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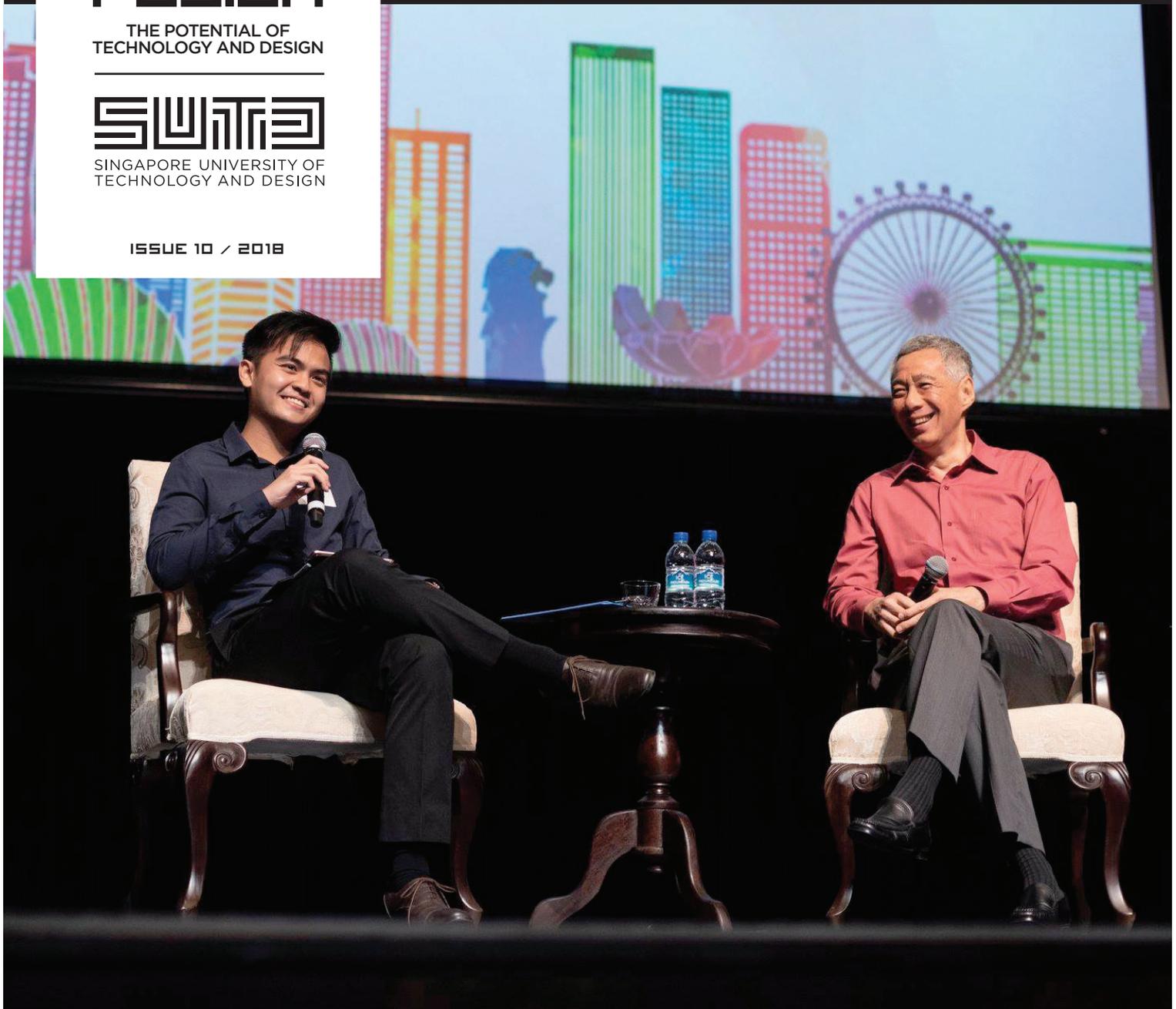
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THE POTENTIAL OF
TECHNOLOGY AND DESIGN

SUTD

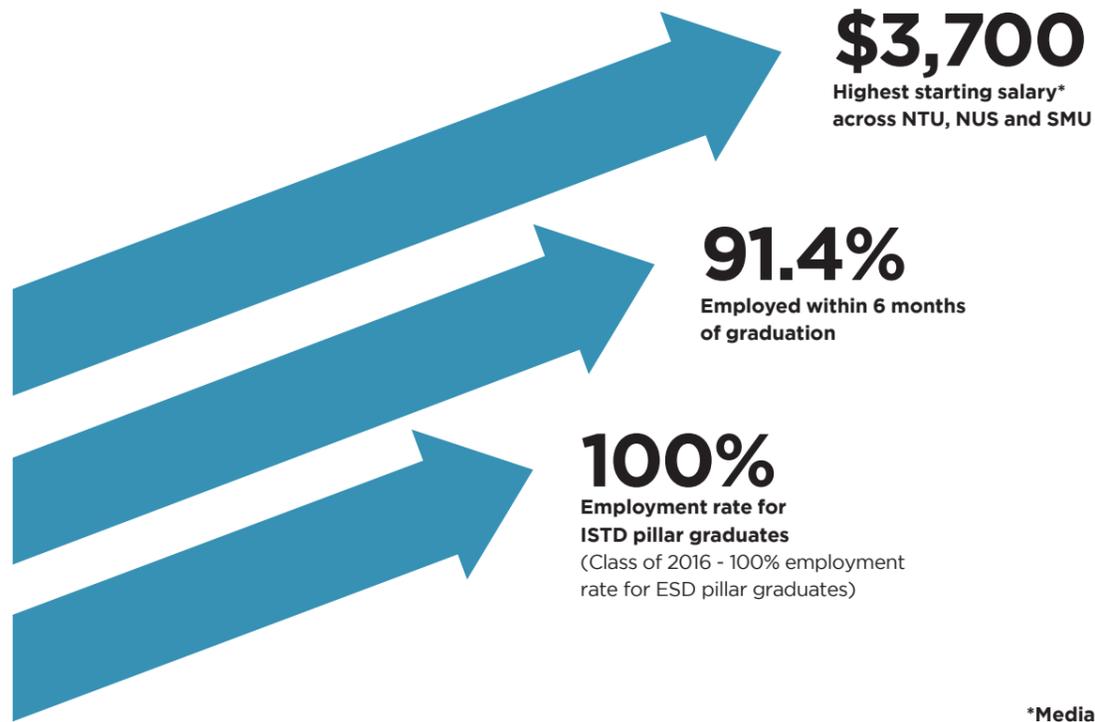
SINGAPORE UNIVERSITY OF
TECHNOLOGY AND DESIGN

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PM LEE WITH SUTD STUDENT MODERATOR
CHARLES WONG AT SUTD'S INAUGURAL
MINISTERIAL FORUM DIALOGUE SESSION

HIGH EMPLOYMENT RATES AND STARTING SALARIES FOR SUTD GRADUATES



For the third consecutive year, SUTD's graduates have sustained high overall employment rates and starting salaries. The results from the latest Graduate Employment Survey revealed that more than nine in 10 SUTD fresh graduates were employed within six months of completing their final examinations, with an overall employment rate of 91.4% in 2017. As for full-time permanent employment, this rose from 84% in 2016 to over 86% in 2017. In particular for engineering graduates, the full-time permanent employment rate was 89.6% in 2017, a 3.5 percentage point increase compared to 2016.

The mean gross monthly salary among SUTD's fresh graduates employed in full-time permanent employment remained consistently high, at \$3,859 in 2017 compared to \$3,853 in 2016. The median gross monthly salary for fresh graduates employed in full-time permanent employment was \$3,700 in 2017, compared to \$3,650 in 2016. Some of the top hiring sectors include Information & Communication, Scientific Research & Development and Financial & Insurance.

Professor Chong Tow Chong, SUTD President, said: "SUTD students have been carefully nurtured within SUTD's multi-disciplinary technology and design ecosystem to hone their critical thinking and problem solving skills. By equipping every student with industry experience through internships, coupled with overseas exposure to provide them with a global perspective, SUTD graduates are industry-, region- and future-ready. We are pleased that for the third consecutive year, employers continue to recognise these invaluable qualities, and our graduates continue to enjoy a high employment rate and starting salary."



EPD graduate Natasha Ong

Engineering Product Development graduate Natasha Ong who is currently working as a Systems Engineer in MITRE Asia Pacific Singapore felt that her time in SUTD has well-equipped her with the technical knowledge to understand and contribute to her current job. She said: "SUTD helped me develop characteristics of adaptability, perseverance and collaboration with the many projects I had to do during my undergraduate study. I learnt not to shy away from learning new things, even when a steep learning curve is expected, because I recognise that it is part of the process."

INAUGURAL MINISTERIAL FORUM WITH PM LEE



PM Lee with some of the BOT members and SUTD students



PM Lee at SUTD's inaugural Ministerial Forum



SUTD presented to PM Lee a special linen shirt that is embedded with photochromic materials that enables the shirt to change colour when exposed to UV(sun) light

SUTD held its inaugural student-run Ministerial Forum on 5 April with Prime Minister Lee Hsien Loong as the guest-of-honour. A crowd of over 800 attended the over one-hour long forum cum dialogue session. PM Lee spoke on the topic of

'A Better Nation by Design' and this was followed by a dialogue session with the SUTD Family where diverse subjects ranging from the benefits of big data analytics to the use of AI to re-examining our political system were discussed.

ON DESIGN THINKING

BY EDMUND KEE

A blind telephone operator. Chasing rainbows. The human spirit. What do all these things have in common? At SUTD's inaugural Ministerial Forum, Prime Minister Lee Hsien Loong delivered his speech using these examples central to the forum's theme: A Better Nation by Design. In his words, "Singapore is a nation by design" - from how the Singapore River was cleaned as it was pungent enough to orientate the blind, to being able to dream bolder with the assurance of safety nets should one fail, and to how the public transport system serves as economic mobilisers and social equalisers so that the human spirit can flourish. Singapore's pioneer generation redefined problems, gained user insights, ideated, prototyped and implemented many of Singapore's success stories. Thus, what we now call "design thinking" was applied to these multi-level issues in the past.

There are some who disregard design thinking as mere fluff, while the more vehement naysayers relegate design thinking to a tool that allows one to frame their solutions in rosy retrospection. As mentioned in the forum, such is the danger of not "amalgamating the software of socio-political elements" with the "hardware aspects" of technical skills and techniques.

In the example of the Singaporean society being overly "focused on numbers", PM Lee made the distinction that while it is important for a people to be well versed in numerical comprehension, it is equally important to understand that many things cannot be quantified as easily as numbers. Drawing parallels, it is easy to see how "design thinking" is gaining popularity due to its correlation with great solutions. Therefore, it is paramount for "design thinkers" to first empathise with various perspectives and understand the socio-political impact of their ideas before they can truly make a better world by design.

NEW PROGRAMMES AT SUTD

Upcoming batches of students joining SUTD will have several new programmes to look forward to. To better prepare students for the digital economy, SUTD will be incorporating artificial intelligence (AI) related subjects into its undergraduate curriculum. Students will need to take one of these three subjects – Artificial Intelligence, Data Analytics or Machine Learning – before they graduate.

Additionally, five new minors and a special track programme have been introduced. The five new Minor programmes are focused on the areas of entrepreneurship, artificial intelligence, digital humanities and computational social sciences, and will be added to SUTD’s undergraduate degree programmes.



Minor	Description
Minor in Design Innovation, Ventures and Entrepreneurship (DIVE)	This minor aims to educate students in systematic design innovation and entrepreneurship theory and applications. Students will be equipped with knowledge, skills and strategies to solve real-world problems and generate ideas that may lead to their own technology-based start-ups.
Minor in Engineering Systems (ES)	This minor will allow students to combine technical depth in either Information Systems Technology and Design or Engineering Product Development with expertise in the tools of technology management (operations research and engineering systems). This fulfils a long-expressed need in industry for “T-shaped Engineers”, that is, for engineers with both technical depth in their chosen discipline and exposure to more broad-based systems and managerial viewpoints.
Minor in Artificial Intelligence (AI)	AI minor aims to provide students the foundation, theory and applications of artificial intelligence (AI) technology. Students will be equipped with knowledge and skills to solve real-world problems using AI technology.
Minor in Digital Humanities (DH)	This minor equips students with the skills to develop and apply digital methods in the study of the arts and humanities. The application of computational techniques in the arts and humanities makes research more efficient and facilitates research that would not be possible using traditional methods. Students will acquire three main skills, namely, archiving, analysis and visualisation, to help enhance their core work in the arts and humanities, centred on interpretation, reasoning and communication.
Minor in Design, Technology and Society (DTS)	This minor emphasises critical analysis of the social dimensions of design processes and projects. Grounded in SUTD’s design curriculum, students will be able to cast the critical eye of the social scientist and the reflective sensitivity of the humanist to inform and augment the generation of creative design outcomes that address pressing contemporary issues in a positive, productive way.

NEW AND UPCOMING PROGRAMMES AT SUTD

SUTD also inked a partnership with Duke-NUS Medical School to offer an SUTD-Duke-NUS Special Track to nurture future clinicians who are adept at practicing medicine and harnessing technological advancements across disciplines to impact healthcare. Students taking this eight-year programme will graduate with a Bachelor of Engineering (BEng) or Bachelor of Science (BSc) degree at SUTD, followed by a Doctor of Medicine (MD) degree at Duke-NUS Medical School.

The USPP is a 12-month intensive full-time programme jointly led by SUTD’s urban solutions research institute the Lee Kuan Yew Centre for Innovative Cities and the Humanities, Arts and Social Sciences (HASS) cluster. The programme aims to equip students, analysts and practitioners with skills in data analytics, policy and planning and to enable them to develop novel solutions to urban challenges such as sustainable mobility, inclusive urban growth and new modes of governance for the 21st century.

New graduate programmes

SUTD also launched two Master degree programmes – the **Master of Science in Urban Science, Policy and Planning (USPP)** and the **SUTD-Chang Gung University (CGU) Dual Masters Programme in Nano-Electronic Engineering and Design (NEED)**.

The NEED dual masters programme provides students with a unique multi-disciplinary learning experience that encompasses the full value chain of the semiconductor industry. Students will start the 18-month programme by doing nine months of coursework at CGU in Taiwan, a top private university in the field of nano-electronics engineering and semi-conductor technology. This is followed by another nine months of intensive research at SUTD, after which students will graduate with two Master degrees.

SUTD TOPS LIST OF “EMERGING LEADERS” IN ENGINEERING EDUCATION



SUTD topped the list of “emerging leaders” in engineering education in the Global State of The Art In Engineering Education report released by the Massachusetts Institute of Technology (MIT). The report, released in March, reviewed cutting edge practices in engineering education that include work-based learning, multi-disciplinary programmes and a dual emphasis on engineering design and student self-reflection.

SUTD President, Professor Chong Tow Chong, said: “We are heartened to be recognised as a top ‘emerging leader’ in the field of engineering education. Our unique multi-disciplinary technology and design curriculum aims to nurture technically grounded leaders and innovators who can better the world by design, and we have seen positive affirmation of our pedagogy through the graduate employment survey results. SUTD will continually refine and evolve our curriculum to ensure that our students will be industry-, region- and future-ready for the fast-evolving global economy.”

The report noted that SUTD is not structured around “traditional engineering silos”. Instead, students study a common first year before specialising in one of four multi-disciplinary pillars - such as engineering systems and design.

LAUNCH OF SUTD ACADEMY TO ENCOURAGE LIFELONG LEARNING



SUTD signed MOUs with 13 strategic industry partners at the SUTD Academy launch

SUTD officially launched its continuing education and training arm, SUTD Academy, on 10 January, offering 20 new SkillsFuture courses in areas such as cybersecurity, data analytics and urban solutions. On top of the 20 courses to be rolled out this year, the Academy aims to develop another 40 courses in the next five years.

Minister for Education Mr Ong Ye Kung, who officiated the Academy launch, also announced that MOE would be setting aside up to S\$75 million to bolster SUTD's growth plans. The SUTD Academy will contribute to SUTD's multi-year expansion plans through collaborations with strategic partners in industry, government, and academia, in key economic growth sectors such as Healthcare, Cities, Artificial Intelligence/Data Science, and Aviation. The multi-disciplinary and integrated partnerships and programmes will enhance SUTD's education and research offerings, better prepare its graduates for the future economy, and support national growth priorities.



Education Minister Mr Ong Ye Kung speaking at the SUTD Academy launch

An excerpt from Minister Ong's speech:

“Being a relatively young university, SUTD is in a good position to pioneer a completely new way of delivering CET. For instance, SUTD partnered Deloitte Singapore to co-develop a series of courses in data analytics. These SkillsFuture Singapore (SSG) approved courses are open to the public, and are jointly delivered by SUTD's Engineering Systems and Design (ESD) and Information Systems Technology and Design (ISTD) pillars. As with many of SUTD's innovative programmes, these data analytics courses are multi-disciplinary in nature, and are intended to promote design thinking and an entrepreneurial spirit in its participants.”

Dr Janson Yap, Regional Managing Partner for Deloitte Risk Advisory in Asia Pacific and Southeast Asia said, “I am proud that SUTD and Deloitte have come together to use our expertise to focus on the methodology and application of data analytics. Information and knowledge changes the way corporations and communities operate and I hope that we can help build and develop the next generation workforce and community through this collaboration. By promoting STEM education that uses technology, design and analytics, we can effectively show how the digital and the physical worlds can come together and be translated into actionable ideas to serve the economy and society.”

At the launch, SUTD also signed MOUs with 13 strategic industry partners. They are:

- Keppel Offshore & Marine
- CPG Corporation
- Xilinx Asia Pacific
- Deloitte
- Research Communication International
- Changi General Hospital
- GovTech
- BCA Academy
- Civil Service College
- Temasek Polytechnic
- Singapore Manufacturing Federation
- The Institution of Engineers
- SIA Engineering

PROF CHONG TOW CHONG APPOINTED SUTD PRESIDENT



SUTD's new President, Prof Chong Tow Chong

SUTD's Acting President and Provost Professor Chong Tow Chong was appointed as SUTD's new President on 1 April 2018. As SUTD's Founding Provost, Prof Chong has been intimately involved with the growth and development of the University since 2010. On 1 January 2018, he took on the role of Acting President after SUTD Founding President, Professor Thomas Magnanti, stepped down at the end of his eight-year term.

Before joining SUTD as its Provost, Prof Chong was Executive Director of the Agency for Science, Technology and Research's (A*STAR) Science and Engineering Council, as well as A*STAR's Data Storage Institute. At the same time, he was also a Professor at the National University of Singapore's Department of Electrical and Computer Engineering.

SUTD Chairman, Mr Lee Tzu Yang, said that SUTD has seen tremendous growth as a small university that punches above its weight under Prof Magnanti's firm leadership. After a thorough and global search, the Board of Trustees found Prof Chong to be the best person for the role of SUTD's new President. In addition to his experience running the university and his commitment to

SUTD's vision of bettering the world through technology and design, he is also the architect of SUTD's growth plans. He and the Board strongly believed that Prof Chong would lead SUTD to new heights in its new phase of growth.

Prof Chong said: “I am very honoured and excited to take on the role of SUTD's President. SUTD's next phase of growth will be big and bold - in both vision and ambition. Building upon the strong foundation achieved over the past eight years, my team and I will continue to invest in strengthening SUTD's core and creating new strategic differentiation, by evolving and refining our innovative education and multi-disciplinary research, as well as expanding our pervasive partnerships with industry, government and global universities. This will ensure that SUTD continues to deliver a truly unique and world-class university experience for our students to impact the world by design. By equipping our students with critical knowledge and skills and inculcating a mindset of lifelong learning, especially in the current fast-evolving global economy, we will continue to produce technically-grounded leaders and innovators to meet the challenges facing Singapore and the world.”

THE PROVOSTS' PLENARY AT THE APAIE 2018 CONFERENCE AND EXHIBITION



Prof Chong Tow Chong making his presentation at the APAIE 2018 Provosts' Plenary

SUTD, alongside the other local universities such as the National University of Singapore (NUS), Nanyang Technological University (NTU) and the Singapore Management University (SMU), co-hosted the Asia-Pacific Association for International Education (APAIE) 2018 Conference and Exhibition from 25 to 29 March.

A key highlight of the APAIE was the Provosts' Plenary organised by SUTD on 26 March. The session, attended by over 250 delegates, focussed on the theme "The Fourth Industrial Revolution: How will it change Singapore's higher education landscape?". Provosts from the four co-hosting universities, including SUTD President Professor Chong Tow Chong, shared their perspectives through a series of presentations followed by a question and answer session.

Here are some key points shared at the Plenary.

1) NUS Senior Deputy President and Provost, Professor Ho Teck Hua's presentation was entitled "Innovation Platform and Community for the 4th Industrial Revolution". He covered NUS' efforts in preparing for the 4th Industrial Revolution, which encompasses the adoption of a fundamentally different education model that promotes lifelong learning, embracing exciting research opportunities that have high intellectual and translation values, and developing an innovation platform and community for creating powerful synergies.



SMU's Prof Lily Kong and Prof Chong Tow Chong at the Provosts' Plenary Q&A session



Left to right: Prof Chong Tow Chong, President, SUTD, Prof Subra Suresh, President, NTU, Prof Sarah Todd, President, APAIE and Vice President (Global), Griffith University, Mr Ong Ye Kung, Minister for Education, Prof Ian Goldin, Professor of Globalisation and Development, University of Oxford, Prof Tan Eng Chye, President, NUS, Prof Lily Kong, Provost, SMU

2) In a presentation titled "Fourth Industrial Revolution => a Learning Revolution?", NTU's Provost and Vice President (Academic), Professor Ling San, shared about a shift in the way students would learn, and the need to learn to learn, which called for new ways to meet this objective, such as leveraging on technology and innovation, focus on outcome-based teaching and learning, experiential and collaborative learning.

3) SMU's Provost and Lee Kong Chian Chair Professor (Social Sciences) Professor Lily Kong in a presentation titled "The Fourth Industrial Revolution - Will Our Students be in Time for the Future?", shared about SMU's approach in nurturing future-ready citizens, through the focus on interdisciplinary teaching, research and innovation, closer collaboration with industry and society, lifelong learning, cross-cultural learning and exposure. She also covered future plans for SMU in preparing students for the future.

4) SUTD's then President Designate and Provost (current SUTD President) Prof Chong Tow Chong spoke about SUTD's perspective and experience through his presentation titled "Nurturing Technically-grounded Leaders and Innovators through Cross-disciplinary Education, Research and Entrepreneurship". Prof Chong shared about the five key areas in transforming higher education learning in response to the 4th Industrial Revolution, and how these areas were implemented in SUTD, which was set up to revolutionise the way engineering and architecture education are taught. SUTD's emphasis on breaking down of silos, emphasis on skills and attitudes beyond book knowledge, providing flexibility, choice and diversification in students' academic pathways, delivery of pedagogical innovation through the emphasis of small group, active and interactive learning and digital technology both on- and off-campus, and the integrated partnership approach with industry to deliver sector-based curriculum epitomises the future of education in itself as a living testbed and platform to nurture industry-ready and future-ready graduates ready for new challenges in the 4th Industrial Revolution.

PARTICIPATING IN THE SHELL ECO-MARATHON ASIA 2018

BY CHARLES WONG



The SUTD E18 EV

SUTD's Electric Vehicle (EV) Club participated in the Shell Eco-Marathon Asia 2018 which took place from 8 to 11 March. The competition required teams to build their own car from scratch and judged them on design, engineering quality as well as fuel efficiency.

The SUTD E18 was a complete re-design of last year's model (E17), a nearly year-long effort which pushed the limits of design, engineering and the team's technical ability. A carbon-fibre monocoque chassis and aluminium drive components meant the car was light, efficient and incredibly strong. Driving the rear wheels is a single-cylinder petrol power unit, tuned for maximum fuel economy using EVOS, the car's engine management system. The car featured extensive aerodynamic changes, including a drag-reducing front scoop, fin inlets and wing mirrors reminiscent of jet engines. Inside, one is cocooned in a driver-centric cockpit designed to eliminate distraction, reduce cognitive load and improve focus.

The car passed technical inspection smoothly and was the hot favourite for the Design Award and Technical Innovation Award. Unfortunately, the car had limited time on the track due to the unexpected non-availability of track time - we only had the time for one competition run, and the car needed to exit the track mid-way due to technical issues. Without a valid run, we were rendered ineligible for the afore-mentioned awards despite being one of the favourites.

Regardless, the team did a stellar job producing such an incredible vehicle. The car is slated to be featured in various automotive publications and the Concours d'Elegance, a prestigious event showcasing rare vintage cars and exclusive hyper cars, to be held at the Fullerton Hotel later this year.

ICONIC VOICES FROM MIT LECTURE BY PROFESSOR ROBERT LANGER

BY MICHINAO HASHIMOTO



Prof Langer giving his lecture

On 30 April, Professor Robert Langer, an Institute Professor at Massachusetts Institute of Technology, gave the Iconic Voices from MIT lecture titled "The Edison of Medicine: Robert Langer's Quest to Solve Global Health Challenges using Biotechnology". As a former researcher in the Langer group, it was an honour for me to receive Prof Langer, or Bob, as a speaker at SUTD.

Prof Langer started his talk by sharing how he got into his current career as a medical engineer and an entrepreneur. When he completed his PhD in chemical engineering in the 1970s, he was not excited by the norm of joining a petroleum company to increase the yield of petrochemical by 1%. He decided to explore his own career in medicine using his education in engineering. After a number of unsuccessful applications, he found his postdoctoral position as one of the unusual people in Dr Folkman's research group at Harvard Medical School. His research idea was to find a way to prevent blood vessels from growing, which could stop nutrients from reaching the tumour cells.

Prof Langer found a way to control the administration of angiogenesis inhibitors (a drug to prevent formation of blood vessels) by embedding them in other polymeric matrices. This idea is now widely accepted as polymeric drug delivery and control release. It was, however, not accepted by the scientific community at the beginning, and the patent applications were not approved either. Prof Langer shared the difficulties he faced. After years of struggle, the patent was finally approved and it has become a basis for many drugs in the market.

After his first invention in polymeric drug delivery system, Prof Langer continued to make numerous contributions in the invention of biomaterials and medical devices. Inventions in new materials — based on engineering perspectives—have improved the quality of medical therapies and devices. Prof Langer illustrated many examples of how important interdisciplinary thinking is to advance the research. The lecture was not only inspirational to students and researchers, but also encouraging for everyone who is willing to take risks and challenges.

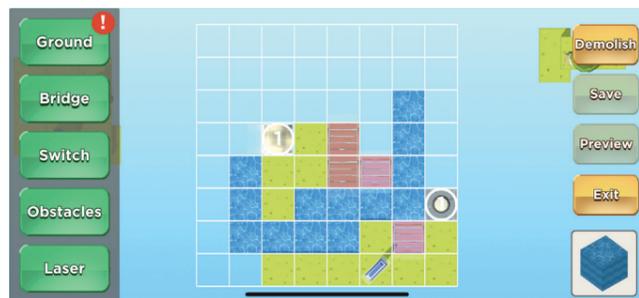
KINETIKOS, THE MOBILE GAME DESIGNED AND PRODUCED BY SUTD GAME LAB



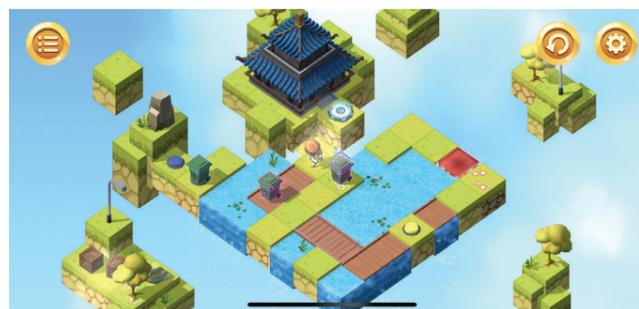
SUTD-designed mobile game - Kinetikos

The SUTD Game Lab recently released Kinetikos, a mind-bending mobile game that encompasses a slew of puzzles with bright and colourful graphics to attract the young and the youthful. Launched around the time leading to SUTD's Open House in March, Kinetikos not only showcases SUTD's capabilities in game creation and design, but the added objective of wanting to engage and empower a new generation of thinkers and makers with its 'Create your own puzzle' function.

The puzzles, while beautiful to look at, were designed with a distinct flair for the logical. Using the SUTD campus architecture as its backdrop, every stage comprises a myriad of options for completion, which leads to unlocking of new stages.



Kinetikos game editor for 'Creating your own puzzles'

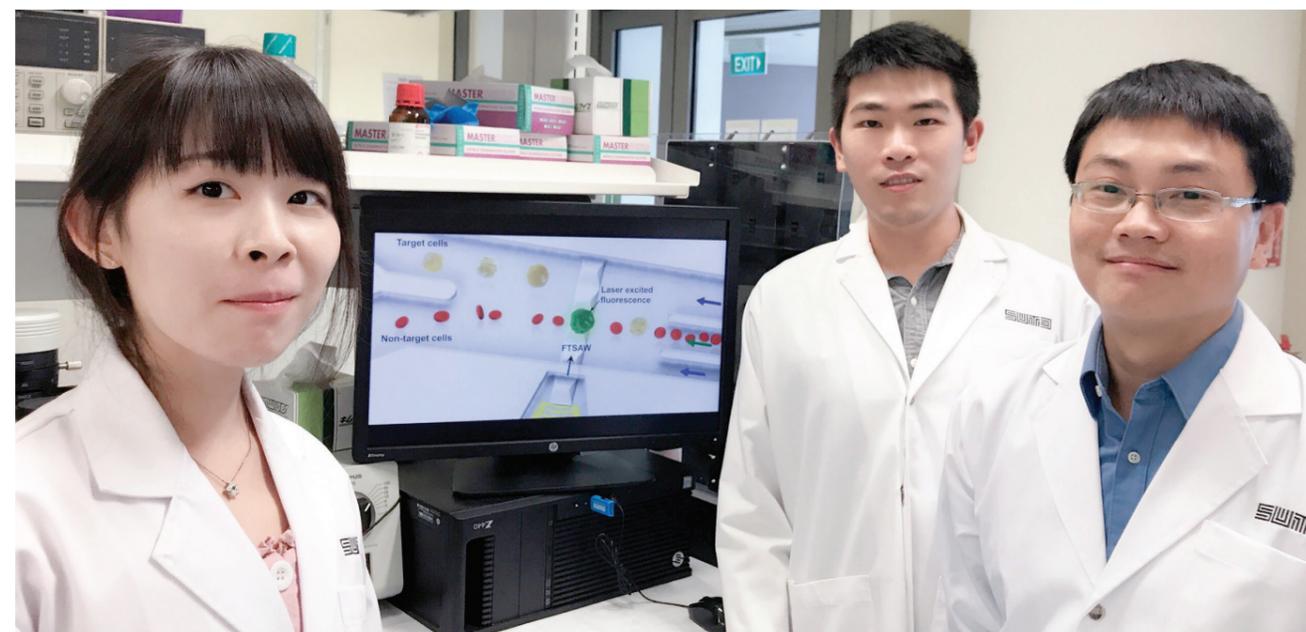


A Kinetikos stage puzzle featuring famous SUTD campus architecture, such as the double-tier pavilion donated by Jackie Chan

"Mobile games are a good way for us to engage students as almost all own a phone and are open to playing something that is fun and interesting. Since SUTD has its own Game Lab, we thought it would be great to create a problem solving game with a function that allows one to create their own levels/stages. We want to show that learning and design can be fun, and in line with our Open House theme — the Future is Yours to Create. Furthermore, with the Easter eggs and tidbits of info on SUTD embedded in the game, we hope the students will learn a little more about SUTD and how we seek to create a better world by design," said Ms Corinna Choong, Senior Director of Marketing and Communications, SUTD.

"The campus of SUTD has always been fun and unique with the blend of traditional and modern architecture along with the lush green environment. Game Lab always wanted to showcase this but never had an opportunity to do so. We pounced upon the chance when we were approached by the Marketing department to promote SUTD in a creative way. Using our expertise and knowledge of gamifying problems, Game Lab took up the challenge to embody the values and creative nature of the school in a game," said Yuen Kean Wai, game artist, SUTD Game Lab.

SUTD RESEARCHERS DEVELOPED SINGLE CELL LEVEL SORTING TECHNOLOGY USING SOUND WAVES



The research team led by Dr Ye Ai at SUTD. From right to left: Dr Ye Ai, Zhichao Ma and Yinning Zhou.

Single cell analysis, for example the ability to examine DNA mutations at single cell level, is essential for assessing the genetic heterogeneity of cancers among different patients, and thus holds great potential of advancing towards precision medicine for cancer treatment. The key to implementing single cell analysis is the ability to isolate single cells from highly heterogeneous biological samples. According to a recent market analysis conducted by Markets and Markets Research Pte Ltd, the global market size of cell sorting is US\$3.57 billion in 2016 and is expected to reach US\$7.89 billion by 2021, with Asia expected to be the fastest-growing market in the next five years.

Currently, sorting and isolation of rare cell populations is typically performed using fluorescence-activated cell sorting (FACS) system, a technology developed nearly 60 years ago. However, current FACS systems are complex, bulky and expensive, requiring highly trained personnel for operation, and may produce bio-hazardous aerosols in open environments. Microfluidics technology capable of precise cell manipulation has great potential to reinvent next-generation cell sorting technology.

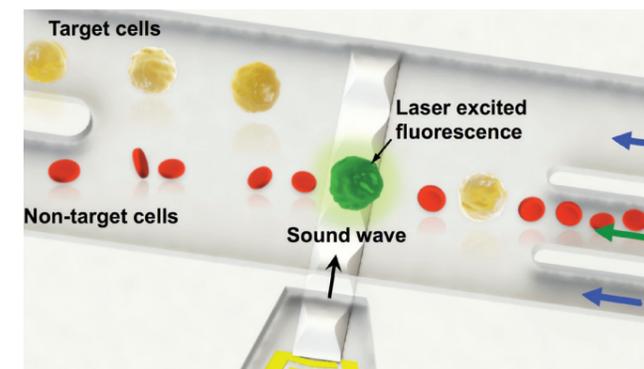
A research team from SUTD, led by Assistant Professor Dr Ye Ai, studied the interactions between ultrasound (beyond the audible limit of human hearing) and micron-sized objects (e.g. biological cells) suspended in aqueous solutions and recently developed a highly accurate single cell level sorting technology using a highly focused sound wave beam (50 Qm wide roughly 1/4 of a single human hair's diameter). This new cell manipulation technology enables highly accurate isolation of rare cell populations in complex biological samples. More concisely, it provides the potential of finding a single cell in a million.

Dr Ai's team designed and built an acoustic sorting system that included a disposable microfluidic channel, a reusable sound wave generator and a fluorescence detection module. Target cells with fluorescent labels specific to their surface biomarkers can be recognized by the fluorescence detection module. Upon detecting a single target cell, the system activates the sound wave

generator to produce a pulsed highly focused sound wave beam that can rapidly deflect the target cell to the collection outlet. The sound wave beam with a width of 50 Qm is highly localised, enabling accurate sorting at the single cell level.

Principal Investigator, Dr Ai said: "Compared to conventional FACS systems, the merits of this cell sorting technology includes a substantially simplified sorting mechanism that shrinks the instrument size, reduces its complexity and substantially lessens costs. Not only that, but it also enables more accurate single cell level sorting and leaves no damage on target cells because sound waves are much gentler than electric fields widely used in conventional FACS systems."

This new cell sorting technology has been published in Lab on a Chip, a top-tier journal focused on research in innovative devices and applications at the micro- and nanoscale. Two SUTD graduate students (Zhichao Ma and Yinning Zhou) and a postdoctoral researcher (David Collins) participated in this project.



Schematic of the fluorescence activated sorting of a single target cell in a heterogenous cell sample.



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