

Together we can!

MESSAGE FROM THE VICE CHANCELLOR

Shaking Malaysia's social norms

Assalamualaikum warahmatullahi wabarakatuh and hello everyone.

It's been six months of a brand new year. Although warming up to the new decade took an unprecedented twist, the hardship, complications and anxiety have brought out the best of our teams in that quintessential UTP spirit and energy.

In our last publication, our message has been one of COVID-19—being mindful of our own hygiene, our shared efforts to take care of our communities and families, and our commitment to one another.

To illustrate, since the start of the Movement Control Order (MCO) on the 18th of March 2020, we have been providing our students RM15 e-coupons for breakfast, lunch and dinner meals at our cafeterias. Our on-campus mini marts too are frequently replenished to make sure our students' essential needs are well taken care of. We are also actively monitoring our inbound and outbound students by providing them all the necessary assistance they need during the MCO.

Despite the MCO, we are doing everything we can to minimise the impact of the disruption and enable our students to continue learning remotely. In fact, on the 16th of March 2020, we announced that all teaching, learning and academic assessments will be conducted online. Mobilised by our Centre for Excellence in Teaching and Learning (CETaL) and our ULearn, we are building the infrastructure for a world of virtual learning.

During this trying time, we've seen hope and we've seen progress. On this count, I'm happy to share that the groundwork for the transition to the new normal has taken hold years before the pandemic hit. This is really no accident. We have come a long way since GENESYS was first launched in 2015 and we haven't stopped since. We recently reached another milestone in UTP's digital transformation and going forward, we will continue to apply our teams and resources across all these levers to do more to accelerate change.

Editor-In-Chief

Photographers

Mohd Hazrin

Khalid Asvril

Shamsina

Shaharun

Ismail

Ismail

Thanks to our ground breaking hard work in the years prior, I believe that the disruption brought on by the pandemic will serve us positively. This renders GENESYS' P.A.C.E. (Participation, Acceptance, Communication and Engagement) change motto, a pivotal role to help us deliver the benefits of scale, especially in today's turbulent environment.

In this respect, I would like to extend my congratulations to all UTP staff who have contributed immensely to

GENESYS' success. With a hopefulness for the new normal, I understand that all of us are eager to get back to work. While we still worry about the risk of getting sick, going back to work begins with trust.

Trust starts both with being safe and feeling safe. To stay safe, we must observe the social etiquette of the new normal. I know that each of us share the anguish that we feel for our world and our colleagues. Therefore, please be mindful of the 3Cs: Crowded places, Confined spaces and Close conversation. Let's take care of one another.

Lastly, as education and industry innovators, we must place faith in our abilities and align our people for change impact.

Prof Ts. Dr Mohamed Ibrahim Abdul Mutalib

UNIVERSITI TEKNOLOGI PET

EDITORIAL TEAM

Advisor

Professor Ts. Dr Mohamed Ibrahim Abdul Mutalib

Editors

Mohd Zulkarnain Zulkifli Wan Madihah Wan Abd Rahman Jauhari Universiti Teknologi PETRONAS. The views and opinions expressed or implied are those of the authors and do not necessarily reflect the views of the University's management. No article in part or in whole should be reprinted without written permission.

UTP Quarterly is the quarterly newsletter of

Editorial correspondence and contributions can be addressed to:

The Editor-In-Chief UTP Quarterly

Corporate Communications Division Universiti Teknologi PETRONAS 32610 Seri Iskandar, Perak Darul Ridzuan Malaysia Tel: 1-300-22-8887



COVER RATIONALE



The cover signifies UTP's unwavering effort to break new ground in crisis solidarity after overcoming halted steps during the MCO. Although the lockdown period will be remembered as a dark spot in Malaysia's history, the sombre period also offered many positives. Lastly, the robotic arm shows how UTP has utilised technology during the pandemic to overcome challenges.

UTP EXTENDS STREAK NEAR THE WORLD'S TOP Universities for talent development AND INNOVATION

As a young university, UTP has constantly defied its age. In the last 23 years, spectacular milestones have kept on arriving, one after another. According to Vice Chancellor, Professor Ts. Dr Mohamed Ibrahim Abdul Mutalib, UTP aspires to become a model of consistency. Throughout the university's inception, UTP has moved rapidly to be a part of global engineering, science and technology solutions for many key industries.

Given UTP's strong academic and industry footprint, UTP has been able to sustain its position as the top private Malaysian university across worldwide and national rankings such as Quacquarelli Symonds (QS), Times Higher Education (THE), Malaysia Research Assessment Rating System (MyRA) and Rating System for Malaysian Higher Education (SETARA).

UTP again made a major leap forward recently after being ranked third among local universities in the THE Asia

University Rankings 2020. This places UTP primed for growth and well positioned to improve its 124th overall ranking.

Notably, UTP is the first private university in Malaysia to be rated a maximum 5-star overall rating in the QS Stars[™] University Rating System. For QS Asia University Rankings 2020, UTP is ranked 82nd, making it Malaysia's only private university in the top 100 QS Asia.

Also, UTP's courses are internationally recognised by the industry. Now, UTP is ranked among the world's top universities in seven subjects in the QS World University Rankings by Broad Subject of Engineering and Technology 2020. Overall, UTP ranks 259th.

Lastly, UTP is the only private university in Malaysia to have reached a six-star rating (highest) in MyRA for its research development and commercialisation programmes—an enviable feat that has been maintained since 2015. In addition, UTP is also rated six-star (outstanding) in the latest SETARA rankings.



UTP ADVANCES TO TOP 500 IN QS WORLD UNIVERSITY RANKING 2021

Organic growth and industry leadership are strategic priorities for UTP. On this count, we are proud to be recognised, both for the excellence of our work and the opportunities for personal growth that we provide to our graduates.

This year is no different. Recently, UTP was ranked 439th in the QS World University Rankings 2021, a steady progress since our debut in 2017. Congratulations to all of you who have made this possible. Going forward, we will continue to work seamlessly together as one and propel UTP towards sustainable global prominence.



COVID-19 SOLIDARITY

A CONTRIBUTION TO BUILD ON **#KITAJAGAKITA**

The coronavirus pandemic has left many in need. Front-line medical workers fighting the pandemic need protective equipment. Those stranded on-campus may be hungry. Unfortunately, the list is long. Fortunately, there's been an outpouring of support from our students, partners and alumni who came together to help others during this time of need. A big thank you goes out to everyone who extended a helping hand. Here's our recent COVID-19 contribution highlights.





19%

Total Donation RM 52,314





UTP Alumni's sponsorship of COVID-19 kit giving campaign ALUMNI RELATIONS OFFICE DONATION DRIVE A GIFT FROM ALUMNI TO STUDENTS Other contributors

UTP Alumni

contributors RM42,251

81%





RM10,063

COVID-19 SOLIDARITY



THE





200 Qurban

packs from MyFundAction Perak



Fond

2500 face masks supply by Talenta Ideas Sdn. Bhd, (a UTP alumni company) Food donation by UTP's Pakistani Student Society

RM7,830

Hari Raya Aidilfitri donation for UTP students on campus and on duty front-liners





Masala Wheels' cofounder and UTP alumni, Kuhan Pathy raised **26,054** meals from 370 contributors

COVID-19 SOLIDARITY

THE VIRUS SIMPLY COULDN'T INFECT OUR **COLLABORATIVE SPIRIT**

After the pandemic arrived, sadly, many parts of the world were jarred by Covid 19's latest swells. This, in turn, has forced the world to migrate to the new normal. In that same perilous time too, our deepest human impulse has drawn us closer to each other, despite being kept socially distanced.

Also, living with the virus has taught us new tricks, pushing us to come up with new ways to work, learn, socialise, pray and even how to move and interact with one another. As the world paused, it provided us an opportunity to step up and move forward.

Since the notice to close the university for students and staff on the 17th of March was issued, we have built a new space that resonates with our redefined goals and most importantly, to stop the virus from winning. This space rides on the back of digital and the information economy. Here's a short story of some of our highlights and lowlights during the MCO.



RM15 per-day free meal e-coupons distributed for 1.300 stranded

students

Food supplies replenished regularly throughout MCO

Before the rules were relaxed, the HSSE of our students, staff and stakeholders was our top priority, especially during the early periods of the MCO. Also, latest health and SOP updates were regularly circulated to keep everyone posted.

BUSINESS AS USUAL IN THE NEW NORMAL

Now, the new normal has become part of life at UTP. Even before the pandemic arrived, UTP has worked tirelessly with the industry to figure out ahead of time what kind of economy all of us need to cultivate in the future. In the wake of COVID-19's acute outbreak, the psychological journey through the pandemic has been nothing short of life-altering.

Ultimately, the diverse teams at UTP have had to get creative around filling the innovation funnel and experimenting with new ways to fashion a recalibrated work-life-balance. Although this required more of an imaginative arc, all of us at UTP took the challenge positively and made sure all of the elements got an equal amount of attention.



E-Learning / ULearn



UlearnX – Big Blue Button (BBB)



Interactive classroom / digital classroom



Lecturers can record and students can listen later



Pop quiz / create a poll



WFH & online meetings



50% population in the office – shift teams



Engagement with Alumni online



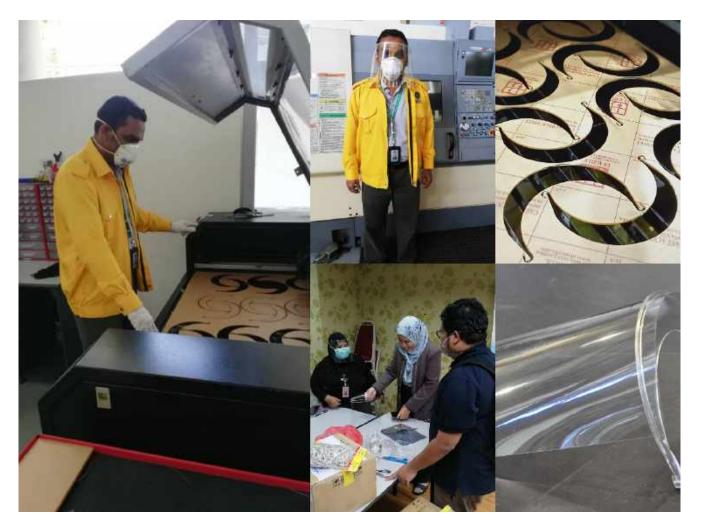


Online with Muhandis, UTP's nasyid group



RESEARCH AND INNOVATION

UTP STUDENTS AND STAFF USED DOWNTIME TO 3-D PRINT FACE SHIELDS FOR HOSPITALS IN NEED



As the need for face shields grows locally and nationally, UTP's Engineering, Prototyping & Innovation Centre (EPIC), Centre for Automotive Research & Electric Mobility (CAREM) and Technopreneurship Office recently joined forces to produce face shields using 3D printing and laser cut technologies for Perak.

To help meet heating up demand as a result of sharp rise in COVID-19 cases, UTP's Deputy Vice Chancellor Research and Innovation, Professor Ir Dr M Shahir Liew says, UTP is working closely with the government to contribute products and services developed through research and innovation.

"In this regard, we are responding to the nation's call for help in the fight against COVID-19 by producing face shields for our frontliners as we have the capability, expertise, manpower and facilities. We improved the design of the face shields based on practicality, strength and standard as set by Perak's State Health Department (JKN)." "We produce 120 pieces of face shields daily and so far, we have delivered 1100 of them to JKN. JKN will then distribute the face shields to hospitals and clinics in Perak. Our target is to produce 10,800 within 3 months."

"This contribution is part of our university social responsibility's effort to give back to the community. It is also a gesture of gratitude for our frontliners who have been working diligently in battling COVID-19 pandemic," adds Prof Ir Dr Shahir.

Meanwhile, according to EPIC Head, Nor Shahrul Abu Bakar, the face shield's frames are fabricated through two methods, laser cut and 3D printing technologies. The former cuts the design on acrylic sheets and produces more face shields in one run, while the latter produces face shields through an additive manufacturing technique using polymer filament and releases less material waste but with a lower production rate.

"The production work is carried out daily by eight staff from CAREM and EPIC on a rotation basis, while the design is done from home," explains Shahrul.

UTP GREETED 517 NEW STUDENTS; VO'W Eased Parents' fears with virtual Orientation week

On the 1st and 2nd of June 2020, UTP welcomed 517 new students to its Virtual Orientation Week (VO'W). Held for the first time in UTP's 23-year history, 32 undergraduate and 485 foundation students took part in the event.

It was a fitting opportunity to kick off the new normal as the orientation was conducted via ULearn, Microsoft Teams and various social media platforms. Although hundreds of kilometres apart, VO'W ensured that new students were given the signature warm welcome they deserved.

Five modules were scheduled for the students to engage and interact with their peers, seniors, facilitators as well as academic and support staff. Not one to miss out, a student from Pahang attended the orientation week from his hospital bed because of dengue.

The 2-day programme culminated in a virtual oathtaking ceremony. It was witnessed by Deputy Vice Chancellor Academic, Professor Ir Dr Hilmi Mukhtar, Deputy Vice Chancellor Student Affairs and Alumni, Professor Dr Nor Hisham Hamid as well as deans and chairs from UTP's academic departments.

Before the ceremony, Professor Ir Dr Hilmi Mukhtar shared a few words with the students. Saliently, he stressed the need for the students to stay positive during this trying time and embrace online learning as the new normal. Also, he encouraged the students to connect regularly with their lecturers to make the most out of the online learning setup.

Last but not least, a big thank you goes out to the amazing teams from ITMS, Registry, CCD, Security, ACS, CeTaL, YUTP, TAZU, Finance, IRC, CSS, SRC, RCSU and our student volunteers who contributed their time, ideas and expertise. Special mention to ITMS' technical team for providing end-to-end technical support and training to ensure the modules were accessible to all our new students throughout the country.

In brief: VO'W 2-day modules

Module 1: Welcome to UTP Module 2: Getting Organised Module 3: Living at UTP Module 4: Campus Life Module 5: UTPinME



OZIL ENERGY MADE IT TO TOP 6 OUT OF 48 AT Prestigious laurie dake challenge



EAGE's Laurie Dake Challenge is a worldwide competition that challenges students with real-world issues and promotes cross-disciplinary geoscience and engineering integration between participating universities.

It's is one of the most prestigious Exploration and Production (E&P) challenges in the world. Every year, students pit their skills against unrelenting contenders from the best universities all over the world for the grand prize. It is no surprise why recognition from EAGE and its storied sponsors is highly sought-after in the field.

UTP was represented by OZIL Energy at the challenge and the team successfully developed an Exploration Programme and the Field Development Programme (FDP) using datasets sponsored by SHELL. Going forward, OZIL Energy will be presenting their final challenge in front of a panel of judges at EAGE's Annual Conference, Amsterdam this coming December. Congratulations OZIL Energy for making the top 6. Good luck in Amsterdam and thank you for raising the bar for all of us.

UTP PETROTITANS OVERCAME 75 ASIAN TEAMS IN SCHLUMBERGER CASE STUDY CHALLENGE WIN

Congratulations UTP PETROTITANS for recently winning the Schlumberger Case Study Challenge. En route to winning the challenge, UTP PETROTITANS nullified tough challenges from 75 strong Asian teams. Key members, Shadishwaren Parmeshwaran, Izryl Zulfiqar and Arvind Raj from Petroleum Engineering and Petroleum Geoscience deserve much kudos for their hard work in ensuring the win. Thank you for making us proud and keep up the good job guys!



UNIVERSITY SOCIAL RESPONSIBILITY

A CARING COLLABORATIVE; YAYASAN Petronas, Petronas dagangan berhad and utp brought aidilfitri cheer to 200 families in Perak

Yayasan PETRONAS, PETRONAS' CSR arm recently collaborated with PETRONAS Dagangan Berhad (PDB) to spread festive cheer among 5,000 deserving families across Malaysia by contributing RM1 million ringgit in kind through this year's Sentuhan Kasih Festive programme. The initiative was carried out in conjunction with Hari Raya Aidilfitri, Kaamatan and Gawai celebrations.

Together with over 100 PDB station dealers, Jabatan Kebajikan Masyarakat (JKM) representatives and PETRONAS Group volunteers, Yayasan PETRONAS handed out food essentials such as rice, milk, oil, eggs, canned food, flour and PETRONAS gift cards to selected families nationwide between 4 May and 5 June 2020. The initiative was meant to ease the burden of these beneficiaries in the run-up to Hari Raya AidilFitri, Sabah's Kaamatan celebrations, as well as the Gawai festival in June.

Yayasan PETRONAS Chief Executive Officer Lita Osman says, "While we continue to battle the challenges brought on by COVID-19, we are stepping forward to support the 5,000 deserving families in managing their daily expenses, especially during the festive season.

"Our contributions are embedded with the hope that all of us will emerge stronger and united as we continue to flatten the COVID-19 curve. We believe that no matter what the situation is, we have the power to collectively change the narrative of despair to one of hope and joy."

PDB's Managing Director and Chief Executive Officer, Azrul Osman Rani says, "Equally passionate are our PETRONAS station dealers that have voluntarily joined the cause, assisted in procuring the items as well as delivering them to the identified homes across all states in Malaysia. This is indeed a time for us to come together and give back meaningfully to the community that sustains us."

For Perak, the Sentuhan Kasih Yayasan PETRONAS in collaboration with PDB was implemented by Universiti Teknologi PETRONAS (UTP). The university reached out to 200 B40 underprivileged families across Perak Tengah and Kinta districts. The families received their food essentials from UTP's Vice Chancellor, Professor Ts Dr Mohamed Ibrahim Abdul Mutalib.

The Sentuhan Kasih programme is part of the Foundation's Community Well-being and Development focus area, initiated to coincide with major celebrations in Malaysia. It provides an avenue for Yayasan PETRONAS to work with communities to provide for their basic needs and well-being.



IN LESS CELEBRATED JOBS ARE OUR COVID-19'S UNSUNG HEROES

Recently, UTP and PETRONITA Perak COVID-19 Aid raised a total of RM21,101.00 of donation to be given out to UTP's frontliners who put their lives at risk in the line of duty during the Movement Control Order (MCO). The donation will be disbursed in four phases to general workers such as cleaners, security staff, and casual labour. Significantly, we would like to thank everyone who contributed and we highly appreciate all the assistance provided during the MCO.



UNIVERSITY SOCIAL RESPONSIBILITY

IN PERSON WITH ASSOC PROF DR NOOR AMILA WAN ABDULLAH ZAWAWI

REWRITING THE SCRIPT ON ENVIRONMENTAL ACTION

Taking a position on sustainability and what really matters to our community

As the University Social Responsibility Environmental Pillar Leader, our priority is taking meaningful action on environmental conservation. As the costs of unchecked development and environmental threats such as global warming rise, it is no longer enough for a university and an industry innovator like us to view our contributions through the lens of traditional social responsibility.

Of course, we are deeply committed to advancing technological and socio-economic progress. However, we want to keep the negative impact our development and industrial activities pose to the environment as low as possible. At the same time, as a leading research university, our goal is to engineer the highest positive-impact returns. This is our way of translating the latest technological advantages in addressing sustainability gaps with respect to the environment. And to move these goals forward, we are working alongside the community, industry and the government to make a difference.

Shifting our action and environment onto a healthier, more sustainable track

Throughout history, we've been both, ingenious inventors and quick adopters of new technologies. Therefore, change is inevitable. But I don't want to lose the things we love—our forests, nature and relationships with the nonhuman world that give us so much in return. Now, our community's desire for environmental change is once again in the air. What gives me hope? I believe, when our youths take ownership of change, we will build a better environment.

For example, it is very important to protect our mangrove forests. Mangrove forests filter salt water to clean water. This, in turn, helps us secure our water sustainability. But if we keep on reclaiming land along our coastal shores at the expense of our mangrove forests, eventually, this will result in higher coastal erosion. I fear, in the long run, this will jeopardise our water supply.

Recently, our programme, Mangrove Conservation Awareness Programme (PKKB 2020) was broadcasted nationwide to raise awareness for the cause. We are really pleased to have the support of stakeholders such as Majlis Perbandaran Manjung (MPM), Jabatan Pengairan dan Saliran Malaysia (JPS), World Wildlife Fund (WWF), Jabatan Perhutanan and others.

All these partnerships mean a lot to us and the community. By working together, this allows us to impart technology knowhow or transfer knowledge to the community. Soon, a few more project announcements in Perak are on the horizon. This winning proposition will be the blueprint that will guide all of our forwardlooking actions.





Food Security (Sustainable Agriculture)



Water Security (Access to Clean Water & Sanitation)



Energy Security (Renewable Energy for Power and Cooking; Solar, Biomass, Hydro)



Waste Reduction (Zero Waste & Translating Waste to Wealth)



Environmental Conservation



Multi-Stakeholder Partnerships & Voluntary Commitments

Lowering global carbon footprint

As education and industry innovators, our Low Carbon Campus 2030 challenge focuses on advancing shared-efforts around energy, mobility, waste, water and greenery optimisation. We believe that change can happen faster than many people appreciate. This is why we need to widen the scale of our industry collaborations. Our goal is to become a global action and thought leader as an environmentally responsible university recognised for our low carbon commitment.

Environmental turnaround

Ultimately, we want to drive impact in environment sustainability, industry stewardship and education. Our stakeholders, including staff, students and industry partners alike increasingly expect a more fundamental and intrinsic commitment to sustainability. Only by working together, we will have the means to implement our ideas.

So we asked ourselves, what can we do? For one, we have various joint-programmes in the pipeline. In all, this will help us to empower our actions, industries and communities with knowledge and technology know-hows. As a leading research university, this is how we show our commitment and drive in sharing our knowledge as well as technologies for the benefit of the community and environment.

Mangrove Conservation Awareness Programme

UTP's YouTube Live Mangrove Conservation, Awareness Programme forum recently drew 1123 online viewers from all over the world. After the forum, 115 e-vouchers were given out. The forum assembled six industry panel members who shared their forward looking thoughts, insights and ideas.



Rumah Titian Ashraful Rohaniah's USR and Rainwater Harvesting & Vermicomposting Project

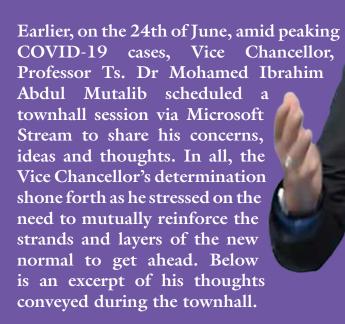
- RM21,670.00 donation drive
- Infaq of RM6,374.36 derived from the donation given to Rumah Titian Ashraful Rohaniah following the purchase of home appliances and mattresses
- Phase 2 to kick off 2 projects: Rainwater Harvesting and Vermicomposting
- Students' MPU4 engineering project engagement





VC TOWNHALL

BUILDING A BRIDGE To the New Normal



VC Townhall 2020 - From VC to You

"Assalamualaikum W.B.T and greetings to all.

Unbelievably, COVID-19 has created a time machine of sorts, taking us into the future of work. I'm aware that adjusting to the crisis has not been easy. Although we were forced to work remotely, I'm happy to share that we have seen noticeable improvement in speed and innovation during COVID-19.

These positive results, perhaps surprising to some, have quickly elevated working from home to a credible longterm option for us in the future. However, despite the distance, we need to stay united and harness the right mindset to thrive in this challenging environment.

We have shown remarkable strength in a number of important aspects over this extraordinary period of remote work. There has been a willingness to adopt necessary changes that has led to greater agility and collaboration.

Looking forward, we need to align our strategic direction with a high-performance culture, especially in view of PETRONAS' Statement of Purpose. Shared Value of Loyalty, Integrity, Professionalism and Cohesiveness should be embraced as our core principles alongside the 6 PCB of Results Matter, Own It, Focused Execution, Nurture Trust, Tell Me and Shared Success. In a sense, our financial sustainability and talent management operating models need to be anchored around excellence. I believe, this will gear us up towards Sustainable Global Prominence.

There will be no slouching from here forward. As the lines between work and life blur, we need to push our boundaries and keep the momentum going through Tier 1 KPI and R2C2 for 2021 - 2025. Indeed, we have no other option but to brace ourselves for the new normal.

Surely, we can pull through this together."

UTP AND AJCUI EXPERTS SHARE THEIR PERSPECTIVES ON GLOBAL ENERGY SUSTAINABILITY



On the 9th of June 2020, UTP and Atma Jaya Catholic University of Indonesia (AJCUI) organised a webinar called the Talk Series 2020. Themed 'Navigating to the New Normal: Rethinking the Role of Energy Towards Global Sustainability', the Talk Series 2020 convened industry players, academics, university students and the likes to participate in global development of economic and sustainability practices.

Most importantly, the talk series focused on how the pandemic will impact the sustainability of energy sectors against a sobering economic background. Led by UTP's Associate Professor Dr Ting Ding Hooi and AJCUI's Associate Professor Dr Endang Sulistyaningsih, a Memorandum of Understanding (MoU) was signed on the 20th of May 2020. Sparked by an earlier grant-



matching partnership, next, both universities will work together to develop academic and research collaboration programmes.

UTP's Vice Chancellor, Professor Ts. Dr Mohamed Ibrahim Abdul Mutalib says, "How then does the energy sector play its role amid this situation? Will there be a new normal for the energy sector in the future? How do energy industries and governments cope with this situation? These issues need special attention, and AJCUI and UTP are at the front line to provide a scrutinised view of these issues."

The webinar is divided into three seasons. Season one was carried out in June whereas season two and three will take place in September and December 2020 respectively.

HICOE-CBBR WEBINAR SERIES 1/2020: PROGRESS IN HYDROGEN RESEARCH

On the 17th of June 2020, HICoE-Centre for Biofuel & Biochemical Research (CBBR) hosted a webinar entitled "Webinar Series 1/2020: Progress in Hydrogen Research". The first in its series, the webinar was held in conjunction with CBBR's 47th Seminar Series and 5th Inter-University & Industry Network Malaysia Biomass to Fuel and Biomaterial (IUINMB2FM) meeting.

Formalised by CBBR's Head, Professor Ir Dr Suzana Yusup, the webinar attracted more than 90 participants from various backgrounds. The audience comprised of local and international students, researchers and industry players.

Moderated by IUINMB2FM's Chairman, YBhg Professor Dato' Ir Dr A Bakar Jaafar FAsc, the webinar featured three esteemed speakers in Professor Dr Masaharu Komiyama (UTP), Professor Dr Shaliza Ibrahim, (Universiti Malaya) and Dr Peer Mohamed (Universiti Kebangsaan Malaysia). Significantly, all three experienced speakers detailed the latest development in hydrogen research and its global challenges.



FINDING THE SWEET SPOT IN RENEWABLE ENERGY

Biogas Could Change the Way our Electricity is Powered

With a vast livestock population across the country, animal manures are resources that, if harnessed effectively, can help Malaysia reduce its reliance on fossil fuel and at the same time, lower our CO2 emission.

It's a tall order. Fortunately, a group of 18 chemical engineering students are currently looking for ways around the challenges. "We are promoting green energy from the resources left over from our livestock farms and plantation estates," says Adilia Al-Yafii Muhammad Alan Al-Yafii, project manager of Moonure Power. The more responsible approach, she says, is a "circular economy" model, in which everything is reused or recycled.

By background, the group is currently promoting the use of renewable methane. It's amazing what a simple improvisation can do says Adilia. "Basically, we mixed up cow's manure with water to produce biogas. This biogas can be used as an alternative source of energy," explains Adilia.

"Chemical engineering is helping to inform the development of alternative energy sources, such as biogas. Biogas could change the way our electricity is powered, making it more efficient and affordable," adds Adilia.

Ultimately, the group aims to promote a circular economy, in which industry and community maximise their resources and minimise their waste.

Indeed, this is another prime example of UTP's profound career connected learning and industry collaboration. From the work we do, we foster long-term relationships with our global social-impact partners to prepare our students, people and researchers as global citizens.



As a leading university in engineering, science and technology, our people are driven to exceed their professional objectives and contribute towards overcoming capability deficit across all sectors and industries.

