 February in NUS News at news.nus.edu.sg/highlights/nus-appoints-three-new-pro-chancellors, and has been edited for The AlumNUS.
A new Deputy President (Innovation & Enterprise) for NUS

A champion of translational research, Professor Freddy Boey is also a highly successful academic and entrepreneur.

PROFESSOR FREDDY BOEY (ENGINEERING ’87), Senior Vice President (Graduate Education & Research Translation) is appointed as Deputy President (Innovation & Enterprise) from 1 April 2019. Prof Boey will be responsible for the University’s initiatives and activities in the areas of innovation, entrepreneurship and research translation, as well as graduate studies in this new role.

As part of this appointment, Prof Boey has also assumed leadership of NUS Enterprise when Dr Lily Chan, CEO of NUS Enterprise, stepped down at the end of March 2019. Dr Chan continues in an advisory capacity from 1 April 2019. As NUS Senior Vice President (Graduate Education & Research Translation), Prof Boey has oversight over all graduate education initiatives and the NUS Industry Liaison Office, which connects and partners with industry to commercialise the University’s innovations. He launched the Graduate Research Innovation Programme within a short timeframe to rapidly increase the University’s research translation efforts.

Said NUS President Professor Tan Eng Chye (Science ’86), “Professor Freddy Boey is known to many of us here and overseas as a transitional research champion who is also a highly successful academic and entrepreneur. Freddy’s deep experience in research translation and entrepreneurship will bring our efforts in these two pillars to new heights. We look forward to working with Freddy in our efforts to grow the NUS Innovation and Enterprise network.”

“We believe that NUS faculty, students as well as start-ups, alumni and partners in our global and local ecosystems will benefit greatly from Freddy’s experience and mentorship. He is a prolific researcher, inventor and entrepreneur who puts NUS and Singapore first. We’re very pleased that Freddy is taking on this new role,” said Senior Deputy President and Provost Professor Ho Teck Hua (Engineering ’85), who has overseen education, research and entrepreneurship at the University.

Prof Boey holds more than 100 patents and is the founder of several spin-offs. He has also helped to raise Singapore’s profile globally as a hub for medical device innovation. Said Prof Boey, “I am grateful for the opportunity to contribute to NUS’ leadership in entrepreneurship, research translation and graduate studies. I look forward to working with my talented colleagues, students and alumni, as well as our many partners and friends in Singapore and overseas to build on the strong foundation, laid by Dr Lily Chan, in the exciting years ahead.”

DR LILY CHAN TAKES ON ADVISORY ROLE
Dr Chan, who joined NUS in February 2006, now takes on an advisory role to Senior Deputy President and Provost Prof Ho. During her tenure as CEO of NUS Enterprise, Dr Chan transformed the University’s research translation efforts. She nurtured hundreds of entrepreneurs and start-ups, architecting a comprehensive support platform that has extended off-campus and overseas.

Under her stewardship, the NUS Overseas Colleges (NSC) programme – a first-of-its-kind initiative that has enabled more than 2,800 students to intern at overseas start-ups while taking classes at top partner universities – grew steadily from its initial location in Silicon Valley to 12 current locations across Asia, Europe, the Middle East and North America. NDC alumni have founded over 370 companies, leading Singapore’s broadsheet The Straits Times to call the programme “the single most important development to boost the start-up movement in Singapore.”

Said Dr Chan, “Creating the foremost comprehensive innovation and entrepreneurship ecosystem for the University requires the efforts of many. I am thankful to my team, our students, alumni, partners and friends for their support in making NUS Enterprise the Innovation & Enterprise thought leader and community developer in Singapore and the region. I look forward to hearing about more successes from our students and start-ups, and for Prof Freddy Boey to take it to the next level.”

Said NUS President Prof Tan, “We extend our deep gratitude and appreciation to Dr Lily Chan, who has led NUS Enterprise with great passion and dedication over the last 13 years. Lily leaves behind a flourishing global and local start-up ecosystem that is a proud testament to the efforts of Lily and her team. We thank Lily for her many contributions to NUS and Singapore.”

“This article was first published on 22 February in NUS News at [www.nus.edu.sg/highlights/freddy-boey-appointed-deputy-president-innovation-enterprise], and has been edited for The AlumNUS.”

Freddy’s deep experience in research translation and entrepreneurship will bring our efforts in these two pillars to new heights.

Professor Tan Eng Chye, NUS President

The programme prepares you to harness the synergistic benefits of technologies that are disrupting industries today. The knowledge and skills acquired equip you to keep pace with the changing nature of industry, and lead transformation to enhance productivity in the workplace.

INFORMATION SESSION
4 April 2019 (Thu) - 7-9pm
NUS University Town
Education Resource Centre (Level 2)
Ngee Ann Kongsi Auditorium
8 College Ave West, Singapore 139608

Programme registration is open now till 30 April 2019

This article was first published on 22 February in NUS News at [www.nus.edu.sg/highlights/freddy-boey-appointed-deputy-president-innovation-enterprise], and has been edited for The AlumNUS.

[600x600]
NUS Launches Its Global Mentorship Programme

The Centre for Future-Ready Graduates at NUS has launched a Global Mentorship Programme designed to help students develop a global executive mindset. This was announced by NUS President Professor Tan Eng Chye (Science '85) at the opening ceremony of the NUS Career Fest on 29 January.

Featuring over 30 mentors from a diverse range of sectors such as finance, technology, engineering and education, this new initiative aims to connect students who are interested in a global career to industry leaders who are either based overseas, have experience working abroad or hold a regional role. The pilot will involve 50 students who will each be paired with an appropriate mentor, who will offer advice, share their experiences and provide guidance on career development. NUS undergraduates across all faculties are eligible to apply for the programme by 31 March.

Companies increasing their global footprint value employees who can understand cultural sensitivities, build relationships across different markets and work effectively in a diverse international team. Many are also looking to expand into Southeast Asia, a culturally-diverse region that collectively makes up the world’s fifth-largest economy. It is therefore vital for our students to think global, be nimble and seize the opportunities before them, said Prof Tan.

Mr Michele Lai Chin’s career as a key account manager with Qvest Media, a global systems architect firm, has taken him to many countries across Asia and Europe. On why he chose to be a Global Mentor, he said, “Working professionals have the responsibility to nurture the next generation to ensure society will continue to prosper, and the NUS Global Mentorship Programme gives us the opportunity to share our experience and takeaways with talented students who will soon enter the workforce.”

Year 1 NUS Arts and Social Sciences student Mr Felix Tan is part of a two-man team developing Skillo, an app that serves as a personal development network to facilitate the growth of essential soft skills. He is considering joining the Global Mentorship Programme to find someone with the knowledge and experience to help him through the process of getting the Skillo app into the market.

“I’m looking out for mentors who are able to give me the insights to help me build my business faster, to maybe scale across different regions. If you’re trying to run a start-up, there are a lot of problems and uncertainties, and I think having a mentor would really help to fast-track the learning and make sure that we do not step into the traps that a lot of entrepreneurs fall into,” he said.

The Global Mentorship Programme is part of the University’s broader plan to have every student gain overseas exposure by the time they graduate, and fits into one of the major themes for Career Fest 2019: ‘Go Global’. More than two-thirds of undergraduates go abroad at least once in their four years at NUS.

Year 4 NUS Law student Ms G Kethlyn Gayathri interned at the Scalabrini Centre of Cape Town, a South African non-governmental organisation, in 2018 as part of the NUS Global Internship Programme.

“If you’re someone who wants to push yourself outside of your comfort zone, or want to discover who you are as a person, find out what you’re passionate about, things you’re good at or what you’re weak in, an overseas internship is something that you should definitely try,” she said.

NUS students learned how to ask the right questions and spark conversations with employers at a talk held at the NUS Career Fest 2019.
As a professional with a passion for robots, Ms Ritchie believes these machines will support and augment the work of human beings, along with mostly doing the sort of labour that humans do not want to do or are ill-suited to doing. Ms Ritchie revealed in a slide the number of countries and cities where robots have joined the workforce and are interacting with people. Besides the sheer number of robots at work currently, what was perhaps even more impressive about the findings highlighted in the slide is the fact that none of these are in heavy industry. So, where can we find these robot workers then? One specific area that Ms Ritchie zoomed in on was eldercare, and how robots might be usefully deployed in supporting roles. The example she used was that of Japan, where the humanoid robot Pepper famously leads senior citizens in exercise programmes. The Japanese government, which is dealing with a problem of managing an ageing population, is going even further, according to the Reuters report cited by Ms Ritchie. Authorities in Tokyo have financed the development of eldercare robots to help fill a projected shortfall of 380,000 specialised workers by 2025 – a scenario that might take place here in Singapore as well.

COMING SOON EVERYWHERE

In Ms Ritchie’s view, relationships are key to creating fruitful work environments where humans and robots interact — and appearances count in this respect. She used examples of robots that had to interact with people in a service environment, or in the home, which were often designed with a bent towards cuteness so as to appear non-threatening and more familiar.

Ms Ritchie’s company, Orange Gate Consulting, looks at this emerging phenomenon because she says it is now the “deployment phase for robots in the wild.” Citing an estimate by the International Federation of Robotics in 2018, Ms Ritchie stated that 39.5 million household robots will enter the workforce between then and 2021. Companies like Orange Gate are tracking how and where these robots pop up, and its website even features a robot-spotting blog, that highlights robot co-workers — in these robots pop up, and its website even features a robot-spotting blog, that highlights robot co-workers — in the service sector.

Above: Pepper, the friendly humanoid robot, represents the way forward in using robotics to address manpower needs in the service sector.

A HELPING HAND AT HOME

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As far as challenges in the world of robotics are concerned, Ms Ritchie acknowledged that security remains a major concern – but one that will continue to be improved upon, and ultimately solved, in the near future. Of course, the issue has to do with hacking, which one cannot escape if robots are connected to the Internet, via IoT for example. Ms Ritchie estimated that the security question might not have a firm answer till at least 2025.

In the question-and-answer session that followed the talk, Ms Ritchie further addressed queries from the audience on what jobs might be lost to robots as well as the pace of AI development. She emphasised that her main area of interest is in proper robots, not necessarily automation, and how these machines will interface with human beings in real life. In other words, Ms Ritchie is interested in what happens when we have “robots” as well as co-workers, because robots will be working with us. On the AI front, Ms Ritchie clarified that despite what we might encounter in Hollywood-produced shows, no one is anywhere near creating anything like general AI or self-aware machines.

The Tech Talk series sees experienced industry experts speaking on emerging technological trends. There will be four Tech Talks a year.

How conversational AI transforms the way we work

Augmenting business workflows with conversational AI/Chatbot and machine learning brings unprecedented productivity gains. By removing the low value, menial, repetitive and transactional tasks, and moving the workforce to high-cognition tasks, like those that require critical and creative thinking, real value and impact is achieved. Find out how enterprises and organisations have witnessed conversational AI freeing up human time and reducing manual operation costs by up to 85%.

Speaker:
Mr Wong Hong Ting (Science ’10)
Founder and Director, Botbot.AI

22 May 2019 (Wednesday)
7.30pm
Coriander, Shaw Foundation Alumni House
Register at alumnet.events/TSmay19
Chinese New Year Year Appreciation Dinner

THE ANNUAL APPRECIATION DINNER hosted by NUS President and NUS Alumni Relations for alumni leaders, volunteers, partners and staff was held on 12 February. More than 200 guests attended the event, including NUS Pro-Chancellors Dr Chan Sek Keong (Law ’61) and Mr Po’ad Mattar (Accountancy ’71); NUS Board of Trustees Members Mr Phillip Tan and Dr Noeleen Heyzer (Arts and Social Sciences ’71); as well as Her Excellency Lynn McDonald, High Commissioner of Canada to Singapore.

An energetic lion dance by NUS Lion Dance welcomed guests at Shaw Foundation Alumni House, before they proceeded to NUS Society Kent Ridge Guild House for a festive lo hei dinner and performances by NUS Chinese Orchestra and The Outside Edition (an a cappella group comprising NUS alumni).

NUS President Prof Tan Eng Chye (right) and NUS Alumni Relations Director Mr Bernard Toh received the Chinese New Year couplets from the NUS Lion Dance troupe.

NUS Chinese Orchestra added a classical touch to the evening.

The Outside Edition entertained guests with a cappella versions of Chinese New Year songs and popular hits.

ALUMNI AND FRIENDS OF NUS have raised over $374,000 for undergraduates of the University. The NUS’ Celebration of Love and Appreciation Dinner was held on 21 February to celebrate the continual support from the NUS alumni community.

The fundraising activity was spearheaded by the NUS Alumni Students Advancement Committee (ASAC) established by the NUS Alumni Advisory Board. “The ASAC was formed in 2013 and led by our very own NUS Alumni, to develop and nurture initiatives that support bursaries for underprivileged students in NUS. This effort is one of the many ongoing fundraising activities organised by the committee for the alumni to give back to the NUS community in the spirit of love,” said Mr Johnny Tan (Science ’92), Co-Chairman of the NUS Alumni Advisory Board, who also chairs ASAC.

The total donations raised by the ASAC through this latest fundraising activity could potentially support awards to benefit almost 40 undergraduates from various NUS faculties.

The dinner event was organised by NUS Alumni Relations, NUS Development Office and NUS Campus Couples Alumni. Close to 250 NUS alumni donors and friends of the University engaged and reconnected with the NUS community at the appreciation dinner.

FROM THE HEART

NUS alumni spread the love, with over $374,000 raised to support undergraduates.

LAS VEGAS IN SINGAPORE

by Dr Lee Kah-Wee
(Design and Environment ’07)

Dr Lee Kah-Wee’s first publication looks at the collision of the histories of Singapore and Las Vegas in the form of Marina Bay Sands, one of Singapore’s two Integrated Resorts. Dr Lee argues that the historical project of the control of vice is also about the control of space and capital. The result is an uneven landscape where the legal and moral status of gambling is contingent on where it is located. As the current wave of casino expansion spreads across Asia, he warns that these developments should not be seen as liberalisation but instead as a continuation of the project of concentrating power by modern states and corporations.

Available from Kinokuniya, NUS BookHaven, NUS Coop and via nuspress.nus.edu.sg.

NUS ALUMNI MANILA NETWORKING DINNER

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MORE THAN 75 ALUMNI attended the NUS Alumni Manila Networking Dinner on 19 February hosted by NUS Alumni Relations. The event was graced by NUS President Professor Tan Eng Chye (Science ’85), who shared with alumni key developments at the University. This included his strategic plan to forge and strengthen partnerships with universities in Southeast Asia, with the aim for NUS to build and link the innovation and enterprise ecosystem within Southeast Asia, with NUS as a key node.

NUS Alumni Relations Director Mr Bernard Toh (Architecture ’84) also announced that it was an opportune time to establish the NUS Alumni Manila Chapter. The Chapter will provide a more meaningful and strategic platform for alumni in Manila to stay connected with one another and with NUS.

FROM THE HEART

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OAR HIGHLIGHTS

FEATURE FILMS

CRAZY RICH ASIANS

THIRSTY THURSDAYS

Sabai Sabai

As the end of the week drew near, close to 100 young alumni got together for Thirsty Thursdays on 7 March at Patara Fine Thai Cuisine to Sabai Sabai (chill and relax) in Thai.

In addition to catching up with friends and making new ones, guests also enjoyed a ‘live’ performance of popular Thai and English songs by NUS student band ‘Nguy Ngui Pua Pia’ (the Thai equivalent of the Singlish term ‘anyhow’).

UPCOMING EVENT

Taste of Taiwan
Thirsty Thursdays
6 Jun, 6.30pm
Register at alumnet.events/TTjun19

STORYLINE

UPCOMING EVENT

Applying Data Analytics to Human Resource Management
SkillsFuture Advice Workshop
16 Apr, 7.30pm
Register at alumnet.events/SFapr19

SINGHISL term “anyhow”).

a ‘live’ performance of popular Thai and
and making new ones, guests also enjoyed
for Thirsty Thursdays on 7 March at Patara

CLOSE TO 100 YOUNG ALUMNI

FROM CLS DIRECTOR ASSOCIATE PROF TSUTIWA N

THIRSTY THURSDAYS

UPCOMING EVENT

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CRAZY RICH ASIANS

THE AUDITORIUM AT SHAW FOUNDATION

ALUMNI HOUSE packed to almost a full house with the screening of Crazy Rich Asians, a Hollywood movie with an all-Asian cast, Ms Janice Koh (Arts and Social Sciences ‘95), who played the part of ‘Felicity Leong’, specially recorded a video message for the audience that was shown before the film. Through the video, Ms Koh shared how NUS has provided her with a strong foundation for her career, how she prepared for her role of Felicity, and offered advice for students and alumni interested in pursuing a career in the entertainment industry.

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AS THE END OF THE WORKWEEK
drew near, THIRSTY THURSDAYS

skillsfuture advice workshop

industry 4.0: historical overview & current trends

CLOSE TO 80 ALUMNI

gained some insights into the various industrial revolutions and what Industry 4.0 is from the speaker of this workshop, Associate Professor Goh Puay Guan from NUS School of Continuing and Lifelong Education (NUS SCALE) and Department of Analytics & Operations, NUS Business School.

They also learned about the opportunities and challenges presented by technological innovation that are blurring the lines between industries, as well as case studies from recent business history and developments.

This series of workshops is organised by NUS Alumni Relations, in partnership with NUS SCALE and SkillsFuture Engage Office.

Mr Martino Tan highlighted the importance of openness and the need to respect diversity in opinion in this era of fake news.

Mr Martino Tan (Public Policy ‘99) candidly shared with the audience how motherhsips.sg was started by “three guys with no practical journalistic experience” and its journey to becoming the third most popular local online news platform in Singapore. In this era of fake news, Mr Tan emphasised that it is important to be open and pragmatic, foster unity while respecting diversity, and let readers arrive at their own conclusions. The session was moderated by former NUSSU President Mr Sih Yih Da (Arts and Social Sciences ‘14).

UPCOMING EVENT

How to Cope Thrive
Lunch Dialogues
26 Apr, 11.45am
Register at alumnet.events/LDapr19

Dr Jade Kua
Consultant, KK Women’s & Children’s Hospital

How to Cope Thrive

Work-life balance is a tricky equilibrium and it is trickier when there are so many variables involved. We know physical and mental well-being are important but how do we achieve it?

Dr Jade Kua is a paediatric emergency specialist at KK Women’s and Children’s Hospital. She is the programme director for DARE (Dispatcher-Assisted First Responders), a national community CPR education campaign launched to provide information for users to act when they encounter someone suffering a heart attack. She also blogs frequently about family life and health education, and is a published author of How to Save a Life.

At home, she is mum to many and loves her rescued dogs dearly. Hear how she achieves work-life balance by juggling between multiple roles as a wife, mother and career woman.

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SKILLSFUTURE ADVICE WORKSHOP

UPCOMING EVENT

Applying Data Analytics to Human Resource Management
SkillsFuture Advice Workshop
16 Apr, 7.30pm
Register at alumnet.events/SFapr19

END OF PROGRAMME

UPCOMING EVENT

Lunch Dialogues
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26 April 2019 (Friday) 11.45am, NUS Mandayl Grove House, 2 Mandalay Road, Singapore 308206

Registration fee:
$20 (Alumni) $25 (Guest)
Registration at
alumnet.events/LDapr19

PROGRAMME
11.45am Lunch & Networking
12.30pm Sharing by Dr Jade Kua
1.00pm Q&A Session
1.30pm End of Programme

END OF PROGRAMME
**CALENDAR OF ALUMNI EVENTS APR—JUN 2019**

### April

**Applying Data Analytics to Human Resource Management**

**SkillsFuture Advice Workshop**

Speaker: Mr David Hutton, Adjunct Lecturer, Institute of Systems Science at NUS.

Get an overview of the tools and techniques which can be applied to various Human Resource (HR) functions, new data analytic methods which may be applied in the future, as well as common issues and problems that occur in HR data analysis.

- **10 Apr**
  - Shaw Foundation Alumni House, Tue, 7.30pm
  - Register: alumnet.events/Apr19
  - Contact: Mr Ng Shan Jun
  - ngshanjun@nus.edu.sg

**Bohemian Rhapsody (M18)**

*Movies On The House*

A foot-stomping celebration of rock band Queen, their music and their extraordinary lead singer Freddie Mercury – from the start of their career to their now-legendary 1985 performance at Wembley Stadium.

- **25 Apr**
  - Shaw Foundation Alumni House, Thu, 7.30pm
  - Register: alumnet.events/Apr19
  - Contact: Mr Roystonn Loh
  - roystonn.loh@nus.edu.sg

### May

**How to Cope Thrive**

*Lunch Dialogues*

Speaker: Dr Jade Kua (Medicine ’03), Consultant, KK Women’s & Children’s Hospital

Join the discussion to learn more about lifelong learning initiatives and take part in fun-filled activities with your family.

- **4 May**
  - The Terrace and Shaw Foundation Alumni House, Sat, 10am
  - Register: alumnet.events/AVMay19
  - Contact: Ms Gabriella Nyam
  - gabriella@nus.edu.sg

**Aquaman (PG13)**

*Movies On The House*

Introduces Brooklyn teen Aquaman, the human-born heir to the underwater kingdom of Atlantis, goes on a quest to prevent a war between the worlds of ocean and land.

- **29 May**
  - Shaw Foundation Alumni House, Thu, 7.30pm
  - Register: alumnet.events/May19
  - Contact: Ms Cassandra Lua
  - cassandra@alumni@nus.edu.sg

**Mystical Myanmar 2019**

NUS Alumni Travel Programme

NUS Alumni Travel takes you on a 5-day, 4-night learning journey to explore the mystical aspects of Myanmar. Learn about the country’s rich history and culture with fellow NUS alumni companions.

- **8–12 Jun**
  - MYANMAR, Sat-Wed
  - Register: alumnet.events/MMJun19
  - Contact: Mr Roystonn Loh
  - roystonn.loh@nus.edu.sg

**How to Cope Thrive**

*Lunch Dialogues*

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NOWAYS, THE IDEA OF HAVING A DRIVERLESS SHUTTLE BUS ON THE ROAD is not a matter of ‘if’ but ‘when’. At NUS, that moment may come as soon as this May. The University is partnering transport company ComfortDelGro in a year-long trial of an autonomous shuttle bus, which will travel along a 1.6km route between Heng Mui Keng Terrace and Business Link at the main Kent Ridge campus.

Powered by artificial intelligence, the self-driving shuttle bus is an excellent example of how smart technologies are revolutionising transport. The autonomous vehicle will initially focus on collecting data for its mapping and navigation systems, and will start taking passengers only after it is deemed safe. Because it runs entirely on electricity, the shuttle — which may eventually be rolled out as a commercial service — could also substantially reduce carbon emissions and improve environmental sustainability.

The soon-to-be-introduced autonomous shuttle bus is but one small indication of the changes that have taken place at NUS during the 2010s, as it inches closer to becoming a ‘Smart, Safe and Sustainable (S3) Campus’. This is the most recent phase of a transformation journey that began back in 1973, when NUS first commenced construction work at the Kent Ridge site. Guided by its S3 Campus mission, the University is modernising its infrastructure, physical and otherwise — and in turn, engaging and empowering the NUS community.

THE TESTBED OF CHANGE

Many of the changes currently happening at NUS’ Kent Ridge campus were birthed in the adjacent University Town (UTown), which welcomed its pioneer batch of residents in August 2011. “UTown gave us an opportunity to create an integrated campus that combines learning and living, and to test new pedagogical methods like discovery-based learning and the flipped classroom approach,” says Professor Yong Kwet Yew, Senior Vice President (Campus Infrastructure) of NUS. “Our tagline was, ‘Our classrooms are everywhere.”

Mr Koh Yan Leng (Engineering ’99), Associate Vice President (Campus Life) of NUS, adds that UTown’s distinctive learning-and-living model reflects
U Town also presented an opportunity for NUS to apply novel, environmentally-sustainable design principles for the first time. The development is built around existing trees, most notably the Margaritaria indica tree at Yale-NUS College that has been gazetted as a Heritage Tree by the National Parks Board. To improve natural ventilation in buildings, large ceiling fans were installed and computational fluid dynamics (CFD) modelling was used for wind-flow simulations. Due to these and other environmentally-friendly practices, U Town has won several Building and Construction Authority (BCA) Green Mark awards, including the inaugural BCA Green Mark for Districts award, as well as international architectural design awards.

A CAMPUS-WIDE REVAMP

Taking a leaf out of U Town’s book, the University has been implementing these same measures to rejuvenate its Kent Ridge campus. “When Kent Ridge was first established in the 1970s, the various NUS faculties hitherto scattered across four sites island-wide—were re-located to one campus, but they remained in separate, entrenched silos. We are now redeveloping Kent Ridge into a well-integrated, greener campus,” explains Prof Yong. Some of these projects have already been completed. Launched in 2014, the Ventus building (occupied by University Campus Infrastructure staff), for instance, is built around existing Tembusu and rain trees, and has a green roof and walls. In 2016, NUS Enterprise opened a start-up facility called The Hangar at iCube, which is within walking distance of Enterprise House, an entrepreneurial-themed residence. At the revamped Science canteen, Frontier, which started operations in 2017, a mix of dining options, study clusters, student club offices as well as interactive spaces allow students to eat, learn and mingle—all in the same spot.

Similar plans are in the works at the NUS Engineering canteen, which is currently being redeveloped, while the Business and Computing canteen is also slated for redevelopment (together with a new School of Computing building). Among the design options being considered for the latter are multimedia-equipped discussion pods where students can work on their presentations, as well as a central stage with a big screen for hosting e-sports competitions, concerts and other events. “We intend to make a bold change to the traditional canteen areas to make a bold change to the traditional canteen

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ABOUT THE RIDGE

This spotted wood owl, recognised as a ‘critically endangered’ species in Singapore, was sighted at the Kent Ridge campus in March 2015. The photo appears in Kent Ridge: An Untold Story (NUS Press, 2019), an edited volume by NUS Law Adjunct Professor Kevin Tan (Law ’86). It traces the history of Kent Ridge back to the early 19th century, during which the land changed 

One of the most striking buildings at Kent Ridge is the Lee Kong Chian Natural History Museum, which was officially opened in 2015. Its boulder-like structure and vertical greenery convey a sense of the natural world. According to the Museum Head Professor Peter Ng (Science ’81), the campus-wide ‘greening’ push is a way of making the area more beautiful and pleasant, as well as restoring our lost natural heritage. “Because of NUS’ hilly terrain, parts of the campus are difficult to build on, so those areas have been left untouched,” says Prof Ng, a conservation biologist. He is especially heartened by the University’s focus on enhancing native biodiversity. “We should preserve what is important to the heritage of our country, including animal and plant species that are indigenous to Singapore.”

ON SMART GROUND

Next in line for a makeover at NUS is the Science–Medicine precinct. A brand new Wet Science Building is set to open by the end of this year, bringing together all wet laboratory researchers under one roof for cutting-edge biomedical research on nanoparticles, graphene sheets and other materials. The building will link up with Frontier to frame an Academic Green — not unlike the Town Green at UTown — to encourage interactions and create breathing space in the heavily-congested area.

To help visualise the new Science–Medicine precinct, University planners are turning to a smart technology called Virtual NUS, a 3D digital twin of the Kent Ridge campus. Developed in-house using drone imagery and data, the virtual model can do more than simulations to test design ideas for future buildings — it collects real-time data from campus WiFi hotspots (including shuttle buses), thus enabling users to conduct data analytics and make more judicious decisions about campus infrastructure. For example, the 3D model can estimate the solar potential of building rooftops and perform computational fluid dynamics (CFD) simulations of wind flow, so as to improve the energy-efficiency of buildings. Virtual NUS’ crowd-sensing capability can help users determine which lecture theatres are under-utilised, and hence suitable for repurposing into modern learning environments such as smaller tutorial rooms, makerspaces or social hubs. It can also track the number of commuters on shuttle buses to optimise bus schedules and routes.

Professor Andrew Lim, Head of NUS’ Department of Industrial Systems Engineering and Management, is the Director of Virtual NUS. This programme falls under the NUS Smart Nation Research Cluster and is housed in the Innovation4.0 building, which opened its doors in September 2018. Indeed, NUS is particularly well-suited to carry out such innovative projects and support Singapore’s Smart Nation agenda. “With more than 200 buildings and some 50,000 students and staff, the NUS community is sizeable yet self-contained. That makes us a safe testbed or ‘sandbox’ to experiment with cutting-edge technologies,” says Prof Lim, Head of Industrial Systems Engineering and Management, NUS.

This app offers 3D outdoor and indoor (room-to-room) navigation to help users find their way around Kent Ridge and UTown.

As NUS’ emergency mass notification system, it provides immediate and vital emergency information, as well as urgent advisories, about NUS.

With a single log-in, this all-in-one platform allows users to customise and access all NUS apps submitted by third-party developers (including students).

Below: NUS Lee Kong Chian Natural History Museum.

Artist’s impression of the Wet Science Building.

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SAFETY FIRST

Another aspect of campus operations that is being transformed by Virtual NUS is campus safety and security. The old approach of staring at monitors and responding to incidents will soon become outdated, as the NUS Office of Campus Security (OCS) gets ready to open its new Command Centre in the next few months. "It will be a ‘smart’ nerve centre that pulls together information from all of our security measures — campus patrol officers, CCTV cameras, access control systems, etc. — to help us do our job more effectively and efficiently," says Mr Keith It (Business '98), Director Designate of OCS.

Integrating these subsystems onto a common platform will give OCS staff a visual appreciation of site plans and building layouts, so they can figure out where best to position CCTV cameras, bollards, site plans and building layouts, so they can figure out where best to position CCTV cameras, bollards, thick shrubs as natural deterrents, and the like. Real-time data will also be useful in improving resource deployment, and to identify the exact location of security officers so as to dispatch the closest one to the scene. However, Mr It stresses that maintaining campus security is the responsibility of the entire NUS community, although many often take it for granted. "While our work is focused on ensuring a safe campus, we don’t want the community to be complacent either. We will work with them because everyone has a part to play in campus security," he says.

Spurred by the launch of the national SGSecure movement in 2016, emphasis is now being placed on community preparedness to fend off terrorism — and University students are taking the lead on this, not just within NUS but across the island. The NUS Civil Defence Lionhearter Club is a student interest group whose members are trained by the Singapore Civil Defence Force, and is part of a national programme to educate and train volunteers in performing life-saving procedures, and to help respond to incidents.

By embracing this mentality [of taking individual ownership of safety and health], our students can in turn exert a positive influence on other people once they join the workforce.

Dr Peck Thian Guan, Director of OSHE, NUS

STICKING TO THE PLAN

Under the NUS Sustainability Strategic Plan 2017–2020, the University aims to achieve the following by 2020 (using 2012 as the baseline, except for carbon emissions):

- Reduce carbon emissions by 25% below business-as-usual levels (compared to 2008)
- Reduce energy use intensity by 10%
- Improve the water efficiency index by 20%
- Increase the overall recycling rate by 25%
- Increase the number of BCA Green Mark–certified buildings to 40
- Increase the area of green spaces (in buildings) to 40,000m²

PHOTO: AIK CHEN

PHOTO: JOEY LIM
Smart Nation: Too Clever for Its Own Good?

What is your personal understanding of the Smart Nation initiative?

SÉBASTIEN: It is an initiative that makes use of non-intrusive technology that one can opt-in to, in order to lubricate day-to-day activities and government decisions.

ALFRED: It is the Internet of Things (IoT) on a national level. While there are clusters of activities — such as government agencies utilizing big data analytics to solve traffic congestion problems — I don’t see a big concerted effort to bring it to the household level and move everybody in the same direction yet.

TANCY: It is about putting emerging technology into our everyday lives, such that it will help everyone — the government, companies and individuals — make wiser decisions. I do see a concerted effort to push this initiative to the lay person — the government disseminates a lot of information over the news channels. For example, the Sunday news on Channel B now has a segment on technology. The SkillsFuture app also has a lot of resources for everybody. There is a strong infrastructure and activity — our citizens just need to tap into it. Coming from the finance sector, I also see the government’s efforts in nurturing the ecosystem for fintech services — and there is a very active community here.

CHÉE CHIU: It is still in its early stages and the government is taking cautious steps before aggressively pushing out the whole chain of changes.

LAURENCE: While government agencies are taking small steps with initiatives like SingPass and the Parking.Sg app, you find that companies such as Singapore Power and Temasek Holdings are being progressive with their digitisation plans. I see this as an attempt to seed the initial momentum through government agencies and moving the bigger bets to the private sector.

Do you think the man on the street is aware and appreciative of these developments, and embracing these new apps and technology?

CHÉE CHIU: For the people, the uptake is largely dependent on the usefulness of the app or technology. The Parking.Sg app is incredibly useful, and so many people use it. The ‘use case’ has to be sound before you even start talking about the technology.

SIHUI: While some people might not be aware that certain things — such as Moments of Life app for parents to register their child’s name online, or find a preschool near them — are part of the Smart Nation movement, these already impact them when they use the app. And the government has taken a lot of effort in marketing the technology and making people more comfortable with adopting it. However, I feel that there is an over-emphasis on the high technology – the “sexy stuff” – but not enough on the actual business applications.

TANCY: This is where the professionals have to come forward and lend their expertise. There is always a learning curve involved in the adoption of new technologies — and if there is support given at the initial phase, this would help individuals to master the features and get started on their self-learning journeys.

LAURENCE: This is also where the SkillsFuture push comes in: the government now wants to move towards having talent with cross-disciplinary experience, such as engineers with business operations know-how, and vice versa.

Given that different demographic groups have different levels of acceptance towards technology, do you think this will widen differences further?

ALFRED: I actually see the move towards Smart Nation as an opportunity for communication between different generations — such as when youngsters teach seniors how to use their phones or certain new technologies.

LAURENCE: Just yesterday I had to teach my dad how to file taxes online!

I see Smart Nation as providing opportunities for communication between generations — such as when youngsters teach seniors how to use their phones or certain new technologies.

— MR ALFRED GOH
WHAT’S APP-ENING

Some notable
Smart Nation apps

Baseline crowdsources
requests and utilises
anonymised public transport
data to come up with new
options for commuters.

Access your family’s health
records via this one-stop
portal. It also offers health
and wellness content, deals,
rewards and e-services.

An open geo-historical map
platform that crowdsources
data to come up with new
something to do with the
ecosystem that offer checks and
balances. However, for a software engineer running his
own start-up to think about this
spectrum of topics would be
impossible. This is where government and regulators
come into place to impose standards on discipline,
control and governance. Products should come with
security labels that indicate the level of security they
provide – just like foods with the “healthier choice”
labels or appliances with the stickers that tell you
about its energy efficiency.

LAURENCE: This is especially so when you look at the
political space, where those who support opposing groups
interact only within their own community, thus mutually
reinforcing their own beliefs and biases to the point where
it cannot be broken down anymore. I also see another
danger of a wired world: everything is hackable. This is
why, as a software developer, I do not have any smart
devices in my home.

Speaking of security, do you find that concerns
about data protection can get in the way
of people adopting ‘smart tech’?

SEBASTIAN: Also, a lot of white goods makers are not
software companies – they don’t cover security loopholes.
So, the general rule is: white goods + smart = don’t buy it!

TANCY: Speaking of security, do you find that concerns
about data protection can get in the way
of people adopting ‘smart tech’?

ALFRED: Nobody is telling them that there are other
ways of looking at this – that the machine is actually
there to help them do their job better and faster.

SIHUI: It will only widen differences when you live
in an environment where you need technology
in order to have certain access to things in life.
And actually, I hear more stories about seniors
adopting technology rather than not – be it in using
WhatsApp to stay connected or using Netflix to
watch Korean dramas.

Better awareness will drive
people and organisations alike
to demand for better data security,
and in turn drive developers
and companies to take the issue
more seriously. - MS TANCY TAN
ONE WEEKS AGO, I was approached by the editors of The AlumNUS magazine, who asked if I would be open to the idea of contributing something for this issue, the main theme of which centres on the evolving campus and issues related to environmental sustainability. Given my job at NUS, this led me to think about questions related to “financial sustainability”, including how we pay for our buildings and campus infrastructure now and in the future.

But let me first set some context. I have spent a lot of my past career (at the World Bank, in a private sector investment firm and lastly at UC Berkeley) focused on “macro” financial issues and how the financial dynamics of a country or an institution are likely to evolve, and how in turn these financial facts interact with the entities’ strategic objectives. One thing I have learnt is that the link between strategy and finance is not always very clear. Strategies are often aspirational in nature, designed to help a country or an institution meet the varied challenges they confront, whereas budgets are constrained and shaped by day-to-day reality. Thinking through how to make the two compatible is something I find to be an exciting challenge.

Simply put, a strategy that is not financially sustainable is not a strategy — it is wishful thinking. Unfortunately, wishful thinking is very attractive. Many of us would like free services and goods — perhaps combined with universal access — but there has to be an economic model to fund the resources used. In addition, wishful thinking can do real harm as it may be possible to pursue an unsustainable path in the short-to-medium-term, by borrowing or using funds already pledged for other future uses. But the underlying financial issues will inevitably surface and the entity will be in a deeper hole than it need be. Being forced to address difficult issues at a time of crisis is no fun; ask any Minister of Finance that has had to implement an IMF/World Bank adjustment programme! It’s a lot better to get ahead of challenges, not least because one remains in control of the solutions and has time to adjust.

A CASE FOR FORWARD LOGIC

Given these realities, a strategy and its stated objectives have to be compatible with the “financial dynamics” of the institution. This does not mean that finance determines strategy. In fact, in well-run institutions, companies or countries it is the reverse. The budget is shaped to serve the strategy, which — given limited resources — requires difficult strategic decisions to be made around resource allocation. For example, if a university’s strategic objective is to expand the number of graduates in discipline X, then the budget has to be redirected to achieve this goal. The sticking point is that this usually requires less resources going to something else. This is where wishful thinking comes in handy, as it appears to be a painless way out of the box. An alternative viable solution is to generate new additional resources instead of making cuts. But one has to be careful to ensure that the new activity fully covers its costs and, therefore, leads to an increase in “net”, not just “gross”, revenue.

To take an example, shortly before I joined UC Berkeley, the Californian state government cut the amount of funding it provided to the university by around 20% in the wake of the 2007/8 financial crisis. In addition, the controlling Board froze tuition fees (in the mistaken belief that this helped low-income students, when in reality it harmed them due to the way the financial aid system worked) and eventually capped the number of higher-paying “out-of-state” students (due to the belief that California tax payers were funding the university and thus should be allocated a certain number of places, whereas in fact the State had reduced its share of total revenue to 12% and out-of-state students subsidised in-state students). The Board also set higher admission targets for in-state students, even though the average cost of providing an undergraduate education at Berkeley exceeded tuition. While one can understand the political/social motivation behind some of these decisions, the end result was a financial crisis with the campus recording a significant and unsustainable deficit. It has since dug itself out via a painful adjustment process that could have been avoided if corrective steps had been taken earlier.

Turning to NUS, it is clear that it has been very well-resourced and stands on a solid financial foundation. The government has provided significant support for both the operating budget via “capitalisation” (that significantly reduces the cost of tuition to students) and, very importantly, the capital budget by funding much of the infrastructure and buildings that currently comprise our wonderful campus. As the ex-Chancellor of Berkeley used to say, “One cannot do 21st century research in 19th century buildings”! In addition, the government has committed to provide resources to fund the maintenance and eventual replacement of many of the current buildings. And, where this is not the case, NUS management has done its best to create “sinking funds” to ensure that the campus infrastructure can be maintained. This type of forward financial planning is unusual, but it is essential to support the aspirational goals discussed elsewhere in this issue.

MEETING REALITIES HEAD-ON

Looking ahead, there are some important changes that NUS will need to confront if it is to remain financially strong and well-positioned to achieve its strategic objectives. First, the demographic trend in Singapore will lead to a decline in the number of junior college and polytechnic graduates. If the proportion of this cohort that proceeds on to university is held constant then, by definition, the number of undergraduates entering the university system as a whole will decline. In addition, the government is gradually reducing the tuition support it provides via “capitation” and there is a cap on the number of foreign students. These trends will produce financial challenges over the medium term unless alternative sources of revenue are identified. Second, in 2016 the government decided to reduce its funding of new buildings at NUS. For those buildings that are for an academic purpose and are approved by the MOE, it will now provide about 75% of the costs (via a mix of grants and debt). It will provide no funding for new student or faculty accommodation as it believes current capacity is sufficient, with the consequence that if increased campus accommodation is to be provided it may have to be funded using our own balance sheet. Nor will the MOE fund academic or research buildings that are not submitted for its approval or if it does not approve. Thus, NUS must look to
While endowments take a long time to build, they are an essential part of the financial architecture of modern first-class universities. NUS is no exception, and thus donor financial assistance will be increasingly important.

In conclusion, NUS has a solid financial base that has allowed it to achieve its current place among the best universities in the world, which in turn has helped provide Singapore with the educated and innovative labour force it needs to compete globally. However, we are going through a transition to a new funding model and thus we must remain vigilant and forward-looking to ensure that we can meet or sustain the goals that others have laid out in this issue’s main feature. As NUS President Tan Eng Chye (Science ’85) has said many times, “It will all work together as one if we can achieve our strategic goals.” This includes ensuring that we all work together to ensure our continued financial strength.

Mr John Wilton has extensive experience in both the public and private sectors. Previously he was a Senior Adviser to McKinsey & Company in San Francisco, USA; Vice-Chancellor for Administration and Finance at the University of California, Berkeley; and was a Managing Director at Parthenon Capital in San Francisco. Mr Wilton worked at the World Bank from 1983 to 2006, in Africa, Asia and Eastern Europe, as well as in its Economic Research and Treasury departments, and was appointed the bank’s Vice President for Strategy, Finance and Risk and Chief Financial Officer in 2004.
Mr Fairoz Ahmad (Arts and Social Sciences + USP ’06) let an experience from a trip to Aceh, Indonesia, after the Boxing Day tsunami transform him into a changemaker that — through his organisation Chapter W — empowers rural Indonesian women to become entrepreneurs.
**Social Studies**

**Artist duo Chow and Lin – Mr Stefén Chow (Engineering '03) and Ms Lin Huiyi (Arts and Social Sciences '03) – marry their abilities to draw attention to global issues.**

**HE IS THE DOOMSDAY-LOOKING SENIOR DIRECTOR for an agricultural and animal health marketing consultancy; he is the globe-trotting photographer and film director with a perpetual five o’clock shadow. She speaks the language of numbers; he, that of images. They might seem like chalk and cheese, but together, married couple Ms Lin Huiyi, 38, and Mr Stefen Chow, 39, have forged a unique expression that has captured the world’s attention.**  

Their seminal work The Poverty Line appears to the untrained eye as a series of food items from different places around the world, shot on a background of a local broadsheet. Two banana blossoms from Phnom Penh. Five strawberries bought in Beijing. Thirty portions of dried pasta purchased in Geneva. Yet, a picture paints a thousand words. Created on the foundation of hard data on poverty as defined within each country, each image depicts what those living on the poverty line in the respective territories can afford for food each day. The photographs might not stir your emotions like that of a portrait of a starving child. In fact, they can afford for food each day. The photographs might not stir your emotions, simply directed by the data gathered on poverty as defined within each country, each image depicts what those living on the poverty line in the respective territories can afford for food each day. The photographs might not stir your emotions, simply directed by the data gathered.  

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Global tipping points, and these are all human-inflicted conditions. The topics range from poverty, consumption and forced migration to inequality. Our first project, The Poverty Line, started in 2010 because it was the topic closest to our hearts. Incidentally, both of us were born into rather well-to-do families, only for our fathers to lose everything in business before we were old enough to go to school. We had discussed this project ever since we started dating in our freshman year in NUS. Other topics were also explored, and they sometimes pop up in our conversations with other academics, some of whom have become good friends. We keep an open and inquisitive mind, as we don’t see ourselves as experts in these fields, but rather as an artist duo with an innate interest in issues that affect our current generation and the future.

The Fish Equivalence on display at the Getxo Photo Festival in Spain in 2018.

**Please illustrate your work process, citing an example.**

**SC & LHY:** When we started on our first collaborative project nearly ten years ago, it was more of a one-off thing. We didn’t expect the huge response that came with it, and felt that perhaps there is something to this. They thus went on to self-fund further projects: “This is bigger than the sum of the two of us.”

**How are the topics for your works decided upon?**

**STEFEN CHOW (SC) & LIN HUIYI (LHY):** We are concerned with global tipping points, and these are all human-inflicted conditions. The topics range from poverty, consumption and forced migration to inequality. Our first project, The Poverty Line, started in 2010 because it was the topic closest to our hearts. Incidentally, both of us were born into rather well-to-do families, only for our fathers to lose everything in business before we were old enough to go to school. We had discussed this project ever since we started dating in our freshman year in NUS. Other topics were also explored, and they sometimes pop up in our conversations with other academics, some of whom have become good friends. We keep an open and inquisitive mind, as we don’t see ourselves as experts in these fields, but rather as an artist duo with an innate interest in issues that affect our current generation and the future.

**What role do each of you play in the process?**

**SC & LHY:** Lin is the brains, while Chow is the eyes and the mouthpiece. It helps that we were in a relationship before we had any inkling to be artists, and we communicate deeply and freely about everything. We influence each other, and there are overlaps in our roles. That is the beauty of Chow and Lin – it is the combination of us both, and these works wouldn’t be possible with the absence of either one.

**Do tell us about your current exhibit at NUS Museum.**

**SC & LHY:** We were approached by NUS Museum’s curatorial department two years ago to discuss how we could plan for an exhibition together. The project probes into Big Data that reduces individuals and societies into data points by problematising issues in society. As we researched the topic, we came to realise that global inequality and the refugee crisis are at unprecedented levels. Privacy issues have also been exposed through social media, and we see the world tipping off its balance. Our hope is that more people can see our work and have rigorous conversations about it. Some professors have arranged modules and tutorials around our projects, and we are very excited about it.

**Who are the people who shaped you into who you are today?**

**LHY:** My parents. From my father, the concept of ‘饮水思源’, which is a drive to contribute to society and remember my roots. From my mother, the courage to face challenges and do my best.  

**SC:** My father, who taught me what it is to fail again and again only to pick yourself up. I witnessed it myself growing up, and he brings with him a sense of humility and openness that I admire till this day.

**Stefen, you summited Mount Everest in 2005, as part of an NUS team. How did that impact you?**

**SC:** Climbing Mount Everest with the NUS Centennial Team remains a cornerstone to me. It convinced me that hard work and having Lady Luck on your side – allows you to fulfill impossible dreams. I learnt this when I was 25, and it still guides me in my life and work.

**What values do you wish to pass on to your two children?**

**LHY:** Treating others with respect and empathy, speaking up for what is right, and believing that each one of us can be an agent for change. I try to use actual life incidents to explain our values and how they define who we are and want to be.

**How would you define a life well-lived?**

**SC:** To have created a positive impact on society, built relationships based on love and respect, and grown to be a more “complete” person.

**LHY:** To have lived a life well-lived.
WHO ARE THEY?
Ms Pranoti Nagarkar and Mr Rishi Israni are the inventors of Rotimatic, an automated kitchen appliance that makes flatbread. Their company, Zimplistic Pte Ltd, was incubated in Singapore. Rotimatic is a Zimplistic’s flagship product, and the company is headquartered in Mountain View, California.

IS THINGS OFTEN HAVE SMALL BEGINNINGS — and we need not only look to Hollywood (Prometheus) for examples of that. “The idea came to us during a dinner conversation when Rishi and I were not happy with the food we were eating after a long day at work. Despite all our modern comforts, we still didn’t have a solution to help us get fresh homemade rotis, a staple for South Asians,” says Ms Pranoti Nagarkar, 36, Chief Technology Officer at Zimplistic Pte Ltd. Together with her husband, Zimplistic’s Chief Executive Officer Mr Rishi Israni also 36, she invented Rotimatic, the world’s first machine that employs artificial intelligence (AI) to produce rotis, or flatbreads, in a matter of seconds. This is no small feat, seeing that making fresh chapatis by hand requires a lot of time, effort and skill. “I had to find a solution as hundreds of millions of human hours go into making five billion rotos for daily consumption,” says Ms Nagarkar. “This is the bigger purpose which has been the glue that kept us motivated throughout the journey. If we stopped, the problem would not have been solved — this is what kept us going through all the ups and downs.”

Now both Singapore Citizens, the couple originally hail from India: Ms Nagarkar from Pune, Maharashtra, and Mr Israni from Lucknow. Both attended NUS and met through club activities there. They have a five-year-old son, Orr, and at the time of this interview, are expecting their second child in April. Ms Nagarkar always had the drive of an inventor. “I majored in Mechanical Engineering and the biggest contributor to my Rotimatic journey was the one-year-long design project I did as a student where I built an automatic ironing machine for shirts. It involved using all the theory I had studied, as well as being hands-on in building the prototype from actual physical materials. It exposed me to realities of product design — from technical constraints to the needs of the user, and how to think about pricing it. It was this experience that instilled in me the confidence of inventing, creating and building products that can solve human problems.”

In 2008, after two years as a product design engineer for Amtek Innovation Design Centre, she set about turning her dream of building a roll machine into reality. Zimplistic — she had wanted “Simplest” but the name was taken — was registered and operated out of NUS Enterprises’ startup hub, BLDOCK31. “I started working on it first, conceptualising in detail and kicked off prototyping” says Ms Nagarkar, who wrote eight patents and expertise proved to be a marriage made in heaven. “That combination became the secret sauce as we could combine the best of both worlds seamlessly to solve challenges we faced in building Rotimatic.”

FLOUR POWER
Rotimatic was introduced to the world in 2015, and its initial 8500 machines were sold out within weeks. Right on the IoT trend, Rotimatic is a “smart” machine that is powered with AI. Once connected to WiFi, the machine’s software is updated automatically and remote troubleshooting is possible. The machine measures, mixes, kneads, rolls, cooks and puffs a roti in 90 seconds; users can even customise the thickness and roast level of their flatbreads. Rotimatic even mimics human judgment to adjust the proportion of flour to water to ensure consistency. The result is a golden-brown chapati that is soft and fluffy on the inside, every time. All the user needs to do is fill up the water tank and the flour dispenser, and press a button. The machine is even easy to clean.

Not surprisingly, Rotimatic’s launch sparked huge interest worldwide, with the Wall Street Journal blogging it to be “the best sandwich since sliced bread” and Fortune doing a show-and-tell demo video of the device featuring Ms Nagarkar on its website. Prime Minister Lee Hsien Loong only added to its popularity when he praised Zimplistic and its invention in his 2016 National Day speech. Mr Israni, however, is quick to point out that improvement and innovation are a continual process for Zimplistic. “Every product is different and all insights about the process are the benefit of hindsight,” he says, referring to a picture on his office wall that shows the creation process is not at all a straight line but a tornado of multidirectional squiggles and complexities.

“You hope to reach a certain outcome, but constantly fail and iterate. You keep a strong grasp of the core principles and keep a clear sight of the big objective — the rest is that meandering journey.”

The “core principles” which Mr Israni talks about definitely are in sync with Ms Nagarkar’s criteria for success, which, for the first generation of Rotimatic, was “for it to be a great choice for a family which wants to eat healthy homemade rotis. So we had a clear picture of the user-experience,” she says. “We knew the size it had to be, the price point, the ease of operation as well as cleaning afterwards — the end-to-end automation to enable fresh homemade eating.”

ROLLING IN THE DOUGH
Zimplistic made $30 million in its first year, but what is more impressive is their vision to scale up the machine and the business — already, since launching, the company has been adding features and software updates for users to continue discovering new ways to enjoy their Rotimatics. Besides roti, one can make pizza bases and puri discs, and soon tortillas and gluten-free flatbreads. Zimplistic successfully raised $39 million last year to fund expansion. “Our first platform has done really well. We are working on the next generation of Rotimatic which is better on all parameters — it’s the one which is going to give us real scale and reach the millions who eat flatbread daily,” says Mr Israni. Their aim is to convert 25 per cent of the world’s flatbread-eating population to Rotimatic users. “I believe that we all have equal capabilities, but the difference in the pursuit of excellence stems from the standards one sets for herself or herself.”

“These standards are a result of one’s exposure, ambitions and awareness. When someone sets their eyes on the right problem and pursues with a mindset of only accepting the most excellent solution, it naturally drives the individual to keep trying despite setbacks and temporary failures.”

THE COMPUTING CONNECTION
A graduate from the School of Computing in NUS, Mr Israni credits his time at the faculty with shaping the way he thought about roboticizing Rotimatic.

“I remember a Data Structures module I took. At the end of every two or three weeks, there was a practical quiz for the cohort, an automated examination system that would automatically check for plagiarism and rate your solution against others’. As a young Computer Science student, I found it fascinating and ahead of its time. It certainly triggered my love for building innovative applications with technology. A few semesters down the road, I took an AI module where we explored the possibilities of bringing intelligence to machines. It planted a seed in my mind which came full circle when I encountered the problem while working on Rotimatic. At NUS, I also did a project which involved building contactless mobile payment systems — which was a huge leap at the time. So many such experiences and instances of exposure at the School of Computing laid the foundation for the technology entrepreneurship career I pursued after graduation.”

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THE BREAD WINNERS

Partners in life and in business, Ms Pranoti Nagarkar (Engineering ‘03) and Mr Rishi Israni (Computing ‘03) turned a dinner conversation into the world’s first flatbread-making robot, Rotimatic.
Making a Material Impact

A new Corporate Laboratory has been set up at NUS to research next-generation semiconductor manufacturing processes — essentially doing precision engineering at an atomic level.

The relentless race to the atomic realm drives the global semiconductor industry, which generated more than US$460 billion in revenue last year. In order to steal a march over its competitors, Applied Materials — a leading semiconductor equipment manufacturer — has collaborated with NUS to set up a new corporate lab to develop next-generation semiconductor manufacturing processes that will realise upcoming nanometre-scale technologies. The problems that may arise in these processes will require interdisciplinary expertise, that spans chemistry, material science, and electronic engineering to solve.

The Applied Materials-NUS Advanced Materials Corporate Laboratory is one of just five corporate labs in NUS and was launched on 25 October last year. This $70 million facility will tap the expertise of staff from both the NUS Department of Electrical & Computer Engineering and the NUS Department of Chemistry. According to Prof Thean, the collaboration came about because Applied Materials was looking for a university with more than 50 US patents in advanced electronics, is the Director of NUS new Nanofabrication Facility, E3Nanofab.

**"NANO"-MANAGEMENT 101**

Working at the atomic level has numerous challenges. Among other things, materials behave differently when they are this size. In addition, the materials are so small that their surfaces and interfaces must be carefully engineered for the best performance. In addition, multiple thin nano-scale materials are being stacked together so that they can work as a single entity. All this requires fundamental understanding and innovative research into new materials and their behaviour at an atomic level. If successful, these research projects will lead to smaller and more power-efficient transistors — and thus more powerful computer chips. This can translate to greater storage capacity for USB drives, and faster chips in smartphones, laptops and servers. It will also lead to more computing power to handle the needs of processor-intensive applications like artificial intelligence and storage, processing and analytics.

One of the projects, for example, is looking at a completely new way of etching a semiconductor wafer. Etching is the process during semiconductor manufacturing which uses chemicals to remove layers from the surface of the wafer. As part of this process, some areas have to be masked off so that the unwanted exposed layers can be removed. Currently, etching is done using a process known as photoresist but the new lab is looking at using an atomic layer of carbon to mask areas instead. This would result in a much thinner mask than the current process.

"The lab is looking at the ability to deposit the carbon layer as a mask reliably and accurately," says Prof Thean.

Another research project is looking at improving the wafer fabrication process by using graphene, a type of carbon that is ultra-strong, as a diffusion barrier. In computer chips, barriers are needed to chemically isolate semiconductors from the soft metals used to electrically interconnect them. In a modern computer chip, for example, all the copper used to conduct electricity must be surrounded by a barrier to prevent the copper from diffusing into the surrounding materials. Currently, tantalum nitride, an inorganic chemical compound, is used as the barrier. Graphene, which consists of a single layer of carbon atoms, would result in a much thinner, stronger barrier. "Ultimately, to build the next big technology we will start from the tiniest of parts, and this requires us to innovate at the atomic level for industrial scale," adds Prof Thean.

**A MEETING OF MINDS**

According to Professor Richard Wong, the Head of NUS Department of Chemistry and a co-director of the lab, the departments will be looking at developing ways to create the new processes needed to work at the atomic level. The project looking at graphene as a barrier, for example, will call on the expertise of groups in the Chemistry department in graphene chemistry, says Prof Wong, who was awarded the 2018 Fuku Medal in recognition for his outstanding contributions to the application of computational chemistry to physical organic chemistry.

About 30 people have been hired for these projects so far, and the lab hopes to eventually hire 50 engineers, researchers and post-doctors. According to Prof Thean, ideas are already being generated now that will lead to patents. The hope is that in five to 10 years’ time, the lab will be able to develop new processes that Applied Materials can commercialise and use. Speaking at the official launch of the lab on 25 October 2018, Finance Minister Heng Swee Keat noted that the lab will also “reinforce NUS’ efforts in building research capabilities to ride the new waves of technological shifts in artificial intelligence, semiconductor technology and the Internet of Things, which can then be applied in areas like autonomous vehicles, robotics and many others.”

The research being done in the lab also fits into Singapore’s economic strategy, as electronics is a key part of Singapore’s manufacturing sector. Singapore is among the top locations in the world for advanced semiconductor manufacturing, Mr Hang pointed out, and currently, more than half of the world’s semiconductor companies do research and development, as well as manufacturing here.

(Source: businessinsider.com.sg)
NUS Business School Mandarin Alumni

90 participants including professors and alumni gathered at the NUS Society Kent Ridge Guild House on 16 February for their annual Lunar New Year celebration. Dean of NUS Business School Professor Bernard Yeung, President of NUS Business School Mandarin Alumni Mr Sun Xiushun (’12), and committee members presented their greetings and a song performance of ‘Gong Xi Gong Xi’. Guests also tossed yu sheng at the luncheon for greater prosperity and vigour for the New Year.

NOC Alumni Startup Ecosystem CNY Lo Hei 2019

NOC alumni got together on 15 February for a reunion, and it was also a great opportunity to get to know more fellow alumni, share experiences and celebrate their lifelong connection with NUS Overseas Colleges, NUS Enterprise and the thriving start-up ecosystem.

SDE Fun Day

More than 40 alumni, staff and students from the NUS School of Design and Environment (SDE) gathered on 16 February at West Bowl for a fun-filled morning. In a bid to reminisce fond memories of the past (SDE staff and alumni used to organise yearly bowling sessions), SDE organised a bowling tournament for alumni, staff and students as part of SDE’s 50th anniversary celebration activities.

Dean of SDE Professor Lam Khee Poh kicked off the event with a speech to encourage all alumni to stay engaged with SDE and took the chance to invite alumni to the SDE 50th Gala Dinner that will be held on 2 October at Resorts World Sentosa. Prof Lam also presented an exclusive SDE50 medal to the top three teams and top male and female individual bowlers.

“Bowling is a good sport activity as it is suitable for team communication and does not require pre-requisites for participation,” said Ms Zhou Xuefeng (’06), who joined the SDE Fun Day with three fellow alumni. The Research Associate at the Institute of Real Estate and Urban Studies also took the chance to reconnect with friends and course mates, and to make new friends among the crowd.

NUS Alumni Relations organises regular movie screenings for members of the NUS community, ranging from all-time classics to family favourites. Join us for Movies On The House, friends and family members are welcome too!

UPCOMING EVENT

SDE50 Charity Golf

25 July 2019
Orchid Country Club

Bookmark SDE's 50th anniversary microsite sde.nus.edu.sg/SDE50 for updates!

Register at: alumnet.events/upcoming

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25 July 2019
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Register at: alumnet.events/upcoming

THURSDAY, 7.30PM AUDITORIUM, SHAW FOUNDATION ALUMNI HOUSE

Register at: alumnet.events/upcoming

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NUSS Professorship Lecture with Professor George Dimopoulos

Over 60 members and guests attended the first NUSS (National University of Singapore Society) Professorship Lecture of the year on 24 January at Kent Ridge Guild House. Associate Professor George Dimopoulos, from Johns Hopkins Bloomberg School of Public Health’s Molecular Microbiology and Immunology department, shared his insights on curing mosquito vectors of human diseases. Prof Dimopoulos explained that the mosquito’s innate immune system and microbiome play important roles in regulating vector competence, and can thereby be utilised for the development of genetic and ecologically-sound disease-control strategies.

The Lecture, which was open to NUSS members and the public, was attended by Professor Shen Zuowei, Dean of NUS Faculty of Science (FoS); Professor Yu Hao (Science ‘01), Head of Department of Biological Sciences, FoS; and many NUS undergraduates and postgraduates.

The NUSS Professorship Lecture was established in 1995 with an endowment of $1.5 million to fund eminent professors from different disciplines to share their knowledge. The professorship is part of NUSS’ efforts to contribute to the development of meaningful interactions with its alma mater through academic pursuits.

NUS Alumni Travel takes you on a journey to explore the wonders of Myanmar. Learn about the rich history and culture with fellow NUS alumni companions.

NUSS-NUS LO HEI DINNER

The National University of Singapore Society (NUSS) held its annual Lo Hei dinner with NUS on 11 February at NUSS’s Mandalay Guild House – the Society’s latest clubhouse. The dinner, which celebrated the warm friendship between NUSS and NUS, was attended by Emeritus Senior Minister Goh Chok Tong (Arts ‘64), Chairman of NUS Board of Trustees Mr Hsieh Fu Hua (Business ‘74), NUS President Professor Tan Eng Chye (Science ‘85), as well as NUS senior management and the NUSS Management Committee.

Guests enjoyed the sumptuous dinner accompanied by pipa and dizi performances. NUSS President Mr Eddie Lee (Law ’81) also presented a cheque of $250,000 to Prof Tan, in support of the NUS Alumni Bursary Fund (ABF). Since its launch in 2013, NUSS has raised $1.5 million towards the ABF.

NUSS Young Alumni Meetup

6 JUNE 2019
6.30PM - 9.00PM

NUS Alumni Travel takes you on a journey to explore the wonders of Myanmar. Learn about the rich history and culture with fellow NUS alumni companions.

Thirsty Thursdays

Taste of Taiwan

NUS Young Alumni Meetup

6 JUNE 2019
6.30PM - 9.00PM

Registration fee: $10

Venue: Typhoon Café, Plaza Singapura
68 Orchard Road, #04-63/67, Singapore 238839

Register at: alumnet.events/TTjun19

Mystical Myanmar 2019
8 - 12 June

Highlights:
- Shwedagon Pagoda - most sacred and impressive Buddhist site in Myanmar
- City tour of Yangon, the commercial capital of Myanmar
- Bagan - home to the largest and densest concentration of Buddhist temples, pagodas, stupas and ruins in the world
- Gain insights into Myanmar from NUS alumni residing in Yangon

Visit alumnet.events/ATPjun19 for more information
The annual Scholars Programme Alumni Network (SPAN) Get-Together organised by the University Scholars Programme (USP) was held on 16 February. Set up to be a cozy affair, about 60 USP alumni, students, faculty and staff came together for an evening of memories and great company at the rooftop of the Education Resource Centre in University Town. USP Director Associate Professor Kang Hway Chuan gave a welcome address and expressed his gratitude to the alumni for taking time out during the Lunar New Year season to reconnect with their alma mater. Alumni also learned about USP’s new initiatives to bring together alumni and current students. Apart from organising talks and events, USP has also recently started its LinkedIn page and group. The group aims to be an informal platform for students to connect with alumni with similar interests, and for alumni to provide job opportunities to students or fellow alumni.

“It’s so amazing to see old friends back in University Town, as nothing has changed. We crowded around Associate Professor Barbara Ryan, and a five-minute catch up became an hour-long discussion! How much I’ve missed all these _”, said Ms Zhang Xintian (Arts and Social Sciences + USP ’15).

Overall, it was a great evening of reminiscence, laughter and catching-up.

NEWLY LAUNCHED:

linkedin.com/school/nus-university-scholars-programme

Nostalgia 1929 - Geography@90 Gala Dinner

On 18 January 2019, the NUS Department of Geography, Faculty of Arts and Social Sciences, celebrated its 90th anniversary by taking a walk down nostalgia lane with nearly 200 alumni, students, faculty members and staff. A gala dinner was held at the hotel ballroom of Novotel Singapore on Stevens with Guests-of-Honour, Mr Ang Hin Kee (’91), Assistant Director-General of the National Trades Union Congress and Member of Parliament for the Ang Mo Kio Group Representation Constituency, and his wife, Ms Caroline Seah (’90) (Director, URA Academy, Professional and Industry Development Department). The event also marked the twin launch of the Tan Huat Neo Prize and Medal, contributed by former Vice-Provost and geographer, Professor Lily Kong (’80), as well as the Department’s Geography Development Fund, established to encourage voluntary donations that would support the development of the department.

The AlumNUS thanks all contributors for the articles and photos in Alumni Happenings, showcasing our vibrant alumni community. Please submit your articles to nus.edu.sg/alumnet/thealumnus/submit-alumni-happenings.
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the path less travelled

KITTEN PURSUITS

IT project manager-turned-cat café owner Mr Jefferson Soh (Engineering ’09) has no regrets since taking a career leap of faith.

WHAT DO YOU DO when you really love cats and coffee? You set up a café with 15 felines, and which serves freshly-brewed coffee, naturally — or at least that is what NUS alumnus Jefferson Soh decided to do with his wife after being inspired by a café of a similar nature in Taiwan.

Providing a clean and safe environment where customers can interact with cats over coffee and pastries, TheCatCafé, as theirs is named, officially opened in May 2014. It was a jarring departure for Mr Soh, then 30, who was an IT project manager working on mobile and web apps.

“My wife and I are café-hopping cat-lovers ourselves so it made sense to us to bring this idea to Singapore,” says Mr Soh, an Industrial & Systems Engineering major. The café’s 15 cats have all been rescued from animal shelters, which means they were once strays or abandoned breeder cats.

Being a small enterprise, a typical day at work can be rather hectic. Mr Soh is involved in every aspect of running the business from managing human resources and putting in place an IT system to caring for the cats and tending to customers, which, he confesses, is his biggest challenge. “There’s a wide spectrum of customers with various levels of needs,” says Mr Soh, a father of a two-year-old boy. “This key soft skill has to be imparted to the café’s crew as well, so we have to ensure that our staff are trained to recognise and address these requirements.”

The knowledge gained in his time at NUS has put Mr Soh in good stead when faced with obstacles however. “Engineering laid down the foundation for critical-thinking and business planning,” says Mr Soh, whose participation in the NUS Overseas Colleges programme also gave him the opportunity to work in a local start-up. He says, “I’m glad I took the plunge into the unknown in setting up this café. If I had not, I would always be wondering ‘what if’.”

“Be prepared — financially, emotionally, mentally — knowing that it will be a tough journey ahead and whatever might go wrong, could go wrong.”

Co-founder of TheCatCafé Mr Jefferson Soh’s advice to aspiring business owners

NOW MEOWING

TheCatCafé (241B Victoria Street Level 3) supports the adoption of cats over buying them from breeders or pet shops. As such, from time to time, selected cats in the café will be put up for adoption.

“Cats have very selective tastebuds. They won’t eat just any type of cat food that you give them. Sometimes they get sick of their usual food and we have to change their entire diet!”

“CAT WHISPERER” INSIGHTS

Now Meowing

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SAVE THE DATE

SAT 7 SEPTEMBER
A Garden Party

6 July 2019
Saturday 4.00pm - 9.30pm
Bukit Timah Campus
Lower Quadrangle

Programme at-a-glance:
4.00pm  Self-guided Bukit Timah Campus Tour
4.30pm  Panel Discussion: De-globalisation, Global Governance and Singapore*
6.00pm  Garden Party
*By registration only, limited seats

Register now at alumnet.events/BT19