

M o m e n T U M

TUM ASIA EVENTS, HIGHLIGHTS
& ALUMNI STORIES

2020 | Edition 01

TECHNICAL
UNIVERSITY
OF MUNICH (ASIA)



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DIRECTOR'S MESSAGE



Happy New Year and warm greetings to all our readers! With the start of a new decade, we are pleased to present to you our brand new newsletter, MomenTUM, which aims to share exciting stories from our students and alumni, as well as event happenings at Technical University of Munich (TUM) Asia.

2019 was filled with many wonderful events. Back at our home campus, Prof. Wolfgang A. Herrmann handed the presidency to his successor, Prof. Thomas F. Hofmann. Here at TUM Asia, we will always be extremely thankful for Prof. Herrmann for his bold and

forward-looking ideas to pioneer a TUM campus in Singapore.

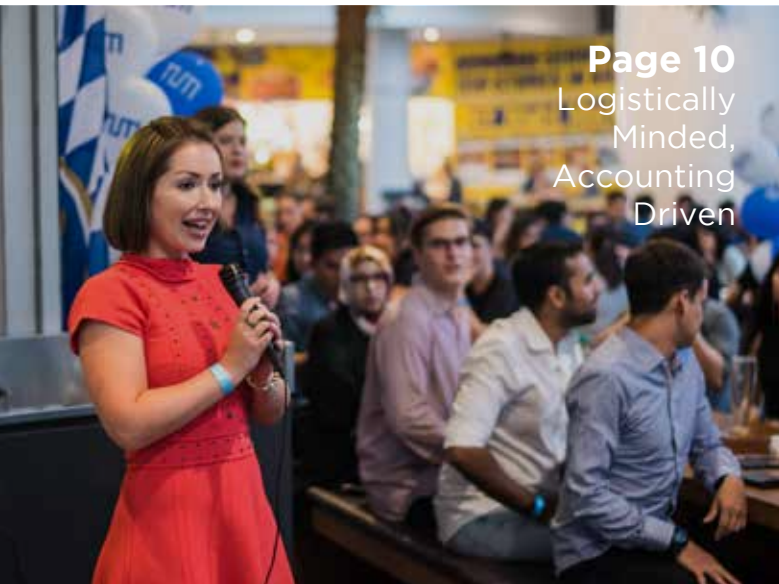
To kickstart 2020, we have gathered some insights from our alumni, professors and students. Each of them share a different perspective on their time at TUM Asia, such as how they studying or teaching at Singapore has become their second home, or how a TUM education has opened the doors for them to the world. Be sure to check out their unique experiences in this issue.

The past quarter has also been an eventful one, filled with many events. We also had the pleasure of hosting the President Emeritus of TUM, Prof. Herrmann. Read more about the recent alumni events, masterclasses, and our new Winter School session.

With this, I would like to wish all our readers a wonderful 2020!



Dr. Markus Wächter
Managing Director, TUM Asia



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2019 was an eventful year at TUM Asia with many highlights

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LEADERSHIP HANDOVER AT TUM

As the longest serving President of a German University, one of Prof. Herrmann's accomplishments would be back in 2002, where he led the way for TUM to make a bold decision - to pioneer TUM Asia and become the first German University to have an overseas branch. This bold decision paved the way for TUM's international reputation. The TUM community in Asia has been growing over the past 17 years.



▶ Prof. Thomas F. Hofmann (left) and Prof. Wolfgang A. Herrmann (second from left) at the TUM Asia Graduation Ceremony 2019 in Singapore.

After one of the most successful presidencies in German university history, Prof. Wolfgang A. Herrmann has made way for his successor Prof. Thomas F. Hofmann at the Technical University of Munich (TUM). At a ceremony, the Bavarian Minister President Dr. Markus Söder and former Stanford University President Prof. Gerhard Casper praised Herrmann as a university politician who combined a visionary outlook with the ability to get things done. Thomas F. Hofmann affirmed that TUM will continue acting as a force for technological change in the interests of society.

In his 24 years as TUM President, Prof. Wolfgang A. Herrmann implemented far-reaching reforms that turned TUM into an entrepreneurial university while leading it to the international forefront in terms of research, teaching, and technology transfer. In recognition of its strategy and achievements, TUM has been designated as a University of Excellence on three occasions. Now Germany's longest-serving university president has handed over his office to Prof. Thomas F. Hofmann, who has served for many years as the Senior Vice President for Research and Innovation at TUM.



GRADUATES RANK AMONG TOP 10 WORLDWIDE

In another interdisciplinary initiative during Herrmann's time as president, TUM freed its degree programs from the rigid links to specific subject areas and instead aligned course contents with future priorities. Today, TUM is sixth worldwide in the Global University Employability Ranking, which rate the quality of graduates. Prof. Herrmann introduced selective processes for student admissions (2000), resulting in higher degree completion rates than at other universities. At the same time, TUM has doubled the number of students within 15 years to 40,000. Foreign students now make up 30 percent of the total. The TUM School of Education (2009) became a role model for German universities as the first department to be responsible for the teaching degree programs based on empirical research in the field.

Since the millennium, Herrmann has turned TUM into one of Europe's most successful universities for promoting start-ups. TUM currently incubates more than 70 technology start-ups every year. Herrmann has boosted cooperative partnerships with research-driven companies, which increasingly include international global players, largely through his "Industry on Campus" strategy.

The outgoing president was guided by the motto "connecting home with the world". With the opening of the Singapore campus in 2002, TUM became the first German university to establish a campus abroad. Today it has liaison offices on five continents. Herrmann has initiated partnerships with the best universities, most recently with the Imperial College London (2018). At the same time he has reinforced TUM's Bavarian roots with the expansion of the Straubing campus (2001/2017) and the establishment of the TUM Science & Study Center in the historical Raitenhaslach monastery (2016).

Source: TUM.de, TUM Asia







LOGISTICALLY MINDED, ACCOUNTING DRIVEN

Having keen passions in transportation, logistics and international trade motivated Maria Emelkina to make her dream of working in the Oil and Gas industry a reality. She shares her journey from studying in the Master of Science in Transport and Logistics* programme to being a Senior Accountant in a logistics company.



MARIA EMELKINA, MASTER OF SCIENCE IN TRANSPORT & LOGISTICS*

Hi Maria, tell us what inspired you to study logistics with TUM in Singapore?

I have always had a deep interest in international aspects of transportation and logistics. With 3 years of practical knowledge and experience acquired in transportation, logistics, shipping and international trade, a Master's degree was my next step up the career ladder. The rapid economic growth in Asia was the motivating factor for me to choose a German Master's degree in Singapore, allowing me to advance into the global economy. TUM's worldwide recognition and the highly accredited Port Authority of Singapore provided a unique combination of education and location, coupled with the comprehensively structured programme. I also looked forward to modules

offered as electives, such as the Consumer Industry Supply Chain Management, Industrial Logistics and LSP Management.

What are some of your fondest memories at TUM Asia?

I really enjoyed the diversity of the classroom as I had classmates that came from Asia, Europe and South America. Studying alongside talents from all around the globe is a truly unique and enriching experience. We shared our cultures and aspirations through celebrating birthdays, cooking national dishes, traveling around ASEAN and so on. These activities built our cross-cultural business awareness and helped us to gain a global perspective.

*Known as the Master of Science in Rail, Transport and Logistics programme from the AY1920 intake.



“I really enjoyed the diversity of the classroom as I had classmates that came from Asia, Europe and South America.”

How did you adjust to working in Singapore?

I am a keen and avid learner who adapts well into new environments. My primary interests in international trade, finance, transportation and logistics motivated me to be educated and work in the commodity trading environment and finance, such as when I was offered by Google to work on a Russian project in Singapore.

Is there anything you miss about home?

It has been more than 7 amazing years living in Singapore! I feel most comfortable, most at home in this country. But of course, occasionally I do miss the snow ;)

We understand that you made a career switch to a different industry. How did that come about?

Some of my classmates recall when I shared with them my desire to work in the Oil and Gas industry. I am now living out my dream as a senior accountant for an Oil and Gas corporation, PAO Novatek. It is Russia’s second largest natural gas producer, and the seventh largest publicly traded company globally by natural gas production volume. Novatek manages its own fleet of vessels and delivers cargo globally, thus a significant amount of logistics is involved. Hence, my prior logistics experience and education is very important in my role.

How has being involved in the TUM Asia Alumni Network been for you?

I first joined as a Treasurer back in 2015. Later, I became the Vice President and recently became the President. Our brainstorming sessions, events organisation, networking and

interactions are great extracurricular activities. I feel blessed that the TUM Asia Alumni Network receives constant support from talented alumni, brilliant professors and great academic services team.

What alumni activities can we look forward to in 2020?

Our yearly plan is to organise quarterly activities for alumni to keep in touch, talk to industry experts, and receive valuable advice from professors. Activities include but are not limited to networking sessions, walkathons, industry talks, and so on. I am excited for 2020!

What advice would you give to students keen to pursue a career in Transportation, Logistics or Railway Engineering?

You are up for an exciting and rewarding career in the efficient lion city (Singapore) or in other amazing locations across the globe. Look forward to friendships and partnerships with leading industry figures. Focus on your studies, be open to new opportunities and never be afraid to pursue your passions. The TUM Asia Alumni Network is always here to support you.

MARIA EMELKINA

“My prior logistics experience and education is very important in my role”

CHEMISTRY 4.0



PROF. DR.-ING. KAI-OLAF HINRICHSEN, ◀
CHAIR OF TECHNICAL CHEMISTRY I,
TECHNICAL UNIVERSITY OF MUNICH (TUM)

Our team had the opportunity to interview Prof. Hinrichsen, who has been teaching various Chemical Engineering modules in the Bachelor and Master programmes at TUM Asia for many years. We find out what motivates him to travel for 12 hours from Germany to Singapore, while hearing his views on the updates to the Chemical Engineering undergraduate programme.

Hi Prof. Hinrichsen, what keeps you excited about coming to Singapore to teach?

Whenever I am in Singapore, it feels like coming home. Singapore is my second home and it is always a pleasure for me to teach young people with great enthusiasm. Since I have been teaching several modules in the Chemical Engineering (Undergraduate) and Industrial Chemistry programmes, I am able to witness how the students grow up over the years. It is also a joy to see them become self-independent when they live abroad during the Overseas Immersion Programme (OIP).

How did your interest in Chemistry first begin?

When I finished school, I was more interested in engineering. That was the reason why I studied chemical engineering. Later on, I became a trained process engineer and specialised in energy and process engineering. I decided to pursue my PhD in catalysis and am currently doing research at the interface of natural sciences and chemical engineering. If I had the chance to study at university again, I would still choose chemical engineering from the beginning.

What is so unique about TUM that ranks it as #6 for the second year in a row in global employability?

It is the spirit of TUM being an internationally recognised university. TUM produces quality graduates and this is attested by companies across the globe. TUM is also located in Germany's most liveable city, Munich.

PROF. DR.-ING. KAI-OLAF HINRICHSEN

“Students will be well-prepared for chemical related industries such as food, nutrition and pharmaceutical, general and speciality chemicals, petrochemical, research, and many others!”

How will updates to the Chemical Engineering undergraduate programme prepare future students for the chemical industry?

The previous Bachelor of Science programme in Chemical Engineering is a three-year programme and has a strong focus on the foundations in chemical engineering. The new programme will lead to a Bachelor of Engineering with honours. It combines more applied (hands-on) courses and with the two specialisations in Data Engineering or Additive Manufacturing, it will provide profound knowledge in future and emerging technologies. The 8-month integrated



“If I had the chance to study at university again, I would still choose Chemical Engineering from the beginning.”

work study programme (IWSP) becomes an essential part of the new programme so that the students will become easily accustomed to working in the industry.

What career prospects can students in Chemical Engineering look forward to?

Students will be well-prepared for chemical related industries such as food, nutrition and pharmaceutical, general and speciality chemicals, petrochemical, research, and many others!

What can TUM Asia alumni do to stay up-to-date with the industry trends?

TUM Asia already offers executive education courses with experts from local industry. I think that participating in such courses during one's career is the best way for our alumni to upgrade themselves and stay relevant to industry trends.



Prof. Hinrichsen teaching at TUM Asia



Students in the Bachelor class



Prof. Hinrichsen awarding a certificate to a graduating student

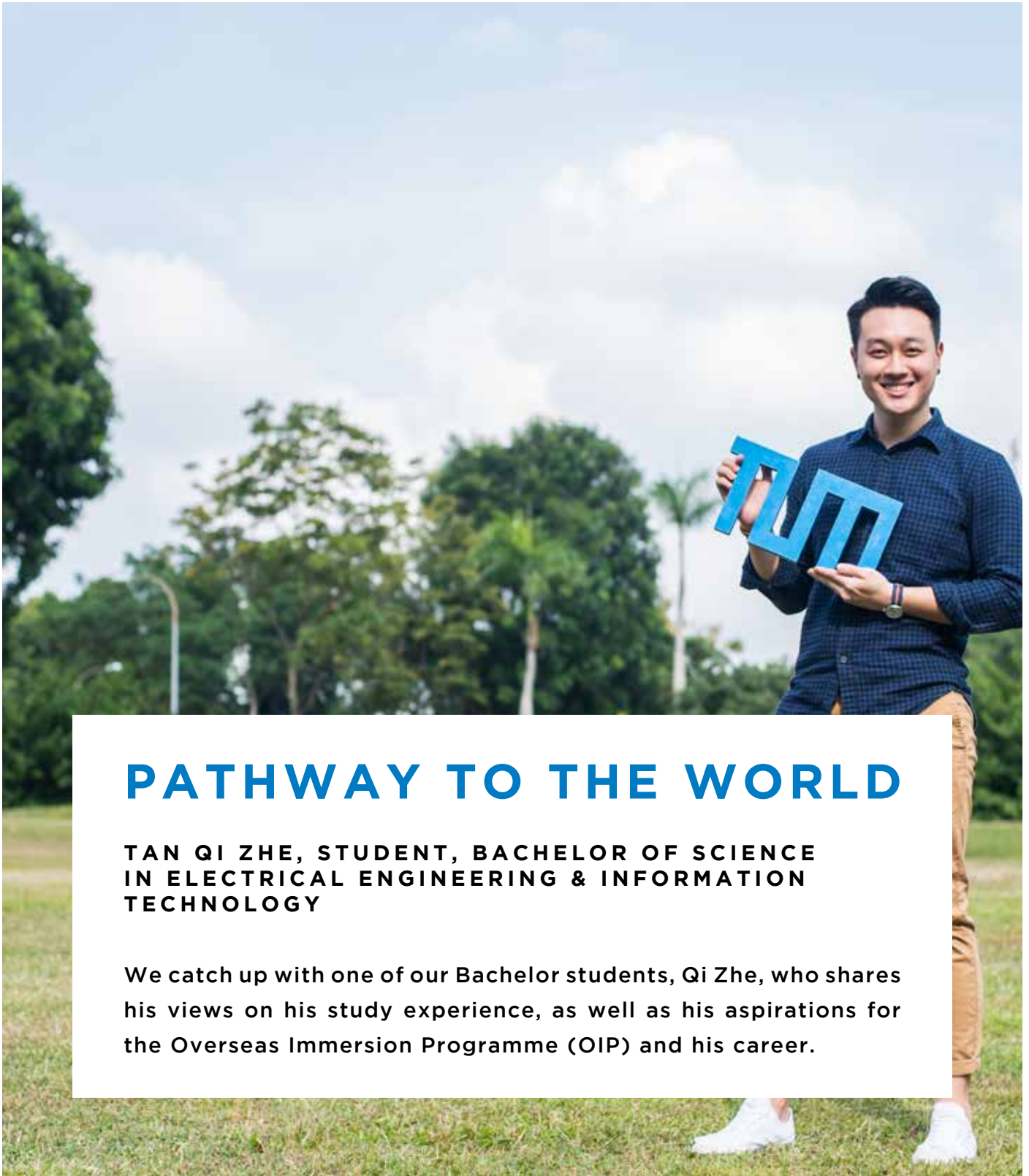
Innovation and Entrepreneurship from Germany to Singapore

On 21 November 2019, the President Emeritus of Technical University of Munich (TUM), Prof. Dr. Wolfgang A. Herrmann, was in Singapore and hosted a dinner talk which covered how TUM's strong entrepreneurial culture in Germany can be applied to the Singapore industry.

Singapore has done well in fostering entrepreneurship in certain areas. However, the country has some way to go in refining the entrepreneur environment. Prof. Herrmann shed light on how TUM has fostered a supportive environment for innovation with a market-oriented approach. Having been a pioneer in this area for over 130 years, TUM helps entrepreneurs identify the challenges of our time and develop business models for sustainable businesses.

TUM encourages young entrepreneurs to start a business based on scientific discoveries and no other university in Germany offers a comparable start-up climate. Singapore can learn from this aspect and offer more support, assistance and funding to start-ups. By supporting the innovative solutions from young entrepreneurs, the Singapore industry will be prepared with solutions that are optimised for tropical and urban settings.





PATHWAY TO THE WORLD

**TAN QI ZHE, STUDENT, BACHELOR OF SCIENCE
IN ELECTRICAL ENGINEERING & INFORMATION
TECHNOLOGY**

We catch up with one of our Bachelor students, Qi Zhe, who shares his views on his study experience, as well as his aspirations for the Overseas Immersion Programme (OIP) and his career.

What made you decide to study your undergraduate studies with TUM?

I have been studying electrical engineering since my diploma studies at Singapore Polytechnic. Thus, I knew early on that I wanted to further

my studies and attain a bachelor's degree in electrical engineering. Applying to TUM felt like the next step forward, as Germany holds a prestigious place in engineering and TUM is the best of the best - it is renowned for its strong foundation in engineering in Germany.



▶ Qi Zhe with his classmates at school

Share with us some fond memories during your Undergraduate studies.

What I will cherish most is the time we spent studying together. Most of my classmates will study together as a big group with multiple smaller groups within, which I feel is hard to come by. We always share our methods and answers, and the stronger students would teach those who do not understand the concept as well. This helps all the students as the stronger students will also gain a better understanding just by teaching the others. In a sense, I see my group as one family, with the other groups being relatives of this huge family.

How would a TUM degree contribute towards your career path?

Our professors are the top experts in our field and their insights have been a valuable asset. They promote discussions and share with us knowledge that cannot be found in our course notes which changes the way we think, and I feel that it gives us an edge above the others. My degree also opens many doors of opportunity, both local and overseas, as TUM is well-known in the engineering world.

What are you looking forward to experience at your OIP?

As I have always wanted to travel to Europe but have never been there, it is a good opportunity for me as I will be there for three months. Being independent and living without my family will definitely be a challenge but I cannot wait to go there and soak in the culture and grow as a person. As an avid football fan, it would be a dream to watch a football match at the Allianz Arena. But most of all, I hope to learn as much

as I can from my thesis professor and use this opportunity to broaden my views on electrical engineering.

Any advice for your juniors?

As with all courses in universities, I believe the most valuable skills you need is time management. As the course is pretty fast-paced, you will have to use your time wisely to prepare for your papers as well as enjoy your university life. I also believe that sharing your knowledge with your peers is the best way for you to succeed in this course as teamwork makes the dream work!

What's next for you after graduation!

I strongly believe that sustainable and renewable energy is the best way forward and hope to join a company that specialises in this. I hope to secure a full-time position before I go to Germany for my OIP. Hopefully, I will be able to achieve that!

TAN QI ZHE

“My degree also opens many doors of opportunity, both local and overseas, as TUM is well-known in the engineering world.”

FASCINATING SINGAPORE



**WEI PING-HSIU,
STUDENT,
MASTER OF
SCIENCE IN GREEN
ELECTRONICS**

▶ Wei Ping-Hsiu (middle) with his TUM Asia classmates

Having studied abroad in various countries during his education journey, we speak to Wei Ping-Hsiu (Daniel) from the Master of Science in Green Electronics programme on how he was attracted to study in Singapore.

Hello! Tell us more about yourself!

Hello! I come from Taiwan. You can also call me Daniel. I enjoy traveling and adventures. I have travelled to over 30 countries so far. Experiencing different cultures, delicacies, nationalities, religions, architecture, landscapes and scenery are in my interests as I am a firm believer that there are things you must do while you are young. No matter how silly it may seem, it is good to do such things while you can before we become restricted with jobs, family, and other responsibilities that hinder you from exploring your dreams.

You have had a variety of experiences studying abroad, tell us more about them.

I completed my Bachelor's degree in China. The initial idea of studying in university in China was to push me out of my comfort zone into a more competitive environment. Not only can you benefit from a different education system, you can also learn about their culture, spirit, personality, and others. A traditional Chinese proverb goes, "there is always something you can learn from the other". Without a doubt, I indeed learnt a lot from my 4 years in China, not only academic-wise but in terms of discovering my personality, managing my finances and relationships.

Having travelled to many countries, how did you eventually study with TUM Asia?

Initially, I was learning German and planning to pursue Masters in Germany. However, I chanced upon the TUM-NTU joint degree here in Singapore, which would be beneficial and provide more flexibility for my career. When it comes to machine and material engineering industry, Germany has always held a high international reputation and TUM emphasises highly on industry focused education. Moreover, NTU is one of the top universities in the world.

How has Singapore been like for you?

Though I have been to many countries, this is actually my first time here in Singapore. Therefore, everything is brand new and fascinating for me, not only from the academic aspect but also the culture and local cuisine. As Singapore is a melting pot of Asian cultures, there are numerous exotic elements at every corner of the street. It is genuinely appealing for a travel enthusiast like me to explore this unknown and interesting country. Aside for the humid weather all year round, everything is great!

Has there been anything that stood out so far during your studies at TUM Asia?

One thing that impressed me is the fact that the course is very practical and utility focused instead of just based on theoretical concepts. The course itself is also extremely intense since we have to absorb a large amount of knowledge in a limited time and be able to put it into practice. Under this intensity, students can improve their capabilities exponentially within a short period. It has also been a unique experience so far to meet professors and classmates from various backgrounds.

What is an area in Engineering that you hope to make an impact on in the future?

Two areas I am currently interested in are bio-nanotechnology in medical applications and nanomaterial applications in the electric car industry. As the life span of the human being has been increasing, the medical industry would play a significant role within the society. Bio-nanotechnology has a promising and infinite future. The electric car is developing in terms of green energy and sustainable resource and nanomaterials will bring breakthroughs.

What was an unexpected way that studying abroad taught you?

I do believe that exploring new things can bring new aspects to our mindsets and help us

WEI PING-HSIU (DANIEL)

“Studying abroad in multiple countries allows one to have a close observation of different company environments and local or global market opportunities.”

to view things through various perspectives. Studying abroad in multiple countries allows one to have a close observation of different company environments and local or global market opportunities. Besides, having multiple perspectives from a variety of countries also provide a wide range of flexibility when it comes to career selection since you already have experiences in all these countries.

Lastly, what do you hope to take away from your Master degree?

Academically, I would like to cultivate industry-oriented skills throughout the learning which allows me to be relatable to the modern technology trends once I graduate. Furthermore, I am keen to have a better understanding and connection with companies of the specific areas that I am interested in, which is the semiconductor and materials industry. I would also like to meet new friends and professors from both TUM and NTU from the social aspect. Since all of us may end up working in a similar industry, there is a high possibility that we could cooperate in the future.

WEI PING-HSIU (DANIEL)

“One thing that impressed me is the fact that the course is very practical and utility focused instead of just based on theoretical concepts.”

AN ADVENTURE IN MUNICH



- ▶ Students at the first day of Winter semester at TUM, Marienplatz Christmas Market

Every year, our final year TUM Asia undergraduate students look forward to the last leg of their studies, which involves them travelling to Munich, Germany. They are able to experience activities such as the first day of Winter semester at TUM, Oktoberfest, travel to various parts of Europe, and enjoy Christmas Markets.



THE IMPORTANCE OF APPLIED EDUCATION



TONY GAN, SPECIALIST DIPLOMA IN ADVANCED DIGITAL MANUFACTURING

INDUSTRY 4.0: The future worker needs to be prepared for the changes that come about with Industry 4.0; a combination of cyber-physical systems, the Internet of Things and manufacturing management. Having a keen interest to prepare himself for these trends, Tony Gan took up the Specialist Diploma in Advanced Digital Manufacturing offered by Festo Didactic and TUM Asia, supported by SkillsFuture Singapore. He shares his journey on how the programme has prepared him for the future challenges in the workforce.

Tell us more about your job responsibilities in your current job.

My name is Tony Gan. I am a Project and Equipment Engineer in Linxens. I have been in Linxens for around two years. As a Project and Equipment Engineer, I consistently provide technical support, work on project improvement planning on our equipment as well as design new fixtures or machines for our operational use.

What made you decide to take up the Specialist Diploma in Advanced Digital Manufacturing offered by TUM Asia and Festo Didactic?

I felt that what I have previously learnt in university was out of date. In order to stay ahead and adapt to the changing times and the market, I decided to invest my time with an executive education programme and be prepared with the skillset to grow the business at my organisation.

Do you have a favourite module or lecturer?

Some of my favourite modules were taught by Prof. Dr. Andre Krischke, such as the Essentials of Advanced Manufacturing Systems and Manufacturing Management. I also really enjoyed some of the hands-on project-based modules taught by Festo's trainers, such as the Advanced Manufacturing Project and Digital Manufacturing Project. Through these modules, I have learnt how to deploy the concepts and technologies of Industry 4.0.

What are potential areas that Singapore could progress through utilising Industry 4.0?

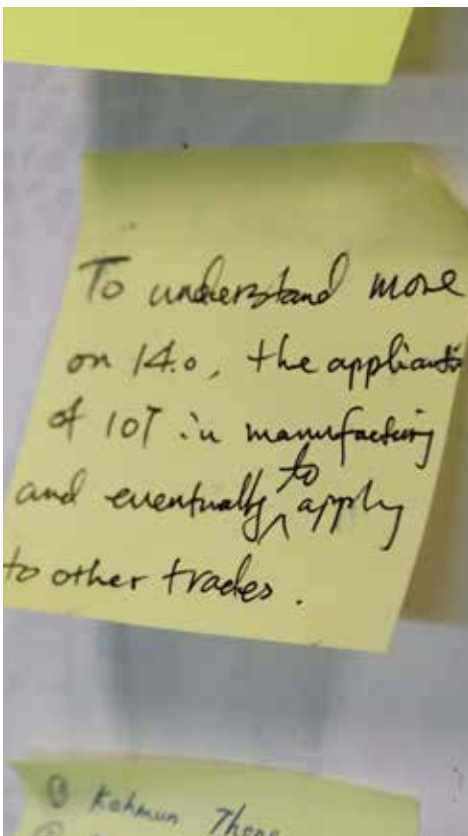
There are many areas in Singapore that can benefit from the opportunities that come about with Industry 4.0. In my opinion, I feel that Industry 4.0 is more active in the aviation, logistics, wafer fab manufacturing and public transportation sectors in Singapore. There are potential areas to implement Industry 4.0 technologies, such as in libraries, hospitals, food and beverage, and utility usage monitoring and control.

What are some challenges you and your organisation face in equipping yourselves for Industry 4.0?

Common challenges that we faced include integrating or embedding the smart device into our existing facilities and equipment. We also faced issues in reorganising the existing layout of our facilities.

How has the Specialist Diploma prepared you for the challenges ahead?

The Specialist Diploma prepared me with the background and hands-on exposure to adapt and participate in new technologies. What makes the Specialist Diploma unique is that companies have the option to implement a project at their organisation, while receiving mentorship to effectively apply their solutions.



▶ Tony with his Specialist Diploma classmates

ALUMNI INTERACTIONS



TUM Asia organised an alumni event in Singapore for its alumni to celebrate Oktoberfest on 20 September 2019. Participants enjoyed a night of German Bier, food, and celebrated Oktoberfest in style in the heart of tropical Singapore. Not only were they able to toast with fellow alumni over a light-hearted evening filled with good food, good company and fond memories, TUM alumni also took the opportunity to catch up with their TUM professors, and expand their career network with various industry partners who attended this memorable event held at Brotzeit Vivocity.

In Shanghai, an alumni event was also held, in which fellow TUM Asia alumni enjoyed a night of food and drinks with one another in the bustling city of China. Besides interacting with

fellow alumni and expanding their network of contacts, participating alumni at this event held at the InterContinental Shanghai Pudong Hotel had an enriching industrial talk and rewarding alumni sharing session, which was then followed by a well-deserved and sumptuous dinner.





SUPPORTING THE FUTURE

NEW CDTI CENTRE

The Technical University of Munich (TUM) Asia, together with Festo Singapore, the leading worldwide supplier of automation technology, inked their commitment to establish a Competence Centre for Digitalisation, Technologies and Innovation (CDTI) at the Industrial Transformation Asia Pacific (ITAP) trade show on 22 October 2019. The signing between Dr. Markus Wächter, Managing Director of TUM Asia, and Mr. Volker Schmid, Head of Asia Pacific of Festo Didactic SE, was witnessed by Mr. Lim Kok Kiang, Assistant Managing Director of Singapore's Economic Development Board, which supports this initiative. Blending academic excellence with industrial know-how, the CDTI is anticipated to ramp up the transfer of industry best practices to Singapore's manufacturing industry through its dedicated focus on continuing education and training (CET).



ENCOURAGING YOUNG TALENTS

German European School Singapore (GESS) and Technical University of Munich (TUM) Asia signed a Memorandum of Understanding (MOU) to support the future academic successes of GESS's students and further develop their interests in the Science, Technology, Engineering and Mathematic (STEM) areas with TUM Asia on 5 December 2019. The MOU was inked between Dr. Markus Wächter, Managing Director of TUM Asia, and Mr. Christof Martin, Principal at GESS, and witnessed by Mr. Knut Zuchan, Counsellor, Head of Science and Technology Department, Embassy of the Federal Republic of Germany Singapore. This partnership connects GESS students with industry experts and researchers, offering them a valuable opportunity to learn beyond the confines of the classroom.

IMPACTFUL MASTERCLASSES



INNOVATION & TECHNOLOGY MANAGEMENT MASTERCLASS

The Innovation and Technology Management Masterclass was held from 29 October to 8 November 2019, featuring 3 tracks – High-Tech R&D and Business Strategies, Innovation-Driven Business Development and Innovative Business Systems – taught by TUM professor Prof. Dr. rer. nat. Krubasik. The masterclass explored concrete examples of innovation and technology management, drawing from live company situations, featured industry guest speakers from various fields of industry, who candidly shared about their practical experiences, and included an industry site visit to the Siemens Center. Through the sessions, participants discussed and examined how organisations face and tackle innovation challenges from industry perspectives such as semiconductors, industrial electronics, automotive electronics, and LED lighting, among others.

INDUSTRY 4.0 MASTERCLASS

The Industry 4.0 Masterclass was conducted on 16 October 2019. The masterclass explored what Industry 4.0 is and how it works, making specific references to technology, policy and the business sector. Participants obtained further insight into the applications of Industry 4.0 globally and in Singapore and were encouraged to dive deeper into broader areas that piqued their interest. They also learnt about the studying profile, overseas opportunities, student life and career prospects of various programmes offered by TUM Asia, from our Bachelor and Master degree programmes to our executive education modules.



INDUSTRY 4.0 WINTER SCHOOL 2019



▶ Winter School participants posing for photos with their lecturers, participants enjoying food at Paulaner Bräuhaus

Would you like to have a taste of summer in winter? Yes, this was certainly so for the participants of TUM Asia's Winter School 2019! The TUM Asia Winter School was designed with the intention of being an experiential and enriching programme for students hailing from foreign countries. The programme embraces a mixture of academic topics amidst the rich cultural background of Singapore, while allowing participants to have a feel of TUM Asia's German roots.

During the Winter School, which was held from 1 to 10 December 2019, students were introduced to Industry 4.0 concepts, smart manufacturing and smart transport systems. Students were taught basic German, introduced to Singapore's culture and heritage, and treated to a brewery tour and traditional German lunch.

Recalling his Winter School experience, Wang Shucang was lavish in his praise: "This is my first time in Singapore, and everything is new and fascinating at the same time. In these few days, we learnt advanced industrial manufacturing technology, 3D printing, and visited the TUMCREATE laboratory. I fully experienced the history and culture of Singapore. Thank you very much to everyone who has worked to make this possible!"

150 Years
culture of
excellence

TUM Asia

TODAY'S STUDENTS, **TUM**MORROW'S ENGINEERS

Engineer the future with the Singapore campus of
Germany's #1 University*,
Technical University of Munich (TUM) Asia

**BACHELOR
OF ENGINEERING
DEGREES**

**MASTER
OF SCIENCE
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