#SUSTAINABLEIMPACT

UTP ANNUAL REVIEW 2019

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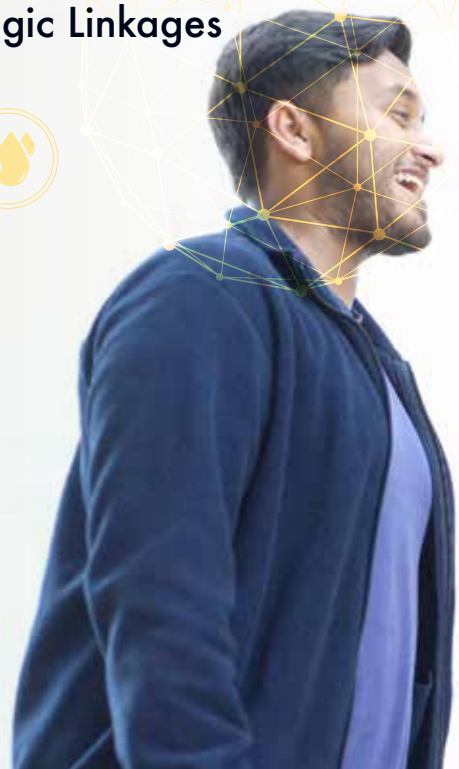


COVER RATIONALE

The UTP brand stands for strategic internationalisation and sustainable global prominence. This is what drives both student and faculty towards making a long-term impact and embracing new modalities for continuous improvement in teaching and learning.

#ENERGISING FUTURES

Universiti Teknologi PETRONAS (UTP) was established on 10 January 1997 and is a leading private university in Malaysia.

The campus is built on a 400 hectare (1,000 acres) site strategically located at Bandar Seri Iskandar, Perak Darul Ridzuan, Malaysia. The university is a wholly-owned subsidiary of PETRONAS, the national oil and gas company of Malaysia.

UTP offers a wide range of industry-relevant engineering, science and technology programmes at undergraduate and postgraduate levels. It aims to produce well-rounded graduates with excellent leadership qualities and communication abilities.

The university conducts extensive research activities in collaboration with PETRONAS and other institutions and industries, locally and abroad, on six research focus and niche areas. They are self-sustainable building, transport infrastructure, health analytics, hydrocarbon recovery, contaminant management and autonomous system.

UTP has produced more than 15,000 graduates and currently has an enrolment of over 1,200 foundation students, 6,000 undergraduates and 1,200 postgraduates from more than 60 countries around the world.

#RECRAFTING THE SCIENCE-SOCIETY LINKAGES

At Universiti Teknologi PETRONAS (UTP), we are constantly seeking opportunities to deliver the best student experience to our family of undergraduate and postgraduate students. We have done this in two ways. Firstly, we have built up our core competencies and capacity among faculty and researchers. Secondly, we have reached out to leading companies in Malaysia and abroad as well as science and academic organisations to promote new approaches to learning in the Industry 4.0 economy.

At UTP, we are serious about implementing the idea of co-creation. This calls for collaborative action among all our stakeholders and for systemic changes in the way we manage all our resources. Our Research and Innovation initiatives have sought to build Smart Communities and achieve Energy Sustainability. We plan to deliver these on the back of breakthroughs in the area of the emerging technologies. Featuring prominently are research initiatives in Nanotechnology, Artificial Intelligence, Robotics and the broad sweep of advances made in the Internet of Things. To bridge the growing disconnect between tertiary education systems and labour markets of the future we have intensified our focus on both digital and social-emotional skills. We are acutely cognisant of the probable gap between education and jobs of the future. We are therefore looking to ramp-up innovation in our learning systems, making a sharp turn away from old modalities of teaching and learning.

Dato' Raiha in a PETRONAS panel discussion on the future workforce, alongside Dr Seren Dalkiran of Millenial Leadership Lab and Arne Gast of McKinsey.

Picture courtesy from PETRONAS Facebook page

The Fourth Industrial Revolution has made it imperative that education systems adapt. The university has responded by embracing a pro-business agenda for jobs. This has been done by creating a global framework for shifting the content of learning and the mechanisms by which it is delivered to those that more closely mirror the needs of the future.

The University continues to make a strong impact and the UTP brand is gaining traction in the marketplace. 90% of our graduates are employed within six months of graduation. UTP remains the top ranking private university and second only to Universiti Malaya, Malaysia's oldest public university.


F2
F1

I believe this is a direct result of UTP's well crafted strategies that has led us towards academic leadership and research stewardship. We have also had excellent collaborative partnerships with major corporations, giving UTP an opportunity to take experiential learning to the next level. I hope we can document these mutually sustaining partnerships for future reference.

Going forward, I would like to see UTP become more successful in attracting potential industry partners interested in highly focused and long-term research. We welcome an on-campus presence of companies who are willing to innovate and invent within a university setting. At the same time students are able to come to grips with research challenges, helping them prepare for entry into the world of science, technology and business. While commercialisation of research continues to hold centre-stage, it is UTP's hope that in all that we do on and off campus we continue to ask the question "Does it contribute to science and society?".

Managing a university like UTP takes tremendous drive, imagination and energy. It is all about maintaining a fine balance. And no one does it better than Vice Chancellor Prof Ts. Dr Mohamed Ibrahim Abdul Mutalib. So I say "Thank you Prof". My grateful thanks also goes out to the Deputy Vice Chancellors, members of faculty and the management and staff of UTP.

Syabas and thank you for a job well done.

Dato' Raiha Azni Abd Rahman
Chairman

#TOWARDS SUSTAINABLE GLOBAL PROMINENCE

I am very pleased to be able to report that UTP has made solid progress with a continued focus on the goals and targets set to ensure its long-term sustainability and financial health. We have been very mindful of the need to be more agile and responsive in order to strengthen UTP's resilience and ability to adapt to the challenging higher education landscape.

EXTERNAL FACTORS POSE SIGNIFICANT CHALLENGES

Declining Interest in STEM

SPM graduates in STEM ('000)

Source: Redmarch – Malaysia Education Sector Landscape 2018

Intense Competition

Source: Redmarch – Malaysia Education Sector Landscape 2018

Reduction in Student Financial Aid

Total of sponsored students

Source: UTP's Student Support & Advocacy Unit

2019 was a turning point with university finances firmly under the spotlight during the year. We made a bold commitment to be more aggressive in managing our costs and enhancing our competitive performance. Our emphasis was very much on prudent financial management. We looked for ways to expand and diversify our revenue streams to ensure that we continue to make a meaningful and lasting impact in our drive to achieve sustainable global prominence.

During the year we prioritised three strategic focus areas: cost optimisation, improving our performance in the Asian universities' rankings and values-driven student development.

BUILDING FINANCIAL SUSTAINABILITY

We had set a target of RM150 million in cost optimisation by 2020. We achieved this by the end of the year on the back of clear realistic goals and strategic cost reduction initiatives. The inculcation of a strong cost-conscious mindset in all aspects of management of the university, remained high priority throughout the year under review. In anticipation of a decrease in student numbers, we scrutinised areas where we could cut expenditure to offset the shortfall.

UTP R2 JOURNEY IS PROGRESSSING WELL

QS Asian University Ranking

YEAR 2019	YEAR 2020
TOP 90	TOP 50

Cost Optimisation Worth RM150 Million (Project SCORE)

YEAR 2019	YEAR 2020
RM 30 MILLION	RM 150 MILLION

Successful Implementation of Student Development Strategies

YEAR 2019	YEAR 2020
42% 609 international experience	60% 871 international experience
70% 800 community outreach activites	70% 960 community outreach activites
2% 83 student enterprise	2% 114 student enterprise

We also intensified and increased our range of initiatives to boost student recruitment. In order for us to be globally recognised for educational excellence and attract the brightest and best students and faculty, there remains a need to enhance UTP's distinctiveness and competitive advantage through our value propositions.

One of these is ensuring that UTP consistently offers industry relevant programmes that produce highly marketable graduates. This is being achieved through a systematic and ongoing review of academic courses. We also explored partnerships with foreign universities that will allow us to conduct joint academic programmes to meet the demand for more overseas exposure from Malaysian students.

The year also saw UTP ramp-up sharply its marketing efforts to build our brand via strategic global connections. Our aim was to increase our international student intake and build academic, research and technology synergies. We strengthened our existing partnerships and explored new areas of collaboration with India, Philippines, Vietnam, Pakistan and Bangladesh. Schools and colleges in India offer good possibilities and potential for growth and internationalisation of UTP's programmes. We are in discussions with an Indian university to introduce a two plus two programme that will bring their students to UTP for their final two years.

UTP is leveraging on its reputation for excellent engineering programmes in countries where PETRONAS has a presence. There are many organisations keen to develop their staff and UTP is gradually building up its numbers of postgraduate students from these areas, particularly the Philippines and Vietnam.

RETHINKING REVENUE

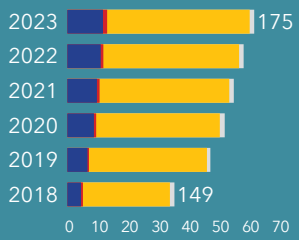
In the quest to take UTP to a better level of sustainability, it was clear that we also needed to expand our sources of revenue. In the past 22 years, we have been heavily dependent on student fees and PETRONAS support. The erosion of traditional financial support required new thinking and innovative strategies.

One of the areas of opportunity identified is our research strength. Now that we have built up our credentials and a solid track record as a leading research-intensive university, we are in a strong position to leverage this capability to bid for consultancy and contract research projects to meet industry needs. This will give us more flexibility in terms of how the revenue is ploughed back into supporting university operations.

We are also looking at commercialising the knowledge and expertise generated from UTP's R&I activities through targeted training courses. Our Centre for Advanced and Professional Education (CAPE) in Kuala Lumpur has been running several training modules. The focus will now be on expanding these and enhancing the system to enable us to offer online courses that will give us a wider reach and improved revenue.

RESEARCH OUTPUT & EXPERTISE MONETISATION MUST IMPROVE

Revenue Projection in RM million



RM **1.79** & RM **1.14** million By 2023, training & commercialisation

Although the move to market online training courses began earlier, further investment will be needed to enhance the system and expand the number of courses offered. The plan is to build up to a range of delivery options, giving the university greater leverage and flexibility in preparation for the future. This will enrich the interaction between faculty and undergraduates and stretch their capabilities.

It will also allow UTP to tap into the working community that requires part-time degree or training courses. Last year CAPE was recognised as a regional educational centre, enabling it to enhance revenue from online distance learning programmes.

TOWARDS TOP 50 RANKING IN ASIA

Despite the demands of an increasingly competitive higher education sector, UTP enhanced its performance and broke through into the Top 100 in the Times Higher Education (THE) Asia University rankings, making it second overall and first among private universities in Malaysia. This was indeed a significant achievement and I must acknowledge the hard work, support and commitment of the entire UTP community as well as all our stakeholders. We will continue to work hard at improving our performance. Our goal is now to break into the Top 50 by 2020.

UTP also climbed 17 places into 60th position in the 2019 THE Emerging Economies University rankings, making it one of the top private universities in Malaysia and the best performing in terms of research. This reinforces our commitment to academic and research excellence in our drive to become an internationally recognised partner of choice for industry and the scientific community by 2025.

We see these achievements as critical to attracting high performing students and faculty from all over the world to UTP. They also enable us to benchmark the university against the best in the world and measure the effectiveness of our efforts for continuous improvement in our teaching and learning, research, student development and operational efficiency.

ENSURING PERSONAL AND PROFESSIONAL SUCCESS

During the year we strengthened UTP's student-centred environment in line with our objective to provide more holistic student experiences and opportunities for their professional and personal growth. As part of our commitment to ensure a distinctive learning experience, curricular and extracurricular activities have been designed to empower our students to achieve all-round excellence.

We encourage the cultivation of core values that are highly sought after by both industry and the community, values such as collegiality, adaptability, accountability, integrity, and respect. We also challenge them to broaden their international outlook alongside the development of workplace relevant knowledge and skills, positive leadership qualities and an entrepreneurial spirit.

It has been decided that by 2020, all undergraduates will stay on campus. In addition to giving them easy access to all university facilities, this will create more interaction and a greater sense of involvement and a stronger UTP community spirit. We have begun the process of improving existing amenities and building new facilities, in particular a well-equipped student centre. At the same time, we are looking at managing these in a way that they can be financially self-sustaining in the longer term.

Student mobility programmes were intensified to heighten international exposure for our undergraduates. Around 650 students were sent overseas in 2019 for periods ranging from two weeks to 12 or more months. The year also saw over 600 students coming to UTP under the internship programme.

Underpinning this was our emphasis on sustainability. The internship programmes saw strong support from industry which helped minimise expenditure for both UTP and the students. This translated to an overall growth in the number of internships without any expansion in our budget allocations.

We have taken the same approach to our social responsibility initiatives. UTP is deeply committed to community engagement; both staff and students make important contributions to the less fortunate in society both locally and overseas. A significant aspect of this is exciting and hands-on activities to enthuse talented young people about STEM education. In 2019, nearly 2,000 students participated in this programme.

In order to sustain our outreach efforts and as part of our employability strategy, we work closely with companies to design and deliver their social responsibility programmes through our students.

The internship programmes saw strong support from industry which helped minimise expenditure for both UTP and the students.

ALL ON BOARD

I look forward to engaging closely with UTP's hard-working, vibrant and dedicated community of staff, students and alumni. They are the heart of our success as a top performing private university. Although we faced a challenging year, we are proud of our many achievements and milestones.

Our commitment to financial sustainability and rigorous fiscal management to ensure that we are fully equipped to deliver the highest quality academic and support services, remains at the centre of our new strategy. The success of our plans to ensure sustainable global prominence for UTP requires the buy-in, support and dedication of the whole university community.

As we go forward, it is critical for everyone at all levels to understand what is at stake and why they need to develop a values-driven and cost-conscious mindset. We have built management capability through training and experience. We are now sharing our aspirations and their importance through close interface sessions and candid, frank discussion.

I am confident that UTP is in a strong position to weather the challenges ahead and take advantage of the opportunities that come our way. We will continue to work hard towards improving teaching and research excellence to transform lives and demonstrate UTP's positive impact on society, locally and globally.

Professor Ts. Dr Mohamed Ibrahim Abdul Mutalib
Vice Chancellor

UTP VICE CHANCELLOR APPOINTED AS HAINAN UNIVERSITY INTERNATIONAL ADVISORY BOARD MEMBER

Hainan University (HU) appointed UTP's Vice Chancellor, Professor Dr Mohamed Ibrahim Abdul Mutalib to its International Advisory Board (IAB) in March 2019.

The IAB advises the HU Management on innovation in scientific research, entrepreneurship, talent development, social service and cultural heritage.

The members of the Board, chaired by Professor Dr Feng Da Hsuan, are internationally respected academics and researchers with broad international experience representing diverse research areas, educational fields of education and global regions.

In conjunction with the Board's meeting in Hainan, Professor Mohamed Ibrahim had the opportunity to deliver a presentation on UTP and "Building Strategic Collaboration Between University and Industry." Hainan University is a research-intensive university and China's southernmost member of the national 211 project. It runs three campuses at Hainan, Chengxi, and Danzhou.

UTP CO-HOSTS APAIE 2019

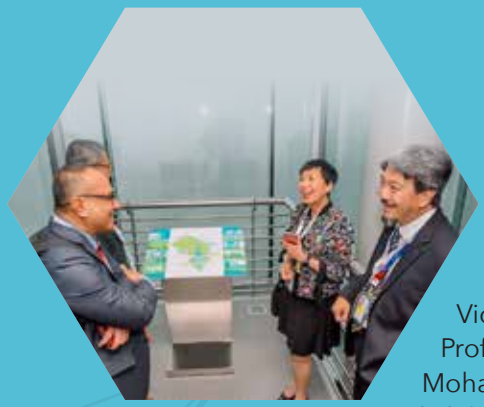
Universiti Teknologi PETRONAS (UTP) co-hosted the 14th Asia-Pacific Association for International Education Conference & Exhibition 2019 (APAIE) held in Kuala Lumpur from 25 to 29 March 2019.

With the theme 'Diversity and Inclusivity of Higher Education in the Asia Pacific', the conference attracted about 2,500 international education policymakers, practitioners and experts from across the globe.

In her keynote speech, Raja Zarith Sofiah Sultan Idris Shah, the Permaisuri of Johor and Chancellor of UTM, called for greater efforts to improve diversity and inclusivity in higher education.

Other universities who co-hosted the conference were lead host for 2019; Universiti Teknologi Malaysia (UTM), Universiti Sains Malaysia (USM), Universiti Kebangsaan Malaysia (UKM), Universiti Malaya (UM), Management and Science University (MSU) and Universiti Tenaga Nasional (UNITEN).

APAIE is the biggest annual conference for international education in the region. It debuted in 2006 with 400 delegates. It aims to encourage greater cooperation between institutions, enrich and support international programmes, activities and exchanges, and promote the value of international education across the region and beyond.



Vice Chancellor Professor Dr Mohamed Ibrahim Abdul Mutalib said that APAIE 2019 opened the door to networking and collaboration in critical areas of academic, research and student mobility programmes. This would increase UTP's visibility as a leading and preferred higher education provider in the region and around the world.

Professor Dr Mohamed Ibrahim took part in the APAIE 2019 Presidents' Roundtable to deliberate on the role of higher education in nation building from a wide range of standpoints, including but not limited to the effects on higher education traditions, practices and policies, short and long-term impacts to the ASEAN region and strategies that make partnerships work.

EXPLORING THE BENEFITS OF STEM

Local Perak communities and schoolchildren discovered how exciting and interesting science education can be at a special carnival organised by the UTP Science, Technology, Engineering and Mathematics (STEM) Exploration Centre in collaboration with Yayasan Pendidikan Kampar (YPK). STEM Waves Perak immersed the children and the public in a learning experience that challenged them to use their creativity and critical thinking skills and explore engaging subjects such as Industry 4.0 issues. The event was officiated by Perak Menteri Besar, YAB Dato' Seri Ahmad Faizal bin Dato' Azumu,

"STEM education plays a vital role as the catalyst to meet the challenges and demands of the present and future economy. We must therefore prepare students with the skills to meet the science and technology challenges and ensure that Malaysia has sufficient number of qualified graduates,"

said UTP Vice Chancellor Professor Dr Mohamed Ibrahim Abdul Mutalib.
Datin Normah Hanum Dato' Ibrahim, Chairman of Yayasan Pendidikan Perak said the smart partnership with UTP enabled YPK to expand its efforts to strengthen areas of academia and embed STEM education into the learning culture.

UTP has been actively promoting STEM to school students in Perak through various outreach activities such as STEM talks, campus visits, camps and competitions.


TOK
ABA

UTP LAUNCHES ITS STEM EXPLORATION CENTRE

The Energy, Science, Technology, Environment and Climate Change (MESTECC) Minister Yeo Bee Yin officially opened the UTP Science, Technology, Engineering and Mathematics (STEM) Exploration Centre in September 2019.

The UTP STEM Exploration Centre reflects the university's commitment to ensuring that the future generation is armed with future-proof STEM skills to meet the challenges of the Fourth Industrial Revolution. UTP is determined to play an active role in establishing a science and innovation driven society.

The Centre, a social responsibility initiative, was developed with help from MESTECC Social Innovation Fund, Malaysia Digital Economy Corporation (MDEC) and SIRIM Measurements Sdn Bhd.

YB Yeo also presented prizes to the winners of the CCM STEM Up x UTP competition for primary and secondary school students. The event is organised by UTP in collaboration with Chemical Company of Malaysia Bhd (CCM), to create STEM awareness among school children.

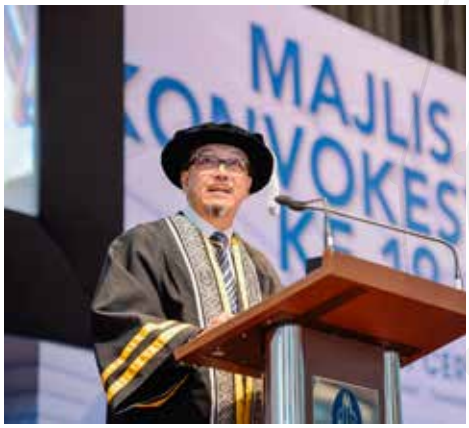
ENGAGING WITH THE PRESIDENT

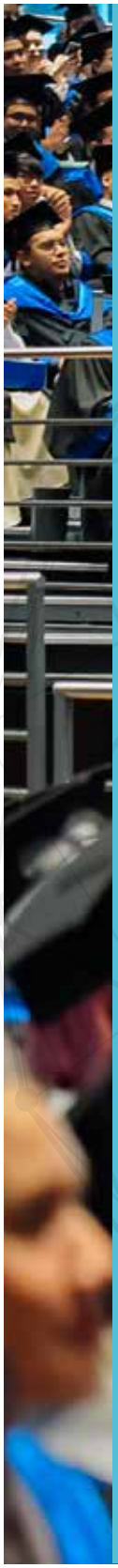
PETRONAS President and Group Chief Executive Officer, Tan Sri Wan Zulkiflee Wan Ariffin, commended UTP for producing highly employable graduates who are contributing their knowledge and skills across diverse industries in Malaysia and overseas.

During an engagement session during UTP's Academia Day celebrations in October 2019, Tan Sri Wan Zulkiflee also shared his aspirations and hopes for UTP's future strategies and objectives.

He presented Focused Recognition awards to five departments/divisions and their team members for their outstanding achievements in line with embracing and nurturing PETRONAS's cultural beliefs.

The Academia Day was initiated and organised by the Education Ministry. Launched on 5 October, the event was held to honour and recognise lecturers and staff from both public and private higher learning institutions in the country.





UTP'S 19TH CONVOCATION CEREMONY

UTP's 19th convocation ceremony saw 1,711 graduates receiving their scrolls from Pro Chancellor Datuk Ahmad Nizam Salleh.

Among these were 115 PhD and 143 Master's degree graduates. The 227 international graduates were from 28 countries including Brunei, Iraq, Yemen, Uzbekistan, Sudan, Egypt and Ukraine.

UTP has produced 19,013 graduates since its first convocation in 2001.

At this year's convocation, Information Technology graduate Aliya Najiha Amir was awarded the Chancellor's Gold Award; Civil Engineering graduate Looi Chee Kean and Chemical Engineering graduate Ho Syhui received the silver and bronze awards respectively.

Abdallah Abdelmoniem Abdallah Mohammed, a Chemical Engineering graduate was named the Best International Undergraduate Student, while Yiin Chung Long, a Chemical Engineering doctorate graduate, received the Best Postgraduate Student award.

#AN UNPARALLELED ACADEMIC ENVIRONMENT

UTP prides itself on not just offering a range of courses but aims to delight with multiple choices of academic pathways. Our courses carry a deep insight into the needs of our target groups. UTP's academic curriculum has been designed with a consistent dedication to achieving excellence across a wide spectrum of academic and work-life environments.

2019 saw Universiti Teknologi PETRONAS take stock of the impact of globalisation and rapid advancements in technology on tertiary education. The university realised that the world of work was being rapidly transformed. Our academic programmes therefore took into account the realities that our graduating students would face. During the year, we reviewed our academic programmes to create a more inclusive and cohesive curriculum.

SPOILT FOR CHOICE

In 2019, we offered 50 diverse programmes. This comprised one foundation course, 14 Bachelor's degree courses and 35 postgraduate programmes. These were designed to address the needs of the industry. Three new undergraduate programmes were introduced at degree level: the Bachelor's degree in Materials Engineering, Bachelor in Computer Science and Bachelor of Business Management. At postgraduate level, a Masters of Science in Corrosion Engineering and a Masters of Science in Industrial Environmental Engineering

UTP continued to take a strategic look at creating holistic, entrepreneurial and balanced graduates who would remain lifelong learners. The emphasis was to achieve financial sustainability and develop innovative educational ecosystems that would assure us sustainable global prominence.

In 2019, we also put in place systems that would give us greater capacity for Globalised Online Learning. Working in synergy with industry as well as our other stakeholders, we are confident that we will be able to make UTP's students outstanding graduates that are future ready.

ACADEMICALLY NIMBLE

Given UTP's academic emphasis on constantly broadening the knowledge platform across all courses, we hope our graduates remain lifelong learners, staying current in all fields, while paying special attention to the new and emerging technologies. As Deputy Vice Chancellor Academic, I have also looked at how we could broaden our programme offerings to secure financial sustainability in challenging times.

I do believe we have to constantly strive towards remaining academically nimble. We therefore deployed strategies to increase the accessibility to our existing Masters by Coursework programmes. And we are already attracting industry practitioners both at home and abroad.

Open Distance Learning (ODL) options widened UTP's appeal in 2019 and were available for the following programmes; Masters of Science in Electronic Systems Engineering and Masters of Business Administration in Energy Management. Our Masters of Science in Offshore Engineering will be launched in our 2020 financial year.

In the pipeline, are three other interesting postgraduate programmes; the Masters of Science in Asset Management and Maintenance, the Masters of Science in Petroleum Geoscience and the Masters of Science in Process Integration. Still on the drafting board are two more Masters programmes: Masters of Science in Process Safety and the Masters of Science in Petroleum Engineering.

MAKING LEARNING EXPONENTIALLY BETTER

During the year, we took steps to implement continuous enhancements in our teaching and learning approaches to remain relevant and to cater to the needs of the new generation. Featuring prominently, is our provision of student-centred learning via UTP's Centre of Excellence for Teaching and Learning (CETaL).

Flipped learning, an innovative approach to drive student learning and development proved to be successful. We found students to be creatively engaged within an interactive, dynamic and enriching learning environment. The efficacy of our online distance learning was also made significantly better with ULearn for undergraduates and ULearnX for postgraduates.


Acknowledgement


OOM 2

During the year, we continued offering our graduates opportunities to pursue their Masters either full time or part time. Only 12% of graduates chose to pursue their Masters programme by research. To encourage greater engagement, we also began offering Masters through Coursework via ODL. 2019 saw UTP continuing to collaborate with industry to encourage graduates in the workplace to enrol into our postgraduate programmes. We had a high response rate from corporations such as PETRONAS, Schlumberger, MDec and MIMOS Berhad.

It is significant to report that 2019 saw the Centre for Advanced and Professional Education (CAPE) strengthen as a regional entity that supports the delivery and assessment of ODL programmes.

In today's fast evolving and competitive environment, UTP continues to distinguish itself for its academic excellence. This has happened because we have responded strategically to the needs of industry and community in four ways; close stakeholder engagement, employing a range of delivery modes for academic courses and our increasingly digitised platform for teaching and learning and a close scrutiny and review of our curriculum.

Professor Dr Hilmi Mukhtar
Deputy Vice Chancellor, Academic

MOVING TOWARDS SUSTAINABILITY

At its 2019 meeting, UTP's Academic Advisory Council (AAC) provided expert insights into the opportunities, challenges and strategies for sustained prominence in terms of academic research, educational excellence and financial resilience.

The meeting was chaired by the Chairman of the University's Board of Directors, YBhg Dato' Raiha Azni Abdul Rahman.

Prior to the meeting, the AAC members had engagement sessions with university staff and researchers and visited several facilities including the Centre for Excellence in Teaching and Learning (CETaL) and the R&D Buildings.

The council provides guidance and strategic direction towards meeting UTP's aspirations for becoming a sustainable globally prominent university. Its members comprise eminent scholars and industry experts. It has been meeting annually since its establishment in 2003.

ON UTP'S CENTRE OF EXCELLENCE FOR TEACHING AND LEARNING (CETaL)

CETaL IMPACT REPORT 2019

CENTRE FOR EXCELLENCE IN TEACHING AND LEARNING

CAPICITY BUILDING AND CAPABILITY DEVELOPMENT

338 STAFF TRAINED | **93%**

18 T&L training in the area of Student Centred Learning (SCL) Technology Enhanced Learning (TEL) Blended Learning (BL) and educational and action research conducted out of 27 total training sessions conducted by CETaL

CHANGE AGENTS

29 Active Learning
15 Cooperative Learning
9 Scholarship of T&L
5 Flipped Learning
4 U-Learn

73.3% lecturers implementing at least one SCL approach for T&L

67.04% lecturers implementing online tools for T&L

45 Community of Practice (CoPs) conducted

14 Peer Observation Completion Certificates

39 projects for T&L of academic modules developed and delivered via usage of AR/VR/Video Recording capabilities. 30 non-academic projects delivered.

- Peer Observation Initiative Launched
- Blended Learning Toolkit Launched
- ULearn DIY Module Launched

ACCELERATION OF RESEARCH AND DEVELOPMENT IN TEACHING & LEARNING

6 Top Down SoTL Grants
5 Bottom Up SoTL Grants

RM350K in funding

1 Learning Analytics Study
Per Academic Department

1 T&L With UTP Press
Envisioning Teaching and Learning in Hights Education

1 e-proceedings of T&L Innovation Festival with UTP Press

1 T&L based Q1 Journal Citation with Review (JCR) paper

2 T&L based Q2 Scopus papers

5 T&L based Book Chapters

TEACHING AND LEARNING COMPETITIONS

36 EXTERNAL **45** INTERNAL

IDE4TE X ELITE 2019

5 GOLD **2** SILVER **1** BEST AWARD

INTERNATIONAL UNIVERSITY CARNIVAL ON E-LEARNING (IUCEL)

1 SILVER

TEACHING & LEARNING INNOVATION FESTIVAL 2019

6 GOLD **18** SILVER **23** BRONZE

IDEAL19

2 GOLD **1** SILVER

IMPACT BEYOND THE CAMPUS

T&L RELATED NETWORKING AND LINKAGES

23 NATIONAL LEVEL **6** INTERNATIONAL LEVEL

3 EVENTS ORGANISED

TFIL 2019 – Oct 2019
Co-Organisers of IDE4TE x ELITE GLUEd 2019 – Oct 2019 GLUEd Colloquium – Dec 2019

NATIONAL LEVEL

PROCESS IMPROVEMENTS

E BOOKING
for requests to use AR/VR/ Video Recording facilities

SoTL
grant utilisation migrated to RMS from manual appication

PURCHASE MIGRATION
via i-purchase requrisition in Research Management System (RMS)

LAUNCH
of Virtual CoPs

UTP LAUNCHES OPTICAL TOPOGRAPHY TECHNOLOGY COLLOQUIUM

More than 70 participants from the healthcare industry, as well as local and international academic institutions met at an Inaugural Open Colloquium to share information on the work being done in Optical Topography technology and collaborative research on applied brain science in March 2019.

The Colloquium was organised by UTP Centre for Intelligent Signal and Imaging Research (CISIR) at its campus in Seri Iskandar, Perak. The event strengthened CISIR's position as the country's Higher Institution Centre of Excellence on Neuro Imaging for Biomedical Image Analysis.

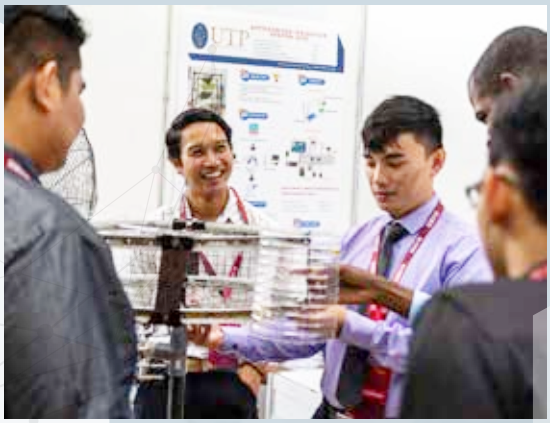
Optical topography or functional near-infrared spectroscopy (OT/fNIRS) is a functional brain imaging technique that enables non-invasive measurement of brain activity. CISIR first introduced optical topography technology to Malaysia in 2014 in partnership with Hitachi Ltd. (Japan).

An OT-HUB was subsequently established by CISIR, UTP (Malaysia) and Hitachi (Japan) on 13 February 2017.

SPARKING INNOVATION

The 2019 Science and Engineering Design Exhibition (SEDEX) drew participation from 470 students, with 159 entries in four categories.

The exhibition is organised annually by UTP to promote interest in STEM subjects among schoolchildren, encourage creativity and innovation and increase awareness of the university's excellent learning ecosystem.
It is also an effective platform for participants to showcase their presentation and communication skills as part of UTP's efforts to produce well-rounded graduates.



#RESEARCH FOR SOLUTIONS IN SOCIETY

In 2019, Universiti Teknologi PETRONAS continued to build on its strong research foundations. Our staff and students worked with integrity and diligence to convert research into solutions. I am happy to report that we kept on track towards becoming a world-class research university.

We maintained a steady focus on our key priority areas aimed at establishing a viable and indeed enviable research ecosystem. At the same time, we successfully built symbiotic relationships with local and international strategic partners from select institutions as well as from industry. UTP's innovative research garnered attention for its characteristic commitment to excellence and passion for discovery.

CREATING AN ENVIABLE RESEARCH ECOSYSTEM

We brought together the synergies derived from faculty and staff to move the university towards achieving sustainability and global prominence. 2019 saw us intensify our work at making our business model much more mature and entrepreneurial. This meant looking at ways and means to transfer research findings and knowledge generated by UTP to the business sector. We actively engaged with corporations and other entities in meaningful research and collaborative ventures.

During the year, all our activities were directed towards nurturing creativity and innovation that I believe, helped further expand the frontiers of technology and education through research. We successfully achieved research and financial sustainability through a strategic focus on five key differentiators.

1. Business Maturity

Our six institutes, Technology Transfer Office (TTO) and the Research Management Centre (RMC) engaged in aggressive business development enabling their transformation into profit centres that were entrepreneurial in approach.

2019 BREAKTHROUGHS

- *UTP participated in a collaboration that developed a digital solution for structure health monitoring. Advance Diagnostic and Prognostic Technology (ADaPT) predicts mechanical damage at various facilities to prevent unplanned plant shutdown d revenue loss. The collaboration involved Group Technical Solutions, PETRONAS Chemicals MTBE Sdn Bhd and UTP.*
- *UTP's solar desalination research project is being considered for commercialisation in the Philippines.*

2. Engagement with National Oil Companies (NOCs)

UTP became a growing presence in the Asian and Gulf Corporation Council (GCC) regions. It is expected that further engagement with NOCs in these regions will become a major driver of growth for UTP in 2020. Income derived from research collaboration and services enabled UTP to expand its presence. Generally, about 40 percent of our research activities are Oil and Gas based.

3. Partnering with Industry

In 2019, we continued to partner with companies and corporations through direct industry engagement. This happened through various technology forums, product pitching, working committees and commercialisation endeavours.

4. Beyond BRICS

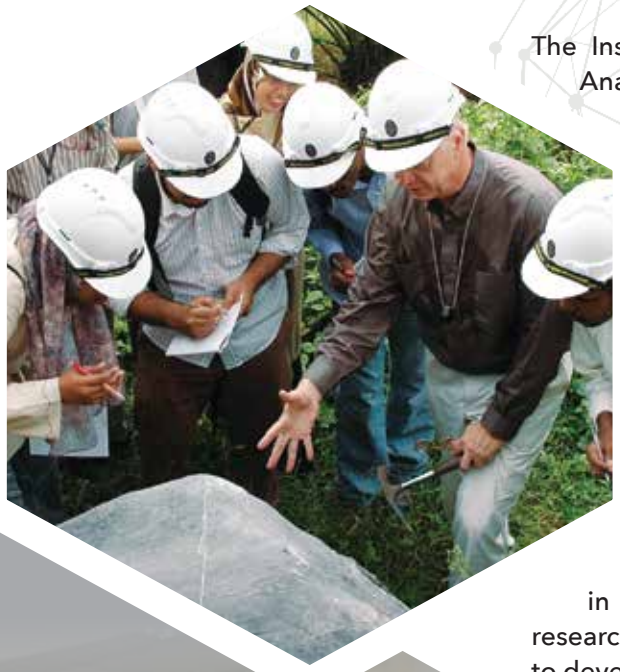
2019 saw the "birth" of four major initiatives which expanded UTP's reach across the Asian Region. This created business and research opportunities in a major paradigm shift. We began aggressive commercialisation of our research across all areas of specialisation. The aim is to link our research ecosystem and IP sharing with other third party entities. As part of UTP's business development efforts, we engaged actively with countries that showed the potential to move our products. In the coming year, we aim to use our TTO to put ourselves on a firm international platform.

We have leveraged on the upward trend of STEM in countries such as Indonesia, Philippines, Thailand, Vietnam, Turkey and Mexico. We have in hand at least four beyond BRICS (Brazil, Russia, India, China and South Africa) economies which whom we are working closely. We hope to be able to report greater net value creation in 2020 and 2021 as it takes our country Project Managers two years to fully address all fundamental issues and create "game-changer" collaborations.

5. Immersion in PETRONAS

2019 saw UTP step up its engagement with PETRONAS in various ways. Research Consultancy Services and Contract research projects resulted in at least a 5 percent growth of our research income from PETRONAS Year-to-Year (YTY).

Our credentials and track record as a leading research-intensive university enabled us to undertake contract research to meet industry needs. Revenues earned could be used to augment budgets for UTP's operations in line with the university's financial optimisation efforts.



The Institute of Self -Sustainable Building, Institute of Health and Analytics for Personalised Care, Institute of Autonomous Systems for Autonomous Facilities, Institute of Contaminant Management for Oil and Gas and the Institute of Hydrocarbon Recovery for Enhanced Oil Recovery are primarily focused on serving the Oil & Gas industry.

They support PETRONAS's core business and the nation's development. In the year under review both TTO and RMC ensured they remained heavily invested in supporting research and innovation activities through the protection of intellectual capital and the sourcing and management of research grants and funds.

Going forward, we will continue to recruit international and local experts to join the university so that they too engage in promoting and facilitating a multi-disciplinary approach to research. Given our track record, I am confident, that we will continue to develop innovative solutions to meet the challenges facing UTP.

RELEVANT MARKET-CENTRED RESEARCH

We have been pragmatic in building action-oriented solutions that have taken us out of our comfort zone and into the world of business. We developed strategic research partnerships with leading companies, government organisations and research groups globally. I am confident that our collaborative research efforts will bear fruit and impact positively on UTP's bottom line.

Exciting, market-driven research will also draw in students who look to transition from their graduate and postgraduate degrees into careers that make them commercially valuable. Throughout the year, UTP initiated leading research across the full spectrum of research clusters. In 2019, we took deliberate steps to ensure that our research endeavours remained viable. We took into account the Sustainable Development Goals, especially SDG 17. By taking both an institutional as well as a capacity – building approach we managed to encourage our researchers to pursue creative and innovative research, guided by our governance policies and six institutes focussed on achieving sustainability. There was a noticeably larger proportion of young researchers in 2019 as compared to the previous year. It was heartening to see that our efforts to inspire young researchers proved successful.

RESEARCH HUB OF EXCELLENCE

UTP's research hub offers opportunities to improve levels of scholarship, performance and output. Developed by the Knowledge Management Unit, Information Resource Centre, the hub connects various reference sources.

Researchers have access to books, reviews, articles, journals and expert information. Also made available are opportunities for collaborative research.

Metadata from the university research institutes are published and hyperlinked from the original sources. During the year, the research hub proved extremely useful to both students and faculty particularly in terms of access to databases and journals from the web. I think the main highlight of the research hub is Research Discovery which connects multiple sites, providing access to university databases (connectors) all over the world.

Many opportunities to access research grants, research attachments and exposure to visiting lecturers who are at the top of their game were made possible during the year. Research and Innovation based activities were also created for undergraduates to give them intense learning experiences. Understudying mentors engaged in consultancies helped students understand challenges faced by industry on an everyday basis. Professional training, attendances at conference and forums gave them a greater breadth of perspective and insight. Any undergraduate showing an aptitude for research and critical thinking was actively encouraged and given ample exposure to mould and hone their research skills. During the year, I personally mentored a number of young researchers and connected them to opportunities which gave them real-life industry experience. I believe creating many industry touchpoints and helping undergraduates and postgraduates to network more widely will prepare them for the workplace of the future.

TYPE	NUMBER OF PROJECT
International	164
National	494
Private	90
Private Cr	20
University	159
GRAND TOTAL	**927**

POWER OF KNOWLEDGE

How do we protect cutting-edge knowledge which should remain the Intellectual Property of UTP? During the year, the Commercialisation Unit coordinated and managed all matters pertaining to intellectual property and commercialisation of invention and research output.

This Unit continued to engage in evaluating research projects from various sources such as students research projects. They also made recommendations for participation in exhibitions.

During the year, they identified 927 projects which had the potential for research and commercialisation. Liaison work with relevant authorities for IP applications picked up pace in 2019 due to the widening spectrum of research undertaken. This Unit was also accountable for coordinating, negotiating, managing and maintaining any agreement between the University and its business partners.

IN SYNC WITH NATIONAL ASPIRATIONS

UTP's research and commercialisation initiatives at national level spotlighted 4 main areas:

- **Closing the Socioeconomic Gap**

Improving the socioeconomic conditions of vulnerable communities by using research approaches to identify projects that would address issues of equity and inequalities.

Creating job opportunities and increasing household income among the orang asli communities in Pos Yum and Pos Legap saw UTP engaging the community in tourism projects such as white water rafting. Community-based agricultural initiatives such as the planting of passion fruit (*markisa*), figs (*buah tin*) and betel leaf (*sireh*) as well as rearing of fish (*projek ikan sangkar*) also helped build up the community .

- **Environmental Conservation**

UTP employed its expertise to help local communities improve themselves in ways that offered a greater capacity to improve their income and at the same time take steps to conserve the environment by leveraging on the natural resources available.

UTP engaged with local communities for ecotourist projects. The mangrove restoration project at Tanjong Kepah was one such effort. Chicken farming proved lucrative for the local population of Manjung. But fly infestation became a major problem. UTP undertook the Integrated Treatment of Chicken Manure to address this challenge. Communities also benefitted from water production using solar stills on islands. Small communities also benefitted from UTP's Integrated Domestic Waste project.

• Digitalisation

IR 4.0 will require a transformation and modernisation of the operations in the services and manufacturing sectors. We will need smarter products, smarter supply chains and smarter processes. In 2019, UTP worked in partnership with PETRONAS to transform certain parts of their operation. This saw the employment of machine learning, artificial intelligence and big data analytics. All of these impacted positively on their overall productivity. Plans are in the pipeline to forge relationships with other industries to replicate and customise solutions for them.

• Competency Development

Through its Centre for Advanced and Professional Education (CAPE), UTP continues to offer professional and customised courses to industry to address specific skill requirement in both the Malaysian and regional market. During the year, four regional initiatives saw UTP customising technological solutions for its regional partners. In the Philippines, UTP collaborated with their regional Department of Science and Technology to install solar stills for water production. UTP also designed commercialisation strategies for its university partners in other countries. This involved capacity building and technology transfer across several countries taking them to different levels of readiness.

I believe what the academic year 2019 demonstrated was that while theoretical, academic research improves student learning, UTP's immersion in the corporate and public sector via members of faculty who worked with industry, either as consultants or in research partnerships, also contributes to improving student learning. Industry assesses the efficacy of research differently from academic journals. Companies and businesses measure success primarily as a return on investment. Therefore, UTP's students exposed to this kind of collaborative research, gain a much more pragmatic perspective, rather than merely conducting research for research's sake. Our aim is to increase the exposure of students to real world environments and expectations year-on-year.

Professor Ir Dr Mohd Shahir Liew
Deputy Vice Chancellor, Research and Innovation

A MILESTONE FOR UTP

Dr Magaret Sivapragasam became the first Malaysian selected for the prestigious Periodic Table of Younger Chemists by the International Union of Pure and Applied Chemistry (IUPAC) in February 2019.

A postdoctoral research scientist at UTP's Centre of Research Ionic Liquids, she was selected for her representation of ytterbium (Yb), the 70th chemical element on the periodic table.

Magaret's research focuses on employing ionic liquids as a dye removal system and oil dispersant. One of her projects includes the removal of dye from industrial wastewater during the "batik" dyeing process, for which she won several awards. She aims to curb pollution in small villages in Malaysia.

The Periodic Table of Younger Chemists was created in celebration of the 100th anniversary of IUPAC. Each of the chosen elements from the periodic table are represented by exceptional young chemists from around the world.

#GOING FOR GOLD

UTP showcased its research and innovation capability with a series of outstanding wins in 2019. The university won medals for almost every entry submitted to various competitions for national and international inventors.

Best of the Best at MTE 2019

It was a double win for Assoc Prof Dr Ahmad Majdi Abdul Rani at the Malaysia Technology Expo (MTE) 2019. He and his team won both a gold medal and The Best of the Best Award (Local Category) for the invention of a Slip-on Sprocket.

Assoc Prof Ir Dr Hisham Mohamad received The Best Award for his team's invention of a Smart Geo-pipe.

UTP submitted six products for the competition bagging five golds and a silver. MTE is an international platform for local and international inventors to showcase their inventions and innovations, particularly to the business community.

GOLD+
THE BEST OF THE BEST AWARD
(Local Category)

Inventor
Assoc Prof Dr Ahmad Majdi Abdul Rani

Product
Slip-on Sprocket

GOLD+
THE BEST AWARD

Inventor
Assoc Prof Ir Dr Hisham Mohamad

Product
Smart Geo-pipe – Fibre Optic Inclinometer Sensor for Landslides and Ground Movement Detection

GOLD

Inventor
Prof Dr Azmi Shariff

Product
Emergency Planning & Response Management System (EPRMS) in Process Industries

Inventor
Assoc Prof Dr Lau Kok Keong

Product
Compact Ultrasonic Absorption System (CUAS) for Efficient Gaseous Separation

Inventor
Assoc Prof Dr Mohd Haris Md Khir

Product
WIFI / GPS-based Indoor / Outdoor Personnel Locator (Insigne) Using Adaptive Machine Learning

SILVER

Inventor
Assoc Prof Dr Muhammad Moniruzzaman

Product
Ionic Liquids Formulation as an Environmentally Friendly Oil Dispersant (Dispersil)

3 Golds at ICOMPEX 2019

UTP's Department of Mechanical Engineering and Department of Computer & Information Science won three golds, two silvers and one bronze medal at ICompEX2019 (National Innovation and Invention Competition through Exhibition).

The Mechanical Department won a gold and a silver medal for the two products submitted.

6 Golds at ITEX 2019

UTP entered nine products for ITEX 2019. Six received gold medals and the other three won silver medals. Assoc Prof Dr Zahiraniza Mustaffa was awarded Best Invention in Design for the Japan Intellectual Property Association Award for her team's invention of New Pervious Concrete Curb (Curbvious) aimed at reducing street flooding in urban areas.

UTP won the silver award for the Best Booth Design.

GOLD+
THE JIPA AWARD – BEST INVENTION IN DESIGN

Inventor
Assoc Prof Dr Zahiraniza Mustaffa
Product
New Pervious Concrete Curb (Curbvious) in Reducing Urban Street Flooding

GOLD

Inventor
Prof Dr Nasir Shafiq
Product
SMART-EGPC : A State of the Art & Green Engineered Composite of Polymeric Materials

Inventor
Assoc Prof Dr Wong Peng Wen
Product
Chained-Function Waveguide Filter for 5G and Beyond

Inventor
Assoc Prof Dr Tang Tong Boon
Product
Brain-NaviTM

Inventor
Assoc Prof Ir Dr Hisham Mohamad
Product
Optical Fibre Inclinometer Casing for Highway Embankment and Slope Monitoring (Smart Geo-Pipe)

Inventor
Dr Mazeyanti Mohd Ariffin
Product
PREDITACK : IOT-Enabled Device for Scanning, Forecasting and Immobilizing Golden Apple Snails in Paddy Fields

SILVER

Inventor
Prof Dr Norani Muti Mohamed
Product
Wireless Solar Hydrogen System

Inventor
Dr Lavania Baloo
Product
Innovation on Rainwater Harvesting System: Subsequent Flushing with Vortex Diverter and Pasteurization (SVP)

Inventor
Dr Maman Hermana
Product
Prediction of Petrophysical Properties for Reservoir Modelling

Top Awards at InTEX 19

Assoc Prof Dr Lau Kok Keong didn't just bag a gold medal at Innovation and Technology Exposition 2019 (InTEX 19). He and his team members were also awarded Best Product – Overall and Best Product – Information, Communication and Technology Cluster for coming up with their Hollow Fiber Membrane Prediction Program.

All 12 inventions entered by UTP won medals; seven of this scored gold.

The event, organised by Universiti Malaysia Sarawak (UNIMAS) as part of its ongoing research and innovation initiatives, drew wide participation from public and private higher learning institutions nationwide.

GOLD+

i) Best Product – Overall InTEX 2019

ii) Best Product – Information, Communication & Technology Cluster

Inventor
Assoc Prof Dr Lau Kok Keong
Product
HFMPP: Hollow Fiber Membrane Prediction Program

GOLD

Inventor
Prof Ir Dr Shahir Liew
Product
Poseidon

Inventor
Prof Dr Azmi Mohd Shariff
Product
PSI4MS: Process Safety Information Management System

Inventor
Assoc Prof Dr Tang Tong Boon
Product
Brain-Navi TM

Inventor
Assoc Prof Dr Zahiraniza Mustaffa
Product
Pipeline Reliability and Integrity Assessment (PRIA)

Inventor
Assoc Prof Dr Mohd Haris Md Khir
Product
Insigne

Inventor
Assoc Prof Dr Ismail M Saaid
Product
Smart Permeability Modifier

SILVER

Inventor
Prof Dr Azmi Mohd Shariff
Product
PC-GLY: An Eco-Friendly Solvent for Co2 Capture

Inventor
Assoc Prof Dr Zahiraniza Mustaffa
Product
Flood Level Monitor for Low-Lying Area (FLO-LOW)

Inventor
Assoc Prof Ir Dr Hisham Mohamad
Product
Smart Geopipe

Inventor
Prof Dr Shamsul Rahman M Kutty
Product
Integrated Suspended Growth Bio-Reactor (I-SGBR)

Inventor
Assoc Prof Dr Ahmad Kamil Mahmood
Product
Rescue-I

Second Win for Curbvious

Assoc Prof Dr Zaharaniza Mustaffa who won gold at ITEX 2019, scored another victory when her product Curbvious (New Purveous Concrete Curb) won First Place in the Product Category at SAINTEX 2019.

Assoc Prof Dr Mohd Haris Mohd Khir won Second Place.

The Sarawak Innovation & Technology Exposition, supported by the Sarawak State Government, enables researchers to present their research findings and translate them into innovative and creative outputs.
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GOLD

Inventor
Assoc Prof Dr Zahiraniza Mustaffa
Product
Curbvious

SILVER

Inventor
Assoc Prof Dr. Mohd Haris Md Khir
Product
Insigne

Excelling at PECIPTA 2019

UTP submitted 12 products for the International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA) 2019. All won awards, including three gold and three silver medals.

PECIPTA is a biannual competition exhibition organised by the Ministry of Higher Education, and its partner institutions since 2001. It showcases innovative products and services developed by institutions of higher learning.

In addition to winning a gold medal, Ts. Dr Mazeyanti Mohd Ariffin and her team walked away with the Malaysian Timber Industry Board (MTIB) Special Award for PREDITACK, an IOT-Enabled Device to Scan, Forecast and Immobilise Golden Apple Snails at Paddy Fields

GOLD

Inventor
Ts. Dr Mazeyanti Mohd Ariffin
Product
PREDITACK: An IOT-Enabled Device to Scan, Forecast and Immobile Golden Apple Snails at Paddy Fields

Inventor
Assoc Prof Dr Mohd Harris Md Khir
Product
INSIGNE

Inventor
Assoc Prof Dr Gunawan Witjaksono
Product
CHROMA-APPS

SILVER

Inventor
Prof Dr Hilmi Mukhtar
Product
Composite Ionic Liquid Polymer Membrane (CILPM) for CO2/CH4 Separation

Inventor
Assoc Prof Dr Fakhruldin Mohd Hashim
Product
Scada Leak Detection System for Liquid Pipelines

Inventor
Assoc Prof Ir Dr Hisham Mohamad
Product
Smart Geo-Pipe

Inventor
Assoc Prof Dr Zahiraniza Mustaffa
Product
Pipeline Reliability and Integrity Assessment (PRIA) Module Software

Inventor
Assoc Prof Dr Zahiraniza Mustaffa
Product
Flood Level Monitor for Low-Lying Areas (FLO-LOW)

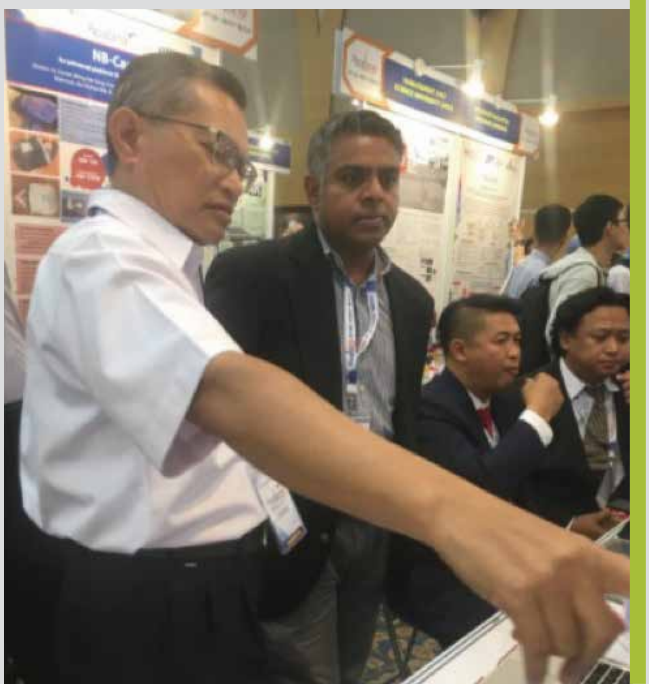
BRONZE

Inventor
Prof Dr Shamsul Rahman
Product
Palm Oil Clinker Media (POCM) for an Attached Growth Medium in Sequencing Batch Reactor Mode

Inventor
Dr Maman Hermana
Product
SQP-SQS Attributes as a New Tools for Better Hydrocarbon Prediction

Inventor
Assoc Prof Dr Suriati Sufian
Product
Humanizing Engineering Education: Solving Real Problems for Real People

Inventor
Assoc Prof Dr Suriati Sufian
Product
Chem-E-Car Challenge: A Transformative Learning Experience for Students in Solving Complex Engineering Problem



Two Awards for UTP's iOASIS

UTP won a gold award with an app designed to change the way information is shared across mobile devices. Its Information Resource Centre (IRC) developed a hub providing an easy connection for users of its services. It also bagged the Diamond Award for the most outstanding project under the Innovation for an Organisation category.

The iOASIS team comprised Siti Nurbaya Abdul Karim, Helmi Iskandar Suito, Kamaliah Mohd and Faizal Bidin and Wan Normanizah Mahmud.

UTP Researcher Wins Medal for Outstanding R&D

The International Association of Advanced Materials (IAAM) Sweden honoured Prof Dr Bahruddin Saad of UTP's Fundamental & Applied Sciences Department (FASD) for his outstanding R&D contributions during its 25th Award Assembly Congress at Stockholm in March 2019.

The Congress was attended by about 350 participants from 50 countries.

The IAAM Medal is awarded to individuals and associations for notable and outstanding contributions to the advancement of materials for global excellence. The organisation has over 50,000 members from 139 countries.

Prof Dr Bahruddin received the award for coming up with a simple method of using advanced materials to determine important compounds such as food contaminants, drugs and environmental pollutants.

For example, the method can be used by the Ministry of Health to survey contaminants in food that the public consume daily. Due to its simplicity and low-cost, the method allows a much larger pool of samples to be analysed. He is currently working on new analytical methods to determine endocrine disruptors in the environment.

UTP and Curtin University Organise the 8th IBA-IFIBIOP

UTP and Curtin University Malaysia organised the 8th International Bioprocessing Association (IBA) International Forum on Industrial Bioprocessing (IFIBiop) in May 2019. This is the first time this prestigious forum was held in Malaysia.

The five-day conference on "Bridging Sustainability and Industrial Revolution Through Green Bioprocessing" featured more than 170 presentations from over 25 countries worldwide. These were divided into five tracks – Bioenergy & Biofuels, Environmental Biotechnology, Food Technology & Engineering, Industrial Biotechnology and Upstream & Downstream Bioprocesses.

This was very much in tandem with UTP's objectives to open up new frontiers, pioneer research, create new technology, and introduce innovative solutions and methods for industry.

The conference was sponsored by the Sarawak Convention Bureau, KLK Oleomas Sdn Bhd, the Institute of Self-Sustainable Building, TRANSWATER & Sarawak Oil Palms.

The conference is also supported by the Ministry of Education, Ministry of Tourism, SIRIM, Majlis Bandaraya Miri, Malaysian Technology Development Corporation (MTDC), The Institution of Chemical Engineers (IChemE), Avantis Laboratory Supply, Medical Resources Sdn Bhd, Teraju IP and Malaysia Convention & Exhibition Bureau (MyCEB).

Merdeka Award Grant for UTP's Feng Ying Xing

Feng Ying Xing, a PhD candidate at UTP's Centre for Intelligent Signal and Imaging Research (CISIR), was awarded the 2019 Merdeka Award Grant for International Attachment.

He was one of five exceptional young Malaysians to receive the award from the Sultan of Perak and Royal Patron of the Merdeka Award Trust, HRH Sultan Nazrin Muizzuddin Shah. Launched by PETRONAS, ExxonMobil and Shell Malaysia in 2007, the Merdeka Award recognises and celebrates the achievements and significant contributions of individuals within their respective fields.

Feng was granted the award for his outstanding research on how to predict cognitive performance under the influence of workload and situational stress using fNIRS (a non-invasive neuroimaging modality) haemodynamic measurements and physiological body signals. He hopes to develop a deep-learning model that could help to identify the nature of stress, as an early preventive measure for costly mental illnesses.

Feng is the second recipient from UTP to have won the Merdeka Award Grant for International Attachment. In 2018, Aisyah Ismail, also a PhD student at CISIR, won the award for her research on the application of Deep Learning approach in identifying the stroke biomarker.

UTP Scientist Wins the 2019 AIMST Falling Walls Lab

A pithy three-minute pitch on "Breaking the Walls of CO_2 Capture in Greenhouse Gases" earned Dr Maisara Shahrom Raja Shahrom the first prize in the Falling Walls Lab organised by AIMST University, Kedah, in 2019. Dr Maisara is a postdoctoral researcher at UTP's Centre of Research in Ionic Liquids (CORIL).

Falling Walls Lab AIMST 2019 received 52 applications from around the country, of which 34 outstanding applicants were selected to present their research work, initiatives or business ideas to a high-profile jury and audience.

Dr Maisara then represented Malaysia in the Falling Walls Lab Finale in Berlin in November 2019 and joined leaders from science, industry, and policy making at the Falling Walls Conference. While at the Grand Finale, she also participated in the Springer Nature event on science publishing.

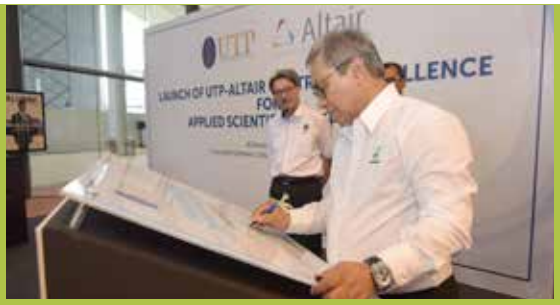
Falling Walls Lab is an international forum for the next generation of early career innovators, trailblazers and visionaries. It challenges participants to present their research or business model to a high calibre jury of experts – in just three minutes. Academic institutions in various countries are encouraged to host local Falling Walls Labs to showcase the quality, diversity and passion of their most innovative minds.

Tackling the Challenges of Landslide and Slope Stability

Academics, scientists, researchers and other experts have a major role to play in meeting the challenges of landslides and slope instability caused by climate change, resource management and unsustainable development.

In an effort to synergise academic research and findings and share experience and knowledge, UTP and Universitas Katolik Parahyangan, Indonesia, organised the International Conference on Landslide and Slope Stability (SLOPE) 2019, held in Bali, Indonesia.

Among the keynote speakers for the conference was UTP's Assoc Prof Ir Dr Hisham Mohamad who spoke on "State of the Art Instrumentation of Slopes and Retaining Structures with Fibre Optic Sensors".



Launch of Centre of Excellence for Applied Scientific Computing (chairman visit pix)

UTP and Altair Engineering Sdn Bhd, a subsidiary of Nasdaq-listed Altair Inc, set up a new Centre of Excellence (CoE) for Applied Scientific Computing, the first of its kind in Malaysia.

Over the next few years, it will focus on research areas related to multi-physics, multi-scale modelling as well as internet of things (IoT) for the benefit of Malaysian businesses and communities. The new CoE aims to deepen the university's research capabilities in computing science and engineering and will enhance UTP's standing for research excellence in Malaysia and internationally.

With this collaboration, UTP will become the Centre for Learning for technologies developed by Altair for universities and commercial establishments in Malaysia. Altair ranks as a number one in South East Asia for engineering simulation. UTP students will have the opportunity to learn the latest skills required to spur further innovation for the oil and gas sector.

UTP Organises Inaugural Loss Prevention Asia Conference and Exhibition

Safety experts from around the world gathered in Kuala Lumpur for the first Loss Prevention Asia (LPA) International Conference and Exhibition in November 2019.

The inaugural event, themed 'Building Resilience through Advanced Digital Safety and Technology,' was organised by UTP's Centre of Advanced Process Safety (CAPS) in collaboration with the Department of Occupational Safety and Health (DOSH), Institution of Chemical Engineers (IChemE) Safety Centre and Centre of Risk, Integrity and Safety Engineering (C-RISE) of Memorial University Newfoundland.

LPA 2019 aimed at showcasing the latest innovations and ground-breaking discoveries in process safety.

PATENTS GRANTED 2019

NAME	DEPARTMENT	FILING NAME
Dr Nejatollah Rahmanian	CHEMICAL ENGINEERING	System And Method For Distributed Modelling Of A Urea Prilling Process
Dr Nejatollah Rahmanian		Sustainable Textile
Prof Dr Mohamed Ibrahim Abdul Mutalib		Production Of High Quality Lubricating Oil Base Stock Group Ii/Iii From Group I Base Oil Using Ionic Liquids
Prof Ir Dr Suzana Yusup		Agricultural Wasted-Based Activated Carbon For Dioxide Capture And Preparation Method Thereof
Prof Yoshimitsu Uemura		Microwave Based Pyrolysis Reactor And Methods Thereof
Assoc Prof Dr Mohamed Hasnain Isa	CIVIL ENGINEERING	Integrated Reactor For Treatment Of Wastewater
Prof Ir Dr Muhd Fadhil Nuruddin		Construction Material And Compositions Containing Same
Assoc Prof Ahmad Kamil Mahmood	COMPUTER INFORMATION SCIENCES	System For Monitoring A Subject During A Rescue Operation
Prof Ir Dr Ahmad Fadzil Mohamad Hani	ELECTRICAL AND ELECTRONICS ENGINEERING	A Method For Objective Assessment And Rating Severity Of Area Of Psoriasis Lesion Using Digital Imaging
Prof Ir Dr Ahmad Fadzil Mohamad Hani		Methodology For Automatic Segmentation And Visualisations Of Articular Cartilage Using Multinuclear Magnetic Resonance Imaging
Dr Irraivan Elamvazuthi		Method For Tuning Controllers Using Differential Evolution
Dr Likun Xia		Fault Chip Diagnosis And Analysis System (B)
Assoc Prof Dr Nidal Kamel Selman		System For Detection Of Epileptic Seizures In Egg Signals
Assoc Prof Dr Nidal Kamel Selman		A System Of Finite Element Method For Brain Source Localization Using Electroencephalography (EEG) Signals And Functional Magnetic Resonance Imaging (FMRI) Images

NAME	DEPARTMENT	FILING NAME
Assoc Prof Dr Anita Ramli	FUNDAMENTAL AND APPLIED SCIENCES	Catalyst For Gasification Of Biomass For Production Of Hydrogen And Method Of Preparation Thereof
Assoc Prof Dr Cecilia Devi Wilfred		Polymerised Ionic Liquids With Improved Properties And Method For Enchange Sorption Of Carbon Dioxide
Assoc Prof Dr Cecilia Devi Wilfred		Ionic Liquids For Metal Extraction Process
Assoc Prof Dr Cecilia Devi Wilfred		Aqua Amino Acids Polymerized Ionic Liquids For Co_2 Capture
Dr Isa Mohd Tan		Novel Surfactants As Foaming Agent For Enhanced Oil Recovery Applications At High Salinity And High Temperatures
Assoc Prof Dr John Ojur Dennis		Design, Simulation And Characterisation Of Mems Resonator Based Micro-Hot-Plate As Gas Sensor
Prof Dr Faiz Ahmad	MECHANICAL ENGINEERING	Metal Injection Molded 316l Stainless Steel For Bio And Dental Implants
Mohd Syaifuddin Mohd		Portable Electrical Energy Storage System
Prof Dr Hussain H Al-Kayiem		Energy Conversion From Wasted Flue Gases
Prof Dr Hussain H Al-Kayiem		Solar Chimney For Cogeneration
Prof Dr Hussain H Al-Kayiem		Method And System Of Turbulated Solar Absorber With Protrusion For Air Heating
Prof Dr Abd Rashid Abd Aziz		Improved Electricity Generations Device
Prof Dr Abd Rashid Abd Aziz		An Energy Harvester
Dr Sonny Irawan	PETROLEUM ENGINEERING	Jatropha Fatty Acid Methyl Esters Based Drilling Fluid

PATENTS FILED 2019

NAME	DEPARTMENT	FILING NAME
Assoc Prof Dr Mohamad Azmi Bustam @ Khalil	CHEMICAL ENGINEERING	Improved Synthesis Method Of Metal-Organic Framework 74 (Mof-74) For Carbon Dioxide (CO_2) Capture
Assoc Prof Dr Lau Kok Keong		Ultrasonic Agitator Comprising Multilayer Transducers For Gas Separation System And Method Thereof
Assoc Prof Dr Lau Kok Keong		Ultrasonic Packed Bed Assembly
Dr Lukman AB Rahim	COMPUTER INFORMATION SCIENCES	Method Of Managing Memory In Graphics Processing Unit Environment
Assoc Prof Dr Chong Fai Kait	FUNDAMENTAL AND APPLIED SCIENCES	Integrated Photooxidative-Extractive System For Deep Desulfurisation Of Diesel
Assoc Prof Ir Dr Masri Baharom	MECHANICAL ENGINEERING	Method Of Producing Rotary Movement Using Statorless Pulsating Motor (Pi 2014703897)

OTHER INTELLECTUAL PROPERTY RIGHTS (IPRs)

NAME	DEPARTMENT	FILING NAME
Universiti Teknologi PETRONAS		IHA (Institute Of Health & Analytics) – Class 42
		ICM (Institute Of Contaminant Management) – Class 42
		IHA (Institute Of Health & Analytics) – Class 42
		IHR (Institute Of Hydrocarbon Recovery) – Class 42
Dr Ho Yeek Chia	CIVIL ENGINEERING	Sesfloc – Class 1
Assoc Prof Dr Zahiraniza Mustaffa		Flood Level Monitor For Low-Lying Area (Flo-Low) – Class 42
Assoc Prof Dr Bashar S Mohammed		Floodab – Class 19
Assoc Prof Dr Bashar S Mohammed		Floodab – Class 37
Assoc Prof Dr Indra Sati Hamonangan Harahap		Eds – Class 11
Assoc Prof Dr Zahiraniza Mustaffa		Bigpipes (Class 42)
Assoc Prof Dr Ainul Akmar Mokhtar	MECHANICAL ENGINEERING	I-Realms (Class 42)

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NAME	DEPARTMENT	FILING NAME
Assoc Prof Dr Haslinda Zabiri	CHEMICAL ENGINEERING	Multiple Fault Diagnosis In Distillation Column Using Multikernel Support Vector Machine
Assoc Prof Dr Haslinda Zabiri		Nlpca-Ac
Assoc Prof Dr Haslinda Zabiri		Narx Network Fda – Fault Detection In Distillation Column Using Narx Neural Network
Assoc Prof Dr Haslinda Zabiri		Valve Stiction Detection Model Based On Artificial Neural Networks
Assoc Prof Dr Haslinda Zabiri		Indexed-Bsbm
Dr Khor Cheng Seong		Watsyn (Water Network Synthesizer)
Assoc Prof Dr Suriati Sufian		Cdio Initiative In Enriching 1st Year Students Learning Experience Chem-E-Car Integrated Engineering Project
Assoc Prof Dr Suriati Sufian		A Module For Green Transformation Of Methane Gases Into Valuable Carbon Nanofibers And Continuous Production Of Cox-Free Hydrogen Via Double-Layered-Hydrotalcite Basedspinel-Like Structure Of Mg-Ni-Al Catalyst
Assoc Prof Dr Abd Nasir Matori	CIVIL ENGINEERING	Freight Transport Route Choice
Assoc Prof Dr Zahiraniza Mustaffa		New Infiltration Rate Test For Lateral Flows In Pervious Concrete
Assoc Prof Ir Dr Hisham Mohamad		Smart Geo-Pipe Software
Prof Ir Dr Mohd Shahir Liew		Gui For Downtime Cost Analysis Of Offloading Operations Due To Parametric Rolling
Assoc Prof Dr Low Tang Jung	COMPUTER INFORMATION SCIENCES	Dual Quantum Channel QKD Model (With Algorithms)
Dr Lukman AB Rahim		Code For Asegml Transfer Diagram
Dr Lukman AB Rahim		Code Fro Asegml Logic Diagram
Dr Lukman AB Rahim		Code For Asegml Structure Diagram
Dr Lukman AB Rahim		Code For Asegml Flow Diagram
Assoc Prof Dr Mohd Fadzil Hassan		Continuous And Combinatorial Double Auction Framework
Dr Maythem Kamal Abbas Al-Adilee		The Conceptual Idea And Hardware Architecture Of The Automated Fining System For High Speed Driving Offences Via Vanet
Dr Maythem Kamal Abbas Al-Adilee		The Protocol Of The Automated Fining System For High Speed Driving Offences Via Vanet

NAME	DEPARTMENT	FILING NAME
Assoc Prof Dr Syed Saad Azhar Ali	ELECTRICAL AND ELECTRONICS ENGINEERING	3ug Control System For Underactuated Underwater Glider
Assoc Prof Dr Tang Tong Boon		Method To Detect Brain Function Defisits
Dr Ramani Kannan		Single Event Burnout Hardening Of Silicon Trench Shielded Power Umosfet
Dr Luluan Almanna Lubis	GEOSCIENCES	Estimation Of Pore Type And Permeability Of Carbonate Reservoirs Using Rock Physics
Dr Luluan Almanna Lubis		Electrical And Elastic Properties Variationsof Partial Hydrocarbon Saturation Reservoirs - Modeling And Real Data Observations
Dr Mirza Arshad Beg Mirza Hadi Hassan Beg		Component Atlas
Dr Mirza Arshad Beg Mirza Hadi Hassan Beg		Cements And Pores Atlas
Dr Mirza Arshad Beg Mirza Hadi Hassan Beg		Pore Types Atlas
Dr Mirza Arshad Beg Mirza Hadi Hassan Beg		Depositional Environment Atlas
Dr Mirza Arshad Beg Mirza Hadi Hassan Beg		Rock Types Atlas
Assoc Prof Dr Maran Marimuthu	MANAGEMENT AND HUMANITIES	Research Framework For Measuring Sustainability Practices In The Islamic Banking
Assoc Prof Dr Shahrina Md Nordin		Research Framework For Measuring Sustainable Agriculture Practices To Prioritize Green Fertilizer Technology Among Farmers
Assoc Prof Dr Abdul Rahim Othman	MECHANICAL ENGINEERING	Creep-Pce Polynominal Chaos Expansion Tailored For Probabilistic Of Creep Damage
Ainul Akmar Mokhtar		Reliability, Availability Maintainability System (I-Realms)
Assoc Prof Dr Fakhruldin Mohdhashim		Scada Leak Detection System (Slds) For Liquid Pipelines
Dr Mark Ovinis		IoT SmartLPG
Prof Dr Abd Rashid Abd Aziz		Algorithm For Navigation And Collision Avoidance For Tawaf And Saie Application

INDUSTRIAL DESIGN 2019

NAME	DEPARTMENT	FILING NAME
Azry Borhan	CHEMICAL ENGINEERING	Table Tennis
Assoc Prof Dr Zahiraniza Mustaffa	CIVIL ENGINEERING	Curbvious Design Concrete Material (Class 25-01)
Assoc Prof Dr Zahiraniza Mustaffa		Infiltration Rate Testing (Class 10-04)
Dr Lavania Baloo		Innovation On Rainwater Harvesting System (Class 23-01)
Prof Dr Norani Muti Mohamed	FUNDAMENTAL AND APPLIED SCIENCES	Photoelectrochemical Cell With Built-In Solar Cell
Dr William Pao King Soon	MECHANICAL ENGINEERING	Tee Pipe Joint


Microsoft

#CREATING GLOBAL GRADUATES

Throughout 2019, we continued to put students at the heart of all our programmes and activities. We mapped out a path forward that gave us a clear direction to ensure that UTP's students were future ready. This meant looking at graduates who were immediately employable and who possess a strong spirit of technopreneurship.

TECHNOPRENEURSHIP OFFICE

4820
NEW JOBS CREATED
By UTP student enterprises
Throughout Malaysia and Southeast Asia

RM1.32MIL
Revenue Generated
by student enterprises

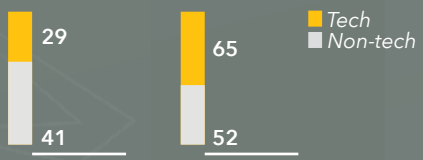
Technopreneur Developmemt Programmes

45 DEVELOPMENTAL PROGRAMMES Organised for Creativity, Innovation & Entrepreneurship (CIE)

9 STARTUP BOOTCAMPS

6 ENTREPRENEUR BAZAARS

RM57,000
TOTAL AMOUNT OF SPONSORSHIP
For technopreneur development



70 Student Enterprises Developed

117 UG Students' Involvement in Enterprises

Students' Achievements

5 SILVER + 5 BRONZE
IIDEX 2019

2 BRONZE
SI2TE 2019

1 BRONZE
I-SAAID 2019

CHAMPION
IUM disrupt

FINALIST
Usahawan Inovasi 2019

5TH RUNNER UP
University startup challenge 2019

Infographics provided by
Mohd Zamri Abdullah
Head, Technopreneurship Office
Centre for Student Development

Every programme we adopted was evaluated on the basis of whether it was enriching, rewarding and would lead to transformative learning experiences. Now, more than ever before, UTP has trained its lens on strategies that enhance the skills and qualities that graduates need to navigate an increasingly globalised world. We have always produced well-rounded graduates; but we now have strategies in place that will ensure every graduate stepping out of UTP will be a well-rounded global graduate.

An essential part of these strategies, is a serious emphasis on enhancing our students' learning experience and becoming a caring global university through achieving 100% participation in community outreach programmes.

PROMOTING INTERNATIONALISATION

In the year under review, UTP kept a firm finger on the pulse of academic trends that foster internationalisation. Our strategy here was multi-pronged. We looked at global trends and directions and involved both faculty and students in collaborative exercises to develop implementable programme responses.

We asked all the pertinent questions. What must we do to increase the employability of our graduates? What would give them greater global appeal as employees and entrepreneurs? How do we encourage a technopreneurship mindset? What opportunities exist to create cross-cultural interfaces that lead to greater volunteerism?

In all this, I would like to recognise the role played by our Mobility Office that facilitated student exchanges, research attachments and short summer courses. These exercises were a two-way street. Our students went abroad and we welcomed foreign students to UTP campus. Our student exchange programmes are designed in a way that encourage not just learning that encompasses knowledge and skills but also what we consider vitally important: ethical behaviour.

Through our comprehensive programmes, students began developing a deep sensitivity and empathy for community needs, well-being and sustainable living. This led some students to make the right choices and become socially responsible global citizens. The work of the Mobility Office was supported by the Campus Life and the Technopreneurship Centre. Together we aimed to make life in UTP immeasurably better.

PASSION TO SERVE

I believe we are very fortunate to be blessed with a faculty and staff who have a deep and enduring passion to serve. Throughout the year in review, we saw faculty, staff and students coming together to work happily, collaboratively and in teams of people from a range of backgrounds.

It was very apparent that UTP's students were being challenged to embrace multiple perspectives and develop a capacity for candid self-awareness that allowed them to become much more flexible and adaptive to a constantly changing external environment.

We went a bit further in 2019. We used a quadruple helix framework (academia, industry/corporate sector, government and civil society) to examine the interdependence of the different 'actors' and multiple partnerships that would give our students a clear understanding of what future employers would require.

I must say we began with baby steps that led towards empowerment and self-actualisation. These 'reverse mentoring' strategies led to students seeing that they were enabled to lead change.

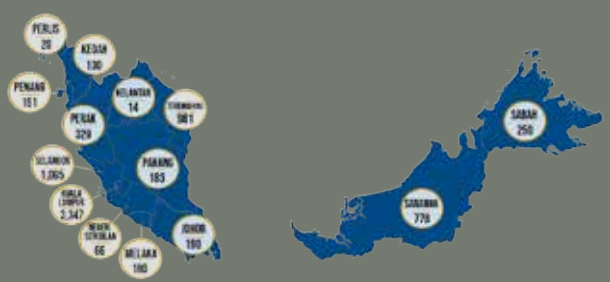
For instance, the students were asked through peer consultations to decide on their dress code. They were also asked to decide on the amenities needed for better student participation in campus life. The water dispensers around the campus came out of this initiative. Students involvement in elections, deciding on the kind of student representation and representatives they needed was facilitated and encouraged by the university.

Our emphasis has always been on participation and striving for excellence. Students immerse themselves in a "broad spectrum" of experiences from dance and music to orchestral performances and singing. Theatre and performance is recognised as important to holistic development and there have been some collaborative initiatives with the Tronoh Theatre Shop.

UTP also fields a strong debate team which has earned national prominence. The University's rugby team, UTP Drillers has consistently made an impact in the annual Super 8 Rugby Competition.

UTP ALUMNI IN NUMBERS
DEMOGRAPHICS 2019

DOMESTIC



INTERNATIONAL

BUILDING MEANINGFUL CONNECTIONS

Strengthening relationships, inspiring friendships, networking and 'owning' the global space; these things succinctly describe UTP's alumni activities. Our alumni corps can be best described as a passionate and engaged community of volunteers.

Through regular alumni activities we harness the insights, ideas, experience and resources of all who have passed through the portals of UTP. We aim to foster a world-class sustainability network for current and future students. Throughout the year we hosted events that connected alumni of UTP with the wider community.

The Alumni Relations Office is always on hand to offer students past and present a platform to contribute to their Alma Mater in a number of ways. These include sharing of expertise, experience and insights as well as monetary contributions.

Alumni Population

Domestic
16,205

International
2,808

Alumni by Gender

11,865 **7,148**

Top 5 Programmes

Chemical Engineering	3,712
Mechanical Engineering	3,565
Information & Communication Tech	3,408
Electrical & Electronics Engineering	2,937
Civil Engineering	2,062

Total Alumni

UG	16,902
MS	1,348
PHD	763
Multiple Degrees	293

Alumni by Age

20–29	5,677
30–39	8,997
40–49	1,221
50–59	79
60–69	4

Alumni by Year

2001-10	2011	2012	2013	2014	2015	2016	2017	2018	2019
6,587	1,470	1,266	1,148	1,291	1,154	1,469	1,258	1,659	1,711

Infographics from the UTP's Alumni Relations Office

FUTURE READY

By creating a conducive environment for growth of student talent, UTP's faculty and staff stayed committed to listening intently to our future global graduates. We realised that they needed to be prepared to work alongside multinational employers and even SMEs who have cross-border businesses.

During the year, we placed special emphasis on internationalising experiences and student learning. We were also determined to keep our enhancement programmes student-led. We therefore took our cue from our students who have a keen sense of ambition, and encouraged them to make independent choices.

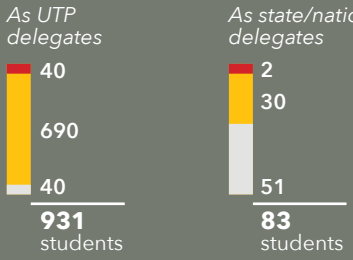
UTP's students themselves continued to be very career-centric and exhibited a keen interest in areas of study that would prepare them for full employment in the emerging fields of technology. Data Analytics for instance as a field of study seemed to dominate in terms of undergraduate interest. Our students are keen to go into areas that would secure them good positions upon graduation.

TALENT ENRICHMENT OFFICE

163
TALENT ENRICHMENT PROGRAMMES
conducted
Jan – Jun 2019

4577
STUDENTS' INVOLVEMENT
in Talent Enrichment Programmes

Student Involvement at Various Levels of Participation



SANGGAR KIRANA
GAMELAN GROUP
8200 Streams via Spotify in 31 Countries

BEST SPORTS TEAM (MALE)
Majlis Sukan Institusi Swasta (MASISWA)

RM341,510
TOTAL AMOUNT OF SPONSORSHIP
for students activities

CAMPUS LIFE OFFICE

91
CLUBS & SOCIETIES

347
ACTIVITIES
ORGANIZED BY CLUBS & SOCIETIES

RM218,968
EXTERNAL SPONSORSHIP
SECURED FOR STUDENT ACTIVITIES

Community Outreach Programmes

150
USR PROGRAMME
EXECUTED

SOCIO ECONOMIC	ENVIRONMENT	EDUCATION
28	57	65

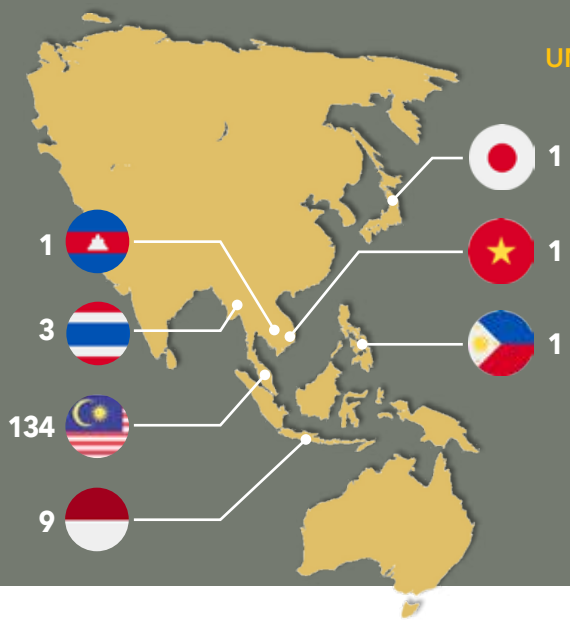
Including
32 Knowledge Transfer Programmes

Data and Analytics are fundamental to digital transformation and many companies are getting ready to go full throttle. From all indicators we are certain our graduates will be ready to step into these roles. After all, we are all producers of data as well as users of data. Data's influence on our lives is all-pervading. It is in these fields that we want students to build their core competencies.

In conclusion, I am pleased to report that in 2019 our overall approach to transform members of faculty from lecturers and imparters of knowledge to advocates for undergraduate growth of talent is succeeding. Students are increasingly aware that learning is no longer just about content and knowledge, but about experience and application. Going forward, we will continue to evaluate our students based on how much they absorb from their different experiences, and the way in which these experiences transform them and their ability to deal with an increasingly disruptive workspace.

Professor Dr Nor Hisham Hamid
Deputy Vice Chancellor, Student Affairs and Alumni

UNIVERSITY SOCIAL RESPONSIBILITY (USR) PROGRAMMES



3219
TOTAL NUMBER OF STUDENTS
PARTICIPATED

2953
FOR LOCAL PROJECT

266
FOR INT'L PROJECT

Clubs & Societies Achievements

Student Chapter Excellence Award 2019
SPE-UTP Student Chapter

2nd runner Best Student Chapter Worldwide 2019
EAGE-UTP Student Chapter

Best Student Award & Geoquiz Champion
ASIA Petroleum Geoscience Conference & Exhibition (APGCE) 2019

Infographics provided by Mohd Zamri Abdullah
Head, Technopreneurship Office, Centre for Student Development

NURTURING ASEAN FUTURE LEADERS

UTP hosted the fourth ASEAN Student Forum 2019 (ASF 2019) to enhance interaction and cooperation among youth in the region.

Themed 'Advancing Partnership for Sustainability', the event was organised by UTP ASEAN Students Association (UTP ASA), supported by Association of Southeast Asian Nations (ASEAN) and Education Ministry, with Yayasan UTP as the main sponsor.

More than 60 delegates from 13 ASEAN Plus Three nations came together to discuss, debate and design solutions to issues faced by ASEAN countries. This year's forum focused on cyber security, human capital in STEM and waste management.

It helped strengthen UTP's networking and collaboration with its ASEAN counterparts, supporting the university´s mission to becoming a globally prominent university.

The UTP ASA was established in 2016 to boost ties among ASEAN students and integrate ASEAN communities. It has seen participation from more than 700 young people.

SIESO MEDAL FOR UTP STUDENTS

Four UTP chemical engineering students have been awarded a new process safety medal by the Institution of Chemical Engineers (IChemE) for their thought-provoking overview of the issues that led to the gas leak disaster in Bhopal, India.

IChemE members Tze Lin Kok and Jing Han Siow, and Yeuan Jer Choong and Chee Kean Looi were awarded the SIESO Medal for their joint entry The Bhopal Gas Tragedy: The Scar of Process Safety, comprising a paper and two posters.

This is the first year that the medal has been awarded. The team were commended by the judges for "an innovative and visually striking way" of highlighting some of the main facts and issues associated with the Bhopal disaster.

The SIESO Medal will be awarded annually to an individual or a group of up to six students for the best multi-media presentation about a major accident and the process safety learning outcomes. The winning team will also receive prize money of £750.

THUMBS UP FOR UTP STUDENT CHAPTER

The SPE-UTP student chapter was judged the most active worldwide in 2019 by the Society of Petroleum Engineers "International" and awarded the Student Chapter Excellence Award.

STUDENT AFFAIRS PROFESSIONALS EXCHANGE

The ever-changing landscape of higher education necessitates a concerted effort in ensuring that student experiences are constantly monitored and upgraded wherever necessary.

Towards this end, UTP's Division of Student Affairs and Alumni initiated a Conference for Student Affairs Professionals (ConSAP) as a dynamic platform for brainstorming and sharing ideas with the potential of creating a Community of Practice (CoP).

The one-day inaugural conference was well-attended by student affairs practitioners from UTP and other private and public institutions including Universiti Sains Malaysia (USM), Universiti Tenaga Nasional (UNITEN), Multimedia University (MMU), Universiti Kuala Lumpur (UniKL), Taylor's University, Sunway University, Asia Pacific University of Technology & Innovation (APU), Universiti Tunku Abdul Rahman (UTAR) and SEGi University.

An important outcome was the first ConSAP Conference Proceedings outlining best practices, exemplary approaches and valuable experiences in various student affairs areas such as careers, mobility, student monitoring systems, student development, alumni, psychology and entrepreneurship.

CHAMPION DEBATERS

ANTI-CORRUPTION DEBATE

UTP debaters emerged champions in the inaugural Chief Commissioner Malaysian Anti-Corruption Commission's (MACC) Inter-University Anti-Corruption Debate Competition 2019. They triumphed over 32 debate teams from 24 universities and learning institutions.

In the final showdown, they successfully opposed the motion "Preventive Action is More Effective Than Punitive Towards a Clean Malaysia, beating the Universiti Malaya team. UTP debaters were Mohamad Mustqakim Mohd Razali (Mechanical Engineering), Ariff Hakimi Chik (Business Information Systems), Mohd Azlie Sham Alimin (Chemical Engineering) and Sabri Nawi Samba Zawawi (Mechanical Engineering).

The event was organised by MACC, Universiti Putra Malaysia (UPM) and Majlis Debat Universiti Malaysia (MADUM). In the Inter-University Anti-Corruption Debate Competition 2019, the UTP Malay Debate Club team made it to the final round.

GRAND TVET DEBATE CHAMPIONSHIP

The UTP Malay Debate Club team were the champions in the Grand TVET Debate Championship. In the final round, the team defeated Universiti Teknologi Mara, Multimedia University and Kolej Universiti Poly-Tech Mara.

Nur Syafiqah Aqilah bt Azmi, a Petroleum Geoscience student was judged the best final round speaker. Her team mates were Andi Mohd Syaiful bin Andi Radi (Petroleum Engineering), Ariff Hakimi Bin Chik (Business Information Systems) and Mohd Faiz bin Mohd Musir (Electrical and Electronic Engineering).

The competition which is conducted in British Parliamentary Style, saw 32 participating teams.

PRODUCING HIGHLY MARKETABLE GRADUATES

UTP was recognised as a Jobstreet.com Preferred University in 2019, putting it among the top 10 private universities highly recommended by Malaysian employers.

The award showcased UTP as a university that produces top quality graduates well-equipped to meet the demands of the labour market, and collaborates actively with industry.


JobStreet.com
Preferred
PROGRAM

SPORTS

UTP's various sports teams showed focus and determination during an active year competing in a variety of events. They scored several successes emerging among the top three in a number of championships.

OVERALL

- UTP placed third overall in the MASISWA Sports Tournament of 2019 with five gold medals, two silvers and a bronze.

- The university won two golds, a silver and a bronze in the Perak Sports Open Tournament.

Rugby

- In the UTP Super Rugby 10s, the UTP Drillers were the first runners up in the under-20, first runners up in men's open while UTP's women team, the G-Drillers, clinched the second runner up spot in the tackle category.

- UTP Drillers was named the Best Male Sports Team in MASISWA 2018. In April 2019, they received a trophy and RM2,500 for their achievement.

- UTP was the second runner up in the Super 7s rugby event.

- UTP was first runner up in the UNIMAS 7s Rugby Championship.

- UTP Drillers were the Plate Champion in the Bali 10 international rugby competition.

Karate
UTP won a gold medal in the 4th UCSI University Karate Championship.

Netball
The university's netball team was the second runner up in the MASISWA Netball Championship 2019.

Volleyball
The UTP Falcons were the Champions in the 2019 Volleyball Championship.

Swimming
UTP won a bronze medal in the MASISWA Swimming Championship.

Dodgeball
UTP added dodgeball to its portfolio of sports activities in 2019. The game has become popular as an international sport. During the year, UTP organised its first Dodgeball Tournament to promote the sport and foster networking among dodgeball participants in Perak.

#UNIVERSITY SOCIAL RESPONSIBILITY

UTP takes Social Responsibility very seriously, embedding it into the university's overall vision and goals. We place great importance on being a part of the community and believe this helps to enrich our academic activities and deepen our impact on economic, cultural, social and environmental development. Our emphasis is on long-term and sustainable change in the lives of our target communities.

A NEW LEARNING CENTRE IN PERAK

In February 2019, UTP launched a community centre as part of its education outreach to help people in Parit, Perak improve their lives. The Pusat Komuniti & Inovasi Desa Layang-Layang Kanan is equipped with library resources, computers and meeting facilities.

During the year, the university organised several learning and sports activities at the centre to help youth make the most of their abilities.

The centre has been developed with support from UTP's crowdsourcing partners and from the sale of the book, Perak Sultanate: The Historic Royal Glory of Perak Tengah, co-written by UTP lecturer, Assoc Prof Dr Shahrina Md Nordin and Datuk Seri Jalil Abdul Hamid, Chief Executive Officer, NSTP.

BACK-TO-SCHOOL HELP FOR LOW INCOME FAMILIES

UTP volunteers distributed uniforms, bags, stationery and other items to 1,200 primary school students from low-income households in Perak in November 2019 under Yayasan PETRONAS' Back To School 2019 (BTS 2019) programme.

The volunteers also conducted Science, Technology, Engineering and Math (STEM) activities at 14 schools.

More than 21,000 students nationwide benefited from BTS 2019 – the largest number since the project started 17 years ago. The programme helps remove one of the barriers faced by some students from low-income families.

One of the volunteers, Ahmad Amirun Aqil Ahmad Rohi said it is hard to imagine that children opt out of school because of the lack of proper shoes or uniforms. "It may not seem that much to some, but to those struggling to ensure that their kids stay in school, it is a much-needed aid. I'm so glad to have been part of something that makes a difference," he added.

STREAM REHABILITATION

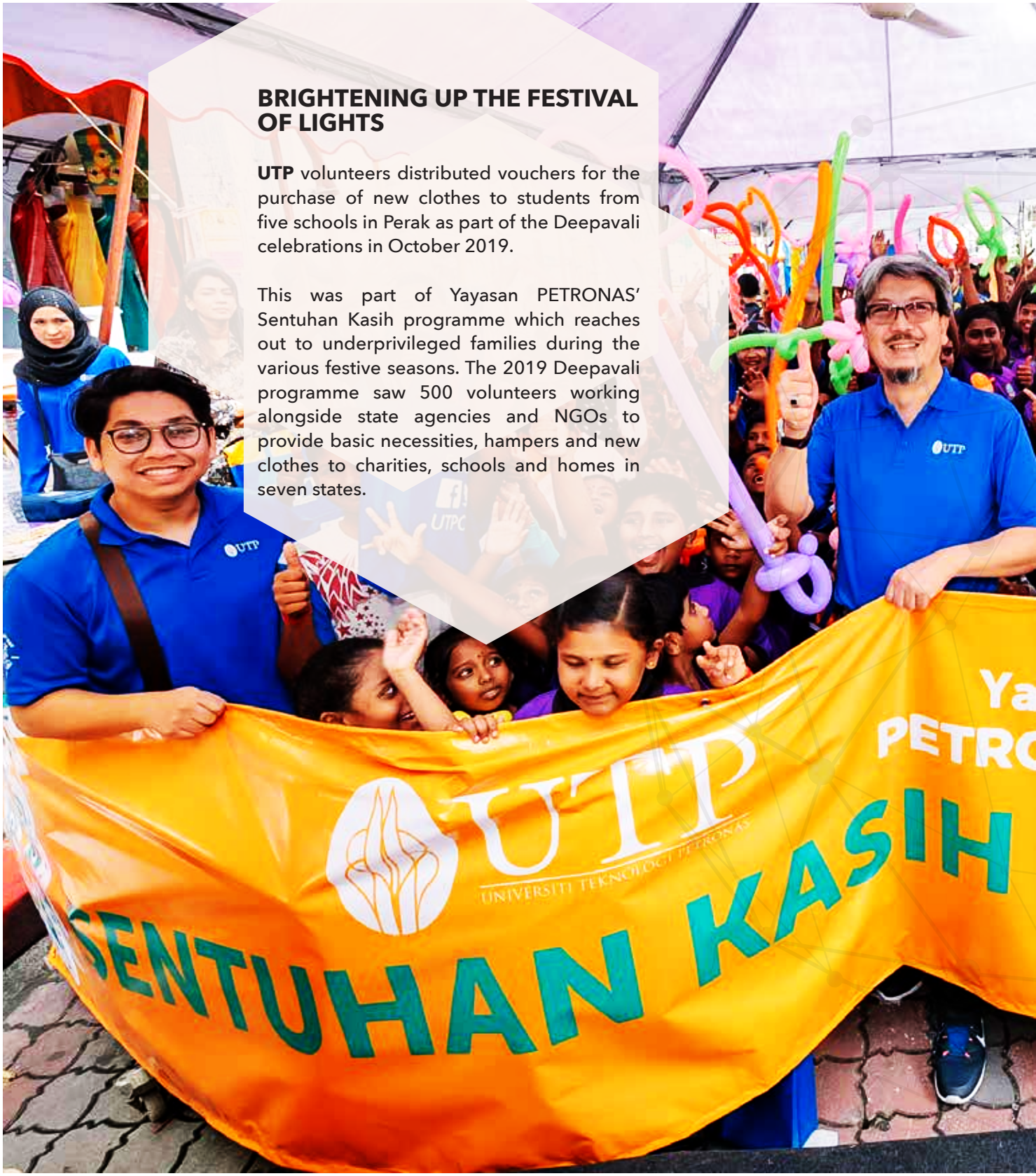
UTP's Civil and Environmental Engineering Department initiated efforts to rehabilitate Sungai Lumut Kanan in Perak under the Ate River Kome programme in collaboration with JPS Manjung, the Manjung City Council and other community partners.

The project provided students from Hydraulics, Urban Water Design and Coastal & Engineering to enrich their learning through real life situations. Alongside the application of their knowledge of mathematics, natural sciences and engineering fundamentals to solve complex engineering problems, the event promoted interaction, cooperation and teamwork.

BRIGHTENING UP THE FESTIVAL OF LIGHTS

UTP volunteers distributed vouchers for the purchase of new clothes to students from five schools in Perak as part of the Deepavali celebrations in October 2019.

This was part of Yayasan PETRONAS' Sentuhan Kasih programme which reaches out to underprivileged families during the various festive seasons. The 2019 Deepavali programme saw 500 volunteers working alongside state agencies and NGOs to provide basic necessities, hampers and new clothes to charities, schools and homes in seven states.




RIYANKA
yasan
ONAS
DEEPAVALI

STREET CLEAN-UP FOR SERI ISKANDAR

About 120 volunteers cleared more than three tonnes of trash from the streets of Seri Iskandar in conjunction with World Clean-up Day in September 2019.

The group, including students from UTP, UiTM Seri Iskandar and Youth of Strength and Happiness (YOSH) gathered at 7.00 am and spent two hours on the clean-up. It was organised by chemical engineering student, Jabir Meftah, in collaboration with Perak Tengah District Council. Sponsors included int3tree, Envy Formula and Mask Team. Nearby restaurants sponsored lunch for the volunteers.

"Although efforts like this are very small, they could be meaningful in raising awareness on the importance of shared environmental responsibility and cultivating a culture of cleanliness, especially among youths," Jabir said. "Seri Iskandar is our first location and we are eager to carry out this campaign on a large scale throughout Malaysia."

World Clean-up Day is an initiative by the Let's Do It Foundation, a global civic movement that began in Estonia in 2008. The foundation's mission is to connect and empower people and organisations around the world to clean up the planet.

CELEBRATING THE TRUE SPIRIT OF RAMADAN

The UTP community shared the blessings of Ramadan with orphans and the underprivileged in the neighbouring community at an Iftar event.

They distributed cash, baju Raya vouchers and food donated by UTP staff, Yayasan PETRONAS and PETRONAS Human Capital Investment. University staff and students cooked up 1,300 packs of bubur lambuk for both the UTP and surrounding community.

The Iftar saw a turnout of over 1000 guests including Institute of Technology PETRONAS Board of Directors Chairman and PETRONAS Group Human Resource Management Senior Vice President Dato' Raiha Azni Abd Rahman, UTP Vice Chancellor Professor Dr Mohamed Ibrahim Abdul Mutalib, representatives from Perak Government Departments and local authorities.

BEST MPU4 COMMUNITY ENGAGEMENT PROJECTS IN 2019

Community Engagement Project is one of the obligatory courses offered to all UTP students as required by the Minister of Education Malaysia. This is a project-based activity whereby the students need to handle from planning, executing until the completion of the event. This course aimed to enhance student's ability to apply their knowledge, skills, patriotisms and moral values. The well-planned project must at least fulfil one of UTP University Social Responsibility (USR) pillars which are Education, Socioeconomic and Environment.

COWDUNG TO MOO-NURE!

A UTP team of chemical engineering and civil engineering undergraduates helped a cattle farm turn its animal waste into clean energy. They set up a biogas reactor at the Viridix Farm in Sungai Siput, Perak, to generate cooking gas for its workers.

The group also involved students from the nearby Bawong Secondary School in the community engagement project to spread awareness of the importance of renewable energy and more effective waste management.

Animal waste poses a significant risk to the environment and public health. Not only does it pollute by leaching into water sources and soil, but it generates large amounts of methane as it decomposes, raising greenhouse gas emissions.

A GUIDE FOR MUSLIM TRAVELLERS IN JAPAN

A team of 19 UTP chemical engineering students created a highly useful guide to help travellers visiting Beppu, Japan, find Muslim friendly restaurants, grocery stores and tourist attractions. This was felt to be a timely project given the upcoming Rugby World Cup 2019 and Olympic Games 2020 to be hosted by Japan.

The group spent two weeks in Japan conducting surveys on local awareness of halal products and services. The information gathered was to be the basis of a comprehensive and easily accessible website for Muslim travellers.

During their visit, the UTP undergraduates also collaborated with students from the National Institute of Technology, Oita KOSEN, in a project which applied their knowledge and skills to solve plastic waste management issues.

GROWING GREEN

UTP students installed a hydroponics system at SK Seri Tronoh in Perak to rehabilitate the primary school's 'Green Zone'. The system is equipped with a smart water quality monitoring and regulation system designed by the team to reduce maintenance time.

The school established the garden a few years ago to ignite a love for agriculture and gardening in the students. However, poor installation and maintenance, as well as infestation of the soil by pests undermined the success of the project.

The UTP team cleaned up and upgraded the greenhouse and installed the nutrient-film technique hydroponics system as part of their community engagement initiative. The quad-pipe system can house 48 vegetables and 20 fruiting plants. Automated sensors applying IoT technology, detect and collect data on humidity, air temperature, PH, Electrical Conductivity (EC), water temperature, and water flow.

They also ran a camp to familiarise the schoolchildren with STEM subjects and agriculture through hands-on activities and interactive videos and games.

#BUILDING STRATEGIC LINKAGES

Collaboration and networking are critical to UTP's continued growth and success. They are also pivotal in the university's efforts to become an internationally recognised partner of choice by the academic and scientific community. Throughout 2019, several strategic agreements were signed with both local and overseas institutions and organisations. They aimed to offer students and staff at UTP and its partner organisations a global education experience and boost the university's student recruitment.

FOSTERING GLOBAL RELATIONSHIPS

UTP and Iqra University (IU) Pakistan agreed to work together to strengthen their research capabilities and academic reputation through rigorous academic-research networking. Pakistan contributes the highest enrolment of international students in UTP with 224 undergraduate and postgraduate students.

UTP and the University of Adelaide strengthened their ties through academic staff and student exchanges, joint research projects and collaborative degree programmes at both undergraduate and postgraduate levels. This is expected to strengthen the students' academic performance, enhance research quality and enable the extension and application of knowledge to address both local and global needs.

An MoU with Texas A&M University (TAMU) and Texas A&M Engineering Experiment Station (TEES) created a platform for cooperation in the area of CO_2 utilisation. The focus is on catalysis and technologies for CO_2 reforming, methanation and hydrogenation to convert waste CO_2 into valuable chemicals and fuels.

FOSTERING GLOBAL RELATIONSHIPS

Collaboration with Hadhramout University Yemen offers new opportunities in student mobility, staff training, development and attachment, joint research and development activities, sharing of information and resources and joint organisation of seminars, conferences and workshops. It has also attracted interest in UTP from Yemeni students. To date, UTP has enrolled 18 undergraduate and 34 postgraduate students.

UTP and the University of Sciences and Technology Chittagong in Bangladesh, are collaborating on teaching, research, training, development, the exchange of faculty members and students, and staff development.

Ties with Bangladesh institutions were further strengthened through an MoU with the Canadian University of Bangladesh for academic partnership, credit transfer and resource sharing. It is hoped that this will boost UTP's intake of Bangladeshi students from its current four undergraduate and 12 postgraduate students.

The Ministry of Mineral Resources and Energy, Mozambique agreed to sponsor more Mozambican scholars to study at UTP. To date, the Ministry has provided scholarships to 91 students.

FOSTERING GLOBAL RELATIONSHIPS

UTP signed an MoU with DR. N.G.P. Institute of Technology, (Anna University), India, to facilitate a more dynamic exchange of information and education experiences for their students and academic staff.

UTP and Hainan University strengthened their collaboration on boosting their scientific, technical and engineering competencies.

UTP's Vice Chancellor, Professor Dr Mohamed Ibrahim Abdul Mutalib has been appointed as Hainan University (HU)'s International Advisory Board (IAB) member.

An MoU with six Kazakhstan universities has paved the way for greater academic, research and cultural cooperation and student exchange. These include Kazakh-British Technical University (KBTU), M.Auezov South Kazakhstan State University, Academician Y.A. Buketov Karaganda State University, M. Kh. Dulaty Taraz State University, S. Seifullin Kazakh Agro Technical University and Al-Farabi Kazakh National University. UTP also hopes that the Kazakhstan universities will promote it as a university of choice in Southeast Asia.

FOSTERING GLOBAL RELATIONSHIPS

UTP expanded awareness of its academic and research capabilities in India by forging partnerships with three well-known institutions: BMS College of Engineering, Bangalore, the Central Institute of Technology, Assam and Amity University, Noida. The agreements cover academic expertise and student exchange, curriculum design, cooperation in research projects and internship opportunities.

UTP and Mahasarakham University, Thailand, agreed to pool resources and knowledge and work together for global solutions in research and science.

ENSURING SUSTAINABLE USE OF NATURAL RESOURCES

UTP researchers will share information, knowledge, technology and expertise with professionals in the Department of Irrigation and Drainage Malaysia (DID) towards sustainable development of environmental resources.

The university's Institute of Self-Sustainable Building for Smart Living (ISB) and DID agreed to work together in the areas that include coastal hydraulics and offshore engineering, internship programmes, joint R&D activities, staff development programmes, journal access and sharing of laboratory facilities.

UTP ISB is committed to green and clean (GLEAN®) technology development for buildings, in the areas of energy, materials, water and waste, and their impacts on community well-being. The Institute has also collaborated with DID Manjong District Perak for coastal erosion at Teluk Nipah and mangrove restoration at Tanjung Kepah, Lekir.

SMART PARTNERSHIP TO NURTURE DEVELOPMENT IN PERAK

A strategic partnership with Dewan Perniagaan & Perindustrian Melayu Perak (DPPMP) will enable UTP to contribute to the development of the state through a sharing of knowledge and expertise, capacity building and joint research projects.

The collaboration will give UTP access to internship placements and tap into opportunities for entrepreneurship and technopreneurship for its students. It will also facilitate marketing of UTP's academic programmes through DPPMP's network.

IT'S ROCKET SCIENCE FOR SARAWAK STUDENTS

An educational outreach space programme will launch joint efforts by UTP, Universiti Malaya (UM), Universiti Malaysia Sarawak (UNIMAS) and The Learning Curve to inspire interest in STEM. They will develop a hybrid (solid fuel–liquid oxidiser) rocket that will blast off on a sub-orbital trajectory flight from Sarawak by 2021.

This nationwide initiative will see UTP's Institute of Autonomous System modelling and simulating the hybrid rocket flight dynamics at its facilities in Seri Iskandar Perak. UM will conduct the rocket's structural dynamics analysis before its physical assembly by UNIMAS' faculty of engineering at Kota Samarahan.

The four institutions have agreed to work together to establish an active STEM community and platform in Sarawak through education outreach, joint teaching and research, and joint production of educational materials and resources.

PARTNERSHIPS FOR PROGRESS

A strategic partnership between UTP and Swinburne University of Technology Sarawak Campus (Swinburne Sarawak) will see a sharing of academic and research resources and student interchange for mutual benefit. Joint research projects and activities will include digitisation, data science and Internet of Things (IoT). Other areas of collaboration include university social responsibility activities and Science, Technology, Engineering and Mathematics (STEM) Outreach programmes.

UTP signed an MoU with Disted College to cooperate in a number of areas including staff and student development, student recruitment and marketing of academic programmes.

UTP and the University College of Technology Sarawak will work together on academic and research programmes, staff and student exchange and publications.

PARTNERSHIPS FOR PROGRESS

UTP, INTEC Education College and Cosmopoint College will embark on several areas of interaction including students' exchange, short courses and staff and student development programmes.

UTP forged a smart partnership with the Terengganu Strategic & Integrity Institute (TSIS). It is hoped this will see new synergies in implementing the state's administrative policies as well as in education areas and mineral resources technology.

WORKING TOGETHER FOR A SAFER CYBERSPACE

UTP became CyberSecurity Malaysia's training centre for the Northern region as part of an overall effort to create and sustain a safer cyberspace.

They will jointly develop specialised cyber security training programmes to build knowledge and expertise for both UTP staff and students and other interested participants.

DEVELOPING A SUSTAINABLE RESEARCH CULTURE UTP SIGNED ON AS A MEMBER

UTP signed on as a member of the Executive Steering Committee of the Research and Innovation of Private Higher Education Network (RIPHEN) led by the Management and Science University (MSU).

The other 6 members of this steering committee are Universiti Tenaga Nasional (UNITEN), Multimedia University (MMU), Universiti Kuala Lumpur (UniKL), Infrastructure University Kuala Lumpur (IUKL), Asia Pacific University (APU), and Nilai University.

COLLABORATION IN RESEARCH AND TECHNOLOGY DEVELOPMENT

UTP will collaborate with PTT Exploration and Production Public Company Limited in technology development to enhance petroleum exploration and production efficiency.

This tie-up supports the Malaysia Indochina Industrial & Institutional Initiative (MIII) and strengthens university-industry partnerships in developing knowledge and expertise to tackle the challenges of the Fourth Industrial Revolution.

BUILDING CAPACITY AND BROADENING UTP'S REACH

To broaden the scope of work of our experts in the Fundamental & Applied Sciences, UTP and Universitas Islam Indragiri (UNISI), to work on joint research projects, grant applications, publications as well as to share resources. Experiential learning opportunities would be enhanced through attachment opportunities, seminars, and short courses.

SUSTAINABLE ENERGY BOOST THROUGH COLLABORATION

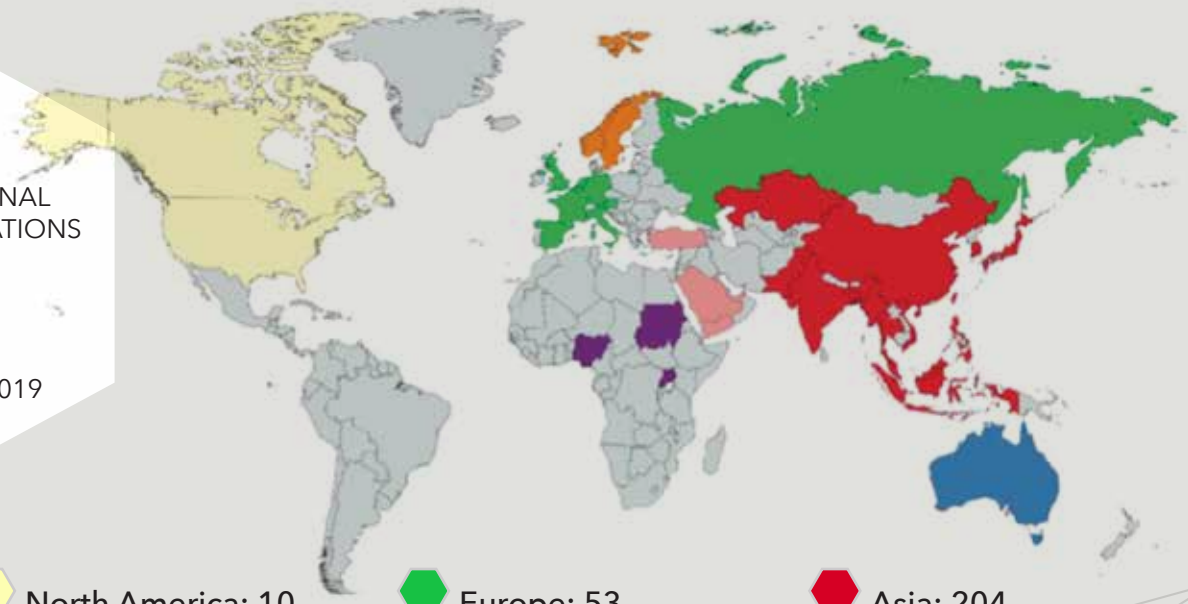
UTP and China University of Petroleum, Beijing, will establish a Joint Centre for Sustainable Energies Technology through joint research and the synergistic pursuit of knowledge in oil and energy technology. It is hope that these two entities will be able to find sustainable solutions to meet climate commitments.

#ACTIVE MOU

290 ACTIVE PARTNERSHIPS WITH PARTNER INSTITUTIONS SPREADING ACROSS 39 COUNTRIES

70% INTERNATIONAL COLLABORATIONS

85 MoUs SIGNED IN 2019



North America: 10

- 1 Canada
- 9 United States

Scandinavia: 3

- 2 Norway
- 1 Sweden

Africa: 5

- 1 Nigeria
- 1 Sudan
- 3 Uganda

Middle East: 4

- 1 Saudi Arabia
- 1 Turkey
- 1 United Arab Emirates
- 1 Yemen

Europe: 53

- 4 Austria
- 2 Belgium
- 3 Czech Republic
- 18 France
- 5 Germany
- 1 Ireland
- 1 Italy
- 3 Netherlands
- 3 Russia
- 3 Spain
- 10 United Kingdom

Oceania: 11

- 11 Australia

Asia: 204

- 4 Bangladesh
- 1 Brunei
- 5 China
- 18 India
- 28 Indonesia
- 14 Japan
- 3 Kazakhstan
- 7 Korea
- 87 Malaysia
- 1 Myanmar
- 9 Pakistan
- 9 Philippines
- 3 Singapore
- 4 Taiwan
- 7 Thailand
- 4 Vietnam

#GOVERNANCE

PRO CHANCELLOR

- **Datuk Ahmad Nizam Salleh**

PRO CHANCELLOR

- **Tan Sri Wan Zulkiflee Wan Ariffin**

BOARD OF DIRECTORS

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4 • **MAZUIN ISMAIL**

5 • **ADNAN ZAINOL ABIDIN**

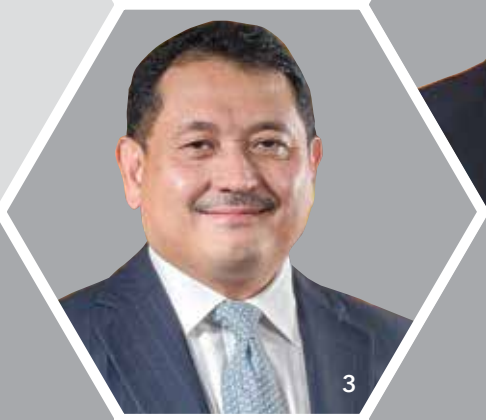
Vice Chancellor

6 • **PROF TS. DR MOHAMED IBRAHIM ABDUL MUTALIB**

Company Secretary

7 • **SYED MARZIDY SYED MARZUKI**


2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Vice Chancellor

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Deputy Vice Chancellor, Academic

3 • **PROF IR DR MOHD SHAHIR LIEW**
Deputy Vice Chancellor, Research and Innovation

4 • **ASSOC PROF DR NOR HISHAM HAMID**
Deputy Vice Chancellor, Student Affairs and Alumni

5 • **ASSOC PROF DR AZRAI ABDULLAH**
Registrar

6 • **ANDREW BERNARD SHANTA**
Chief Financial Officer

7 • **IR DR AIDID CHEE TAHIR**
Chief Strategy Officer

8 • **SOLIHUDDIN AHMAD NASARUDIN**
Chief Support Services Officer

9 • **ZAMRI YUSOF**
Chief Human Resources Officer

10 • **SHAMSINA SHAHARUN**
Senior Director, Corporate Communications

Secretary

11 • **HASLINA NOOR HASNI**
Senior Manager, Legal Services


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Chairman

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Vice Chancellor

Members

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Deputy Vice Chancellor, Academic

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Director, Centre for Student Development

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Director, Research Management Centre

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Chief Strategy Officer

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Senior Manager, Legal Services

Secretary

17 • **ASSOC PROF DR AZRAI ABDULLAH**
Registrar


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Group Human Resource Management
PETRONAS

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Chairman, AmBank & Pro Chancellor Open University Malaysia

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Professor of Civil and Environmental Engineering
Director, Princeton Environmental Institute

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Futurist, Catalyst, Singularitarian, London, United Kingdom Management Consulting

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President ASEAN Honeywell International Incorporation, USA

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Executive Vice Chairman of Infosys, India

Andrew Frederick James Gould
Former Chairman & CEO, Schlumberger, USA

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Chief Strategy Officer, Universiti Teknologi PETRONAS

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Chief Operating Officer, Multimedia Development Corporation (MDeC)

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Head, Group Research and Technology, PETRONAS

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Non Independent Non-Executive Director, Dagang Nexchange Berhad (DNeX)

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President, Academy of Sciences Malaysia

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University of Melbourne, Australia

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Deputy Director General, Research & Development Technology Programme
Malaysian Nuclear Agency

Sid Vinyard
Chairman, Houston Technology Center

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Director, Research Management Centre
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Pertubuhan Tindakan Wanita Islam (PERTIWI)

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Social Development & Training Specialist
Yayasan Pendidikan Hidayah

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Professor at Aston University
Texas A&M University System, United States of America

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University of Melbourne, Australia

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University of Rochester, United States of America

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People Performance Sdn Bhd

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ERICSSON

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Halliburton Energy Services (KL)

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Eng Ling Ho
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Intel Corporation

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Director, Developers Ecosystem, Enterprise Business, South East Asia
NVIDIA Singapore

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Group Technical Solutions

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PETRONAS Group Health, Safety, Security & Environment

Ir Hambali Chik
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PETRONAS Group Technical Solutions (GTS)

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Director
Department of Occupational Safety and Health Malaysia

Kapt (B) Dato' Ir Hj Anuar Hj Yahya
Timbalan Ketua Pengarah (Sektor Pakar)
Jabatan Pengairan Dan Saliran

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Indah Water Konsortium Sdn Bhd

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Director
Malaysian Communications and Multimedia Commission (MCMC)

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Process Automation Digital Factory / Process Industries & Drives Head of Regional Vertical Sub-Segment (VSS) Glass & Solar ASEAN Business Segment Coordinator for Process Instrumentation ASEAN
Siemens Malaysia Sdn Bhd

Kalai Selvan Subramaniam
CEO and Co-Founder
Infinecs Systems Sdn. Bhd.

Ir Dr Adrian Tan Kong Fei
Engineering Manager
Roc Oil Malaysia (Holdings) Sdn Bhd / Roc Oil (Sarawak) Sdn Bhd

Ir Liam We Lin
Technical Director
RPM Engineers Sdn Bhd (Civil & Structural Engineering Consultancy Services)

Ir Liew Shaw Shong
Senior Director
G&P Geotechnics Sdn Bhd

Prof Dr Mohamad Akram Laidin
Executive Director
International Shari'ah Research Academy for Islamic Finance

Ts Mohamad Sukor Zainal Abiddin
Executive Director / Technical Director
EFTECH Director Solutions Sdn Bhd (KL)

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QSR Brands (M) Holdings Bhd

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Chief Officer Digital Ecosystem
Malaysian Communications & Multimedia Commission (MCMC)

Mohd Asrul Abdul Aziz
Managing Director
Uzma Integrated Solution Sdn. Bhd

Mohd Farid Zainal Abidin
CEO & Founder
Elvira Systems Sdn Bhd
Mohd Rezuwan Shah Zakaria
Managing Director and Head of Laboratories

Johor Toyyiban
Laboratories Sdn Bhd
Nasaruddin Ahmad
Custodian (Petroleum Geosciences)
PETRONAS Carigali

Nik Mohd Hasyudeen Yusoff
Founder
Inovastra Capital Sdn Bhd

Noor Aishah Mohd Nor
Head of Group Communications, UEM Group Berhad and Chief Executive Officer of Yayasan UEM
UEM Group Berhad

Ir Noorul Khairi Mohd Nor
CEO
Petrofac RNZ

Ir Ong Hock Guan
Delivery Manager and Discipline Head, Technical Authority Level 1, Materials, Corrosion and Inspection Engineering
Sarawak Shell Malaysia

Ir Rafil Elyas
Owner and Principal Consultant
East One-Zero-One Sdn Bhd

Dr Rezal Khairi Ahmad
Chief Executive Officer
NanoMalaysia Berhad

Ir Salmey Abdul Halim
Project Director / Custodian Electrical
Pengerang Cogeneration Plant (PCP) and Pengerang Transmission Line Projects (PTL) PD&T Division, PETRONAS

Shah Rizal Dahlan
Custodian Engineer Instruments &Controls
PETRONAS Group Technical Solution (GTS)

Thierry K.H. Wee
Managing Director & Principal Production Technologist Consultant
Invigour Energy (KL)

Wan Ahmad Kamal Wan Halim
Executive Vice president - Enterprise
Telekom Malaysia Bhd

Ir Wan Anuar Wan Endut
Managing Director & Civil Engineer
Arup Jururunding Sdn Bhd

Wan Mohammad Sobri Wan Abdullah
Principal Engineer (Water Technology)
PETRONAS Group Technology Solution (GTS)

Ir Yee Yew Weng
Geotechnical Engineer Managing Director
Keller ASEAN

Dato' Yunus Abd Razak
Chairman, Board of Geologists Malaysia
Board of Geologists Malaysia

Dr Zahidah Md Zain @ Md Din
Principal (Reservoir Technology) / Head (R&D Unconventional Technology) Group Research & Technology Project Delivery & Technology
PETRONAS Research Sdn Bhd (PRSB)

Zuraida Mat Isa
Specialist (Petroleum Geosciences)
PETRONAS Carigali Sdn Bhd

The UTP Annual Review 2019 includes reports, activities and events of Universiti Teknologi PETRONAS from 1 January to 31 December 2019. It is available in both print and online version.

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