

# SIT Welcomes Two New Members to its Board of Trustees

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From left: Mr Han Kwee Juan, Managing Director & Group Head, Strategy & Planning, DBS Bank; and Ms Jacqueline Poh, Managing Director, Singapore Economic Development Board. (Photos courtesy of DBS Bank, Singapore Economic Development Board)

The Singapore Institute of Technology (SIT) welcomed two new members to its Board of Trustees on 1 June 2022. They are:

- Mr Han Kwee Juan, Managing Director & Group Head, Strategy & Planning, DBS Bank Ltd; and
- Ms Jacqueline Poh, Managing Director, Singapore Economic Development Board.

In his role at DBS, Mr Han works with the Group CEO and Group Management Committee to develop strategies to drive growth and build new businesses through partnerships. He also leads and drives the bank's transformation agenda including embedding the culture of innovation and industrialising the use of artificial intelligence (AI). Prior to joining DBS, he was Chief Executive Officer and member of the board of Citibank Singapore Limited, and also served as a member of the Main Committee of the Committee of the Future Economy (CFE) in 2016.

Ms Poh was appointed Managing Director of the Singapore Economic Development Board (EDB) in October 2021. The EDB plans and executes strategies to sustain Singapore as a leading global hub for business and investment. Prior to the EDB, she was Deputy Secretary of the Strategy Group in the Prime Minister's Office. Ms Poh was also the founding Chief Executive of the Government Technology Agency of Singapore (GovTech), and was previously the Managing Director of the Infocommunications Development Authority (IDA). In her career, she also held key positions in the Ministry of Manpower, the Ministry of Finance, and the Ministry of Defence.

Mr Bill Chang, Chairman, Board of Trustees, SIT said, "We are delighted to welcome both Kwee Juan and Jacqueline to our Board. Their expertise in their respective fields and rich experience will benefit SIT immensely as we pursue our aspiration to be Singapore's premier University of Applied Learning."

The SIT Board of Trustees comprises 20 eminent business leaders, entrepreneurs and professionals from across the public service and private sectors. The Board works closely with the management and stakeholders of the university to shape its vision, chart major directions, and guide significant initiatives. The full list of Trustees can be found <u>here</u>.

#### Please click here for the full story.

## SIT and AMILI in Partnership to Advance Asian Gut Health R&D

First-of-its-kind made-for-Asia sustainable R&D to develop kale stems as prebiotics; partnership to deepen symbiotic industry-academia collaborations in applied research and talent upskilling

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Key representatives representing SIT and AMILI at the MOU signing ceremony (from left): Dr Jeremy Lim, CEO & Co-Founder, AMILI: Ms Toh Kai Yee, Head of Lab and Research, AMILI: Assoc Prof Susanna Leong, Vice President (Applied Research), SIT: and Prof Chua Kee Chaing, President, SIT

The Singapore Institute of Technology (SIT), Singapore's University of Applied Learning, and AMILI Pte Ltd, Southeast Asia's first precision gut microbiome company, have formalised a three-year partnership on 3 June 2022 to accelerate innovations in human gut microbiome. SIT and AMILI will jointly embark on a series of research and development (R&D) programmes, staff upskilling initiatives, and work attachment opportunities for SIT students.

#### Commercialising Kale Stems as Prebiotics through First-of-its-Kind R&D Programme

As the human gut microbiome research continues to be an important field to advance human health, researchers from SIT and AMILI have embarked on a research programme to exploit the benefits of leftover farmed vegetables for gut health improvement. The first-ofits-kind applied research programme utilises food waste valorisation through drying and milling methodologies to optimise kale stems as prebiotics that will enhance the growth of probiotics, with a focus on the Asian population. Kale stems, in its powder form, are found to be strong catalysts for the growth of Bifidobacterium and Lactobacillus, both of which are essential intestinal bacteria that aid in the maintenance of a healthy gut system.

SIT will further develop kale stems as a prebiotic to be incorporated into AMILI's next generation of gut health supplements. Coupled with AMILI's findings from its fast-growing multi-ethnic microbiome database, the new commercial product will present a competitive edge to existing Western formulations. AMILI's keen focus in Asian microbiome research and innovation enables the company to develop products and services that are based on comprehensive studies of the gut microbiome and dietary patterns of people living in Asia.

The joint R&D in optimising kale stems as prebiotics is a continuation of SIT's work in food waste valorisation with home-grown agri-tech company Sustenir, which produces healthy vegetables such as kale, lettuce and spinach. Apart from the optimisation of kale stems as prebiotics, SIT and AMILI will also embark on other applied research initiatives that will contribute to leveraging technology platforms to accelerate the expansion of AMILI's gut health studies and suite of commercial offerings.

#### Industry Upskilling and Strengthening Talent Pipeline through Skills-Based Learning

As part of the collaboration, SIT and AMILI will employ a skills-based approach in a symbiotic staff exchange programme that aims to strengthen industry and academia upskilling. SIT academic staff, comprising faculty and Professional Officers, will be closely engaged in AMILI's product development efforts, while AMILI's staff will benefit from SIT's applied research expertise and laboratory contributions. Both SIT and AMILI employees will also co-develop and incorporate topics on gut microbiome in future coursework.

There will also be work attachment opportunities for SIT students across multiple disciplines, including Food Technology, Pharmaceutical Engineering, and Dietetics and Nutrition. Students will gain real-world exposure through practical sessions in applied research and commercial product development.

Said Associate Professor Susanna Leong, Vice President (Applied Research), SIT: "One of SIT's key applied research focus is sustainable food innovation. We aim to contribute to the growing functional foods and nutraceutical market through sustainable R&D methodologies such as food waste valorisation. We look forward to working with AMILI to develop products that meets the needs of Asian consumers."

Dr Jeremy Lim, CEO & Co-Founder, AMILI, said: "We are honoured to partner SIT, a university that includes food science and innovation as one of their key areas of focus. As our tagline goes, 'Good health starts with gut health', and Asia has many traditional foods and ingredients that are only just being scientifically assessed to demonstrate their health benefits. We believe this partnership will be a key platform to achieve this."

#### Please click <u>here</u> for the full story.

### SIT Hackathon 2022: Sustainability in Space Final

Four teams unlock innovative solutions in space with 3D printing technologies in inaugural edition of hackathon; NASA astronaut graces event

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The winning team's (Team REPA) representative Louis Tan with NASA Astronaut Jeffrey N. Williams. (Photo courstesy of Keng Photography)

The Singapore Institute of Technology (SIT), Science Centre Singapore and NEO Aeronautics Pte Ltd have successfully concluded the inaugural edition of "The SIT Hackathon 2022: Sustainability in Space".

Themed "How to Live in Space for 365 Days", the Hackathon saw participating students from SIT proposing innovative solutions related to 3D printing technologies that can be used in space. From January 2022 to June 2022, six teams submitted their product proposals and were given a budget of \$500 to produce their prototype. Four teams progressed to the Grand Final, held at SIT@Dover on 8 June.

Team REPA impressed the judges with their sustainable innovation proposal and clinched the top prize of \$500 cash. The winning team, comprising three Year 3 Mechanical and Aerospace Engineering students from SIT-University of Glasgow joint degree programmes, proposed using recyclable plastic material for 3D-printed repair parts in the International Space Station.

The event was graced by Guest-of-Honour – NASA Astronaut, Jeffrey N. Williams, who holds the record for the longest time spent in space by an American Male Astronaut. At the Hackathon, he also shared insights on his space missions in a talk on "What It Takes To Be An Astronaut?"

Professor Ng Siu Choon, Associate Provost (Students & Faculty Development), SIT said, "We are delighted to organise this SIT Hackathon. It encourages SIT undergraduates to think of creative ideas on sustainable living in space using additive manufacturing (AM) technology. By affording a platform for them to present their innovative proposals, we hope to spark an interest among SITizens in technology, as well as Singapore's budding space scene. The strong nexus of applied learning to research encourages our students to go beyond their curriculum and to think out of the box for solutions that can solve real world problems."

Associate Professor Lim Tit Ming, Chief Executive, Science Centre Singapore said, "Hackathons are a great way to strengthen connections, facilitate fruitful exchanges and stimulate creativity. It's always inspiring to see the younger generation come together to co-create ideas. In this sense, we see hackathons not just as opportunities to generate solutions but to accelerate innovation. That sense of curiosity, enthusiasm and passion among the teams is what we aim to foster. The hackathon also demonstrates the importance of bringing like-minded partners together to create nurturing spaces. All these small steps can lead to giant leaps in overcoming the complex challenges before us."

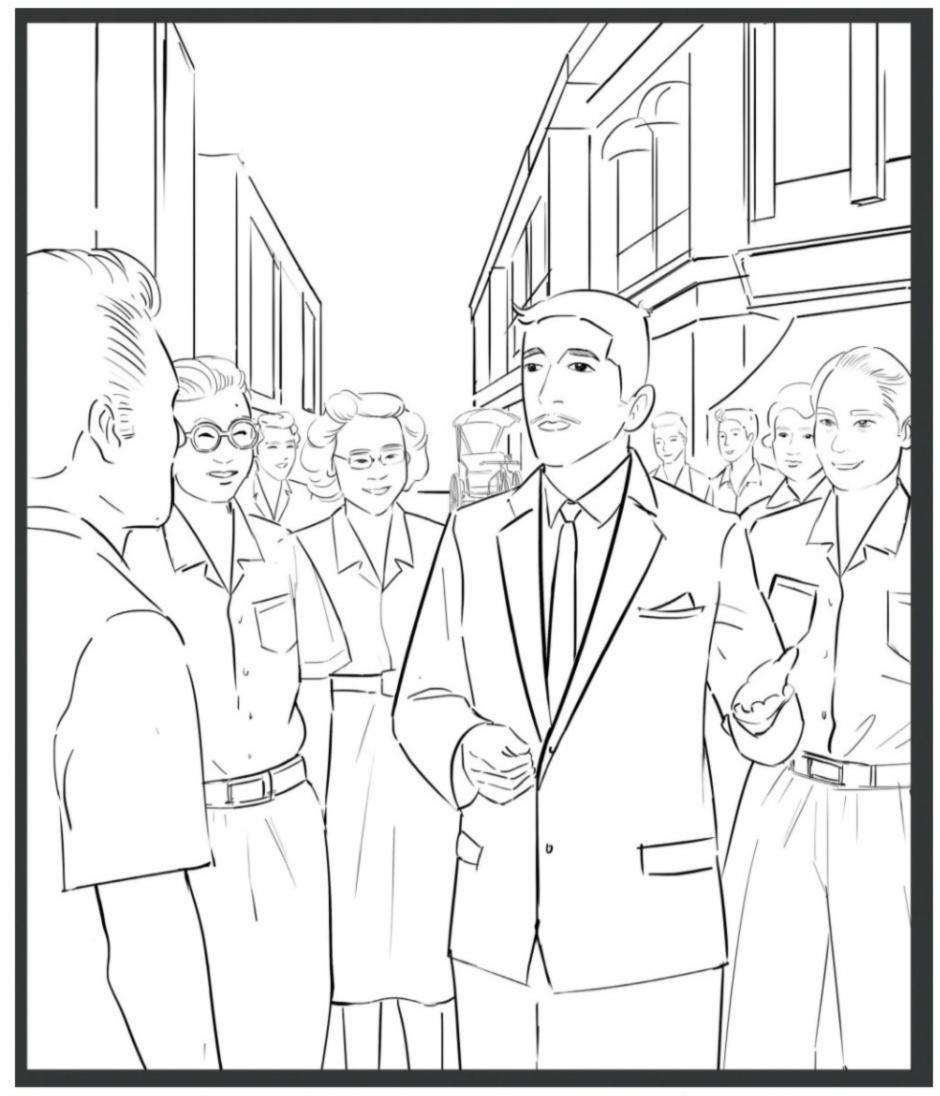
Dr Neo Kok Beng, Founder of NEO Aeronautics said, "I would like to encourage students to apply their scientific knowledge and imagination to explore opportunities in the space industry."



## Yusof Ishak Scholars: SIT's Budding Service Leaders for Tomorrow

Brimming with promise, purpose and passion, the first 3 recipients of the Yusof Ishak Scholarship share their dreams and aspirations with SITizen Buzz

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President Yusof took time to mingle with ordinary citizens and, especially in his interaction with young students, would urge them to give back by serving the nation in any way they can.

The first President of Singapore (1965 to 1970), Encik Yusof Ishak was known as the People's Champion for his firm commitment in promoting meritocracy, multiculturalism and racial harmony. Throughout his Presidency, Encik Yusof emphasised the importance of education. He saw it as being crucial for the nation's development, and as the avenue to learning more about other cultures and communities.

Thanks to the generous support from various donors, the **Yusof Ishak Scholarship** has been established at the Singapore Institute of Technology (SIT) in honour of the late President, with the blessings of his family and the support of the Ministry of Education. Valued at \$15,000 each, this prestigious scholarship aims to nurture student excellence in academic studies as well as service leadership.



#### A Passionate Voice for Pups and Children

When final-year Air Transport Management student Mr Darrol Tan first started volunteering at Causes for Animals, an animal shelter, he realised that street dogs were often misunderstood. "Some people have the misconception that street dogs attack people, but they are actually just trying to fend for themselves when they sense danger," he said.

He joined SIT Whiskurs, an animal welfare and awareness initiative, in hopes of raising awareness and promoting adoption. As the Head of Publicity, he generated educational content and organised webinars to educate members on street animals and the awareness of animal cruelty in Singapore.

Mr Tan is also currently a volunteer trainer in Digital Scientist programme conducted by Central Singapore CDC, which holds workshops that involves science concepts and coding outcomes for children from low-income families.

"I hope to bring fun in learning science for the children and learn how to communicate with them better through the process!" he said.



#### Looking Forward to Paying it Forward

Second-year Mechanical Engineering student Mr Muhammad Syahrul Mirza Bin Sulaiman expressed that receiving the Yusof Ishak scholarship was a validation of him as someone who possess the potential for the future of the society. "I hope one day I can also give back and change someone's life like the donors have changed mine," he said.

His decision to pursue a degree after completing his polytechnic education was driven by his passion and interest to broaden his knowledge as an engineer.

Upon graduation, he is looking forward to getting into a good company where he can contribute using skills gained at SIT. "I also look forward to collaborating and networking with new colleagues, sharing my ideas to them." he said.

#### Giving her Heart to Physiotherapy and the Elderly

First-year Physiotherapy student Ms Chua Wen Jing was once unsure about her aspirations till she encountered a Physiotherapy speaker during her first year in junior college. Ms Chua then realised that she shared the same passion.

She is now most passionate about geriatric care, and says she looks forward to honing her skills and equipping herself with the necessary knowledge through her course at SIT.

Ms Chua also volunteers with YMCA occasionally, befriending the elderly who live alone on alternate weeks, helping them with their house chores and checking in on their well-being. "At first, I was worried about the potential language barrier since the elderly mainly spoke in dialects. But I could tell they really enjoyed the company, so I always look forward to visiting them again," she said.

### Plant-based Protein Supplements – A Tasty Alternative with an Asian Flavour

Black sesame, coffee, passionfruit, and mushroom soup – these familiar favourites have had their flavour and nutrition profiles harnessed to be consumed as a plant-based protein supplement for cancer patients.

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Asst Prof Tan concocting plant-based protein instant beverages for the Asian palate.

It started over a Christmas dinner with an oncologist friend, on how his cancer patients needed to ensure an adequate amount of protein intake during treatment and recovery. Available products on the market are usually limited to flavours like chocolate, vanilla, strawberry – not exactly crowd favourites among the local population.

This got Asst Prof Verena Tan, <u>Programme Leader of SIT's Dietetics and Nutrition</u> degree programme, thinking and tinkering for a plantbased protein supplement with a local twist. What if one could formulate nutritious and tasty plant-based protein supplement?

#### **Balance Between Nutrition and Taste**

There were a couple of considerations. First and foremost was to ensure an optimum protein profile when developing a plant-protein alternative. From currently available evidence, plant proteins, with the exception of soy, are not considered a high-quality protein source as they lack certain essential amino acids required for maintaining or increasing muscle mass.

Inadequate protein intake is also a key contributing factor to the loss of lean muscle. For cancer patients, the loss of lean muscle mass may also be compounded as a result of cancer-related factors such as loss of appetite, psychosocial stress and emotional stress.

This loss can lead to poorer tolerance to their cancer treatment. Guidelines for cancer patients typically recommend a protein intake of up to 1.5g per kg of body weight per day, to support protein balance in the body. "Studies have shown that an elevated protein intake promotes the building of lean muscle tissue in cancer patients," said Asst Prof Tan.

Currently, the commonly used nutritional supplements for cancer patients on the market are usually sweet, uses whey protein (a component of cow's milk) and come in limited flavours. Taste fatigue builds and becomes another barrier to nutrition supplementation for this group of consumers.

#### **Combining the Best of Many Plants**

Enter Asst Prof Tan's plant-based protein brainwave. She has successfully developed prototypes made up of a combination of different plant-proteins in a ratio that provides an optimal essential amino acid profile for muscle health. There is 20g of protein in each serving, which is shown to be the optimal dose to allow for muscle protein synthesis.

Furthermore, these instant beverages have been flavoured for the Asian palate, such as black sesame, coffee, passionfruit, and mushroom soup.

The verdict? These flavour profiles have been a hit. Preliminary findings have shown positive reception to the prototypes developed. Learn more about the protein supplements in the video.

Please click here for a video interview with Asst Prof Verena Tan, Programme Leader of SIT's Dietetics and Nutrition degree programme.

### Flying High!

It's a blast at the long-awaited return of Alumni Movie Night, as SITizens make a beeline for the blockbuster Top Gun: Maverick

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The Neon Room at Projector X: Riverside featured comfy cinema seats with lots of legroom, and special booth seats.

In 2020, the curtains fell on the Alumni Movie Night amid COVID-19 restrictions – but this ever-popular event presented by the SIT Alumni Leisure Network came back with a bang on Thursday, 2 June 2022, just like Top Gun: Maverick, the mega-hit sequel it screened. And what a treat it was for the close to 50 SITizens who attended the screening at Projector X: Riverside at Riverside Point!

The first Alumni Movie Night in two years started off with a bento dinner before the cinema doors opened at 8pm. Instead of the usual cinematic surround-sound that you would get from the cineplex, attendees received wireless headphones so they could fully immerse themselves in the cinematic experience without any distractions.

Mr Wei Quan, an Mechanical Design Engineering alumnus, found it to be a "very unique experience." He said, "The venue had a very nice theme with the old cinema equipment placed around, and it felt like one of those old-school cinemas."

Mr Zhou Xihao, who graduated from the Computing Science programme in 2020 said, "Finally, being able to attend a physical event after so long honestly feels liberating – nothing beats face- to-face interactions. I'm really glad that the SIT Advancement & Alumni Division is coming up with tons of initiatives for the alumni networks."

What made this memorable night for Mr Zhou? "Spending quality time with old friends and making new ones all while enjoying an amazing show!" he said.



Mr Zhou Xihao (right) with his fellow SITizens are all smiles as they prepare to watch Top Gun: Maverick.

## Launching Alumni Groups of Passion

Two new official SIT Alumni Groups allow SITizens to stay connected even as they keep up their zeal for shared interests

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Graduating does not mean you have to leave your interests from your university days behind. June 2022 saw the launch of two official Alumni Groups. Specially formed by SIT Alumni to connect with their fellow SITizens, these groups are also supported by the SIT Advancement & Alumni Division.

#### SIT Muzeka Alumni Group



The SIT Muzeka Alumni Group (SMAG) is the alumni counterpart of Muzeka, SIT's very own student band. Formed in April 2022, the SMAG is a platform for alumni to express themselves through music and provide a stress-free space to experience the joy of music making. The official launch took place on 10 June 2022, with members bonding as they sang and jammed to their favourite songs. SMAG welcomes all alumni who have a passion for music – the group has welcomed 50 members to date, at least five of whom were not from the student band.

#### SIT GSA Alumni Group



Alumni from SIT-GSA (Glasgow School of Art) came together to form the SIT GSA Alumni Group, which held its first networking event on 23 June 2022.

SIT-GSA alumni gathered at Projector X: Riverside for some casual networking over food and drinks, also taking the opportunity to catch up with old friends and meet with graduates from other years.

The event also included a short sharing session by alumni speakers Mr Fariz Junaidi and Ms Christine Lim, who spoke about their work experience since graduating from SIT. Special guest speaker Mr Aik Beng Chia, who is known as one of Singapore's most prolific photographers, was also in attendance, sharing about his journey in the arts scene.

### A Meeting of Mentoring Minds

Mentors from the SIT Alumni Programme gather to hear industry experts share their experiences on leadership and mentoring

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The SIT Alumni Mentoring Programme is getting back into the full swing of physical events, the latest being the Cycle 4 Mentor Get-Together on Wednesday, 22 June 2022. Alumni Mentors from Cycle 4 gathered at The Working Class restaurant and bar to catch up and network over food and drinks.

The event was also a valuable opportunity for them to meet with industry leaders. Mr Harry Wong, CEO & Co-Founder, NebulasTree, Ms Wendy Leow, Deputy Director, finexis advisory, and Mr Louis Khoo, Director, Kimly Construction were specially invited to share their expertise and experience in mentoring and leadership.

One key message of the night was the importance of communication in mentoring relationships. Mr Khoo encouraged the mentors to connect with their mentees on a "human" level, while Ms Leow spoke about how a good mentor has a good pair of listening ears and the ability to give direct feedback.



(From second from left) Mr Harry Wong, CEO & Co-Founder, NebulasTree, Ms Wendy Leow, Deputy Director, finexis advisory, and Mr Louis Khoo, Director, Kimly Construction providing their insights on questions submitted by mentors during the Q&A segment. The segment was moderated by Final Year Electrical Power Engineering student and Ngee Ann Kongsi Scholar Mr Haresh Pandian (extreme left).

Aerospace Engineering Alumnus Mr Esmond Lim shared, "Getting to hang out with the other mentors was a great way to understand their experiences with their mentees and their takeaways, lessons and frustrations." He added, "The industry speakers had great insights into leadership and mentorship, and their motivational points and thoughts were helpful too."

Ms Joanne Wang, an Accountancy graduate, enjoyed spending time with her fellow alumni. She said, "It felt like a catch-up session with my course mates at a good place with decent food."



Alumni mentors have fun socialising with food, drinks and chit-chat!