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# PEKAN REVIEW

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Bridging Universiti Malaysia Pahang to the world community

## UMP and CIDB established Building Information Model (BIM)

The collaboration between Universiti Malaysia Pahang (UMP) and Malaysia Construction Industry Development Corporation (CIDB) to establish a Building Information Model (BIM) ecosystem for national transformation is seen as successful amidst the high interest in the construction industry worth RM1.4billion that brings about various benefits and changes.

It also involves drafting of policies, transfer of technology and knowledge, human capital development and the Building Information System (BIS).

BIM is a modelling technology and sets of processes that are related to produce, communicate, analyse and manage information about a construction project throughout the construction life cycle.

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Processes that are based on BIM model will provide information for architects, engineers and professional building and infrastructure efficiently.

UMP Centre of Excellence for Construction Industry Cluster Director, Associate Professor Dr. Mohd Yusoff said, CIDB has been instrumental in supporting the university, CIBD also provided financial assistance for various projects and programmes, module development, establishing international cooperation and holding professional certification training worth almost RM 1.5 million for the year 2016-2018.

"Under this initiative, UMP has also transformed the industry from one that uses conventional methods to one that is more modern, supporting the needs and challenges of the Industrial Revolution 4.0, as outlined in the Construction Industry Transformation Plan," said.

As a mark of appreciation, UMP named CIDB as the recipient for the Industrial and Community Excellence Award.

The award was presented during UMP Quality and Innovation Day 2019 ceremony that was held at the UMP City Campus on September 12, 2019.

Scomi Transit Projects Sdn. Bhd. Director and invited speaker of UMP [CEO@Faculty](#) Programme, Rohan Saini, Pahang CIDB Director, Saini Saidi, representing CIDB Chief Executive Officer, Datuk Ir. Ahmad Asri Abdul Aziz.

Among the guests at the ceremony were UMP Board of Director Chairman, Dato' Sri Ibrahim Ahmad and UMP Vice-Chancellor, Prof. Dr. Azhar Wan Yusoff.

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## **Unity, a priceless gift and needs to be well-looked after**

Unity is an invaluable gift and needs to be upheld as well as appreciated by all people living in a multi-racial and multi-religious society.

Unity is a creation that comes from people with diverse ethnicity and religions having mutual respect of each other, being mindful of their sensitivity, religion and culture, for the sake of harmony.

According to Dr. Al-Azharri Bakr Kamunri of the National Security Council under the Prime Minister's Office, unity is an appropriate one, something to be valued together by Malaysians and the government in a move toward a harmonious and peaceful shape country.

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"When we have a feeling of togetherness, the differences among the races can be easily overcome. We must understand that in this modern world, we cannot live alone. We are in need of each other.

"If we do not have this oneness spirit, the country's future threat will be due to racial disunity," he said in conjunction with the closing ceremony of Love My Malaysia Fiesta.

The fiesta was held in conjunction with UMP National Day celebration organised by the Registry Department on September 18, 2019.

He added that if disunity among races happened in the future, it was not due to the generation of that time being unable to infuse unity well enough.

"If we are still into things that can cause disharmony, this will only inculcate negative culture for the next gen

“The most important thing for the leader of today is the need to promote the Malaysian values well enough past leaders in their efforts to gain independence,” he said.

He reminded the university students and the new generation to always remember the contributions of the nation would prevail.

Also present at the programme were Deputy Vice-Chancellor (Student Affairs & Alumni), Professor Dato' Directors' member, Professor Dato' Ts. Dr. Rosli Mohd Yunus.

According to Professor Dato' Dr. Yuserrie, UMP organised the National Day celebration every year with various patriotism.

"These activities demonstrate a unique perspective of patriotism, in the context of UMP being an ivory tower, to encourage the younger generation to appreciate the meaning and value of independence, and to do so with such awareness and genuine patriotism."

## ProSES Symposium – exploring into Chemical Engineering

More than 70 people attended the Process Systems Engineering and Safety (ProSES) Symposium 2019 organised by the Process and Safety Research Group, Faculty of Chemical and Process Engineering Technology (FTKKP).

The participants comprised academicians, industry experts and UMP students.

Themed, 'Process Modelling and Simulation towards Industrial Revolution (IR 4.0)', the symposium was held on September 13, 2019.

Sixty paper works on modelling and simulation were presented at the symposium and among the keynote speakers were Professor Ir. Dr. Haslenda Hashim from Universiti Teknologi Malaysia (UTM) and Professor Dr. Azmi Mohd Shariff from Universiti Teknologi PETRONAS (UTP).

Professor Ir. Dr. Haslenda Hashim said that over the years, researchers had made many researches in process modelling and simulation, from a smaller scale involving molecules right up to those that could be applied by the industries.

Professor Dr. Azmi, meanwhile, suggested that researchers to come up with works and findings that could be applied in the industries.

The symposium was officially opened by Dean of Industry Innovation, Research and Innovation Department, Associate Professor Dr. Abdul Adam Abdullah.

Also present was FTKKP Deputy Dean (Research and Graduate Studies), Associate Professor Ts. Dr. Sumarni.

In his speech, Associate Professor Dr. Abdul Adam said he was pleased that the faculty was able to organise the symposium for the first time.

He also said the paper works presented would be published in the Journal of Chemical Engineering and Technology (Scopus-indexed journal) and IOP Material Science and Engineering (Scopus-indexed proceeding).

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"UMP is committed in conducting research and commercialisation activities in the engineering process and mineral, oil, gas and pharmaceuticals.

"The faculty has been involved in several projects such as halal gelatine production, halal capsule production known as microcrystalline cellulose which is jointly developed with Pahang Agriculture Development Board.

"UMP has also managed to obtain RM10 million from the government's Fundamental Research Grant which is channelled to the faculty," he said.

According to Programme Director, Associate Professor Dr. Mohamad Rizza Othman, the symposium was aimed at sharing technology and knowledge on the latest research findings in process modelling and simulation as well as to researchers and industries.

He hoped that the symposium would spur the researchers' interest and awareness in matters involving science and technology in the IR4.0 era, its significance to expand and put into practise by the industry.

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## **Wheelchairs with adjustable motorised kit for the elderly and handicapped**

Two Universiti Malaysia Pahang (UMP) lecturers had come up with an adjustable motorised kit for wheelchairs for the elderly and handicapped.

The lecturers, Dr. Mohamad Heerwan Peeie, 32, from Faculty of Mechanical and Automotive Engineering and Dr. Kamarulzaman, 33, from Faculty of Computing were concerned with the difficulties faced by the elderly in moving around using the normal wheelchair.

As such, they came up with the idea for a motorised kit that could be fixed to a wheelchair, allowing the user to move around more easily.

This would help reduce the burden of staff or caretakers in the centre as well.

Dr. Mohamad Heerwan said the freedom to move around on their own could help boost their confidence and create a more cheerful place for them.

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On the product, Dr. Mohamad Heerwan said it was made based on the standard wheelchair design available.

"The electrical motor module, battery and control is specially designed so it can be fixed to any type of wheelchair based on the height and size of the wheelchair.

"The module only needs two hours of charging and can be used up to eight hours. The battery has safety features and speed can be adjusted.

"The control system can also be adjusted based on the user's hand, be it left or right. It can be used by the handicapped and elderly to move around the wheelchair more easily.

"The motor inside the kit can withstand up to 100 kg of a person's weight and climb a steep of 20 degrees without any problem," he said.

Dr. Syafiq also said the research conducted for this project was aimed at providing better mobility for seniors so that they could go on with their daily routines with less difficulty.

"It would facilitate the caretakers as well," he added.

"As a result of this cooperation with Mahmudah Care Centre, the residents can now move more freely and independently without any problem," he said.

As for Mahmudah Care Centre Manager, Sazali Mohidein, he lauded the collaboration formed with the researchers because the centre was short of staff to help residents go to the surau, the dining area or do light exercises.

Dr. Mohamad Heerwan and Dr. Syafiq Fauzi were Fellows of the Automotive Engineering Centre (AEC).

Work on the research started after Dr. Mohamad Heerwan received a grant for the project, which began in 2015. A prototype design for the commercial market was created.

They also received support from the UMP's Research & Innovation Department which awarded them the university's

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The cost is estimated at RM2,500 and the product, which received a silver medal at Malaysia Technology Fair, will be available in the market by early of next year.

Dr. Syafiq also said in the future, they planned to introduce element of Internet of Things (IoT) in the kit that will be developed.

"We plan to introduce biometric features that can gauge the person's breathing, heart rate and body temperature. These data will be monitored online and recorded to help detect any symptoms of ailment," he added.

He also welcomed contributions from the public for the centre.

"The contributions will not only help with the centre's daily essentials but also help to develop technology that will benefit the residents and improve their lifestyle.

"If the needs of a centre can be connected to the right platform of solution, quality and important innovation can be developed," he said.

"It is also suggested that more match-making initiatives between the research products of UMP lecture and students can be done via a crowd funding platform," he said.

Dr. Mohamad Heerwan and Dr. Syafiq Fauzi were researchers with more than five years of experience when they started the project.

Dr. Mohamad Heerwan's expertise is in automotive especially in electrical vehicle, control system and robotics.

Dr. Syafiq Fauzi's expertise is in electronic and computer science. He is now involved in a research involving the development of a system and robotic.

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## 20 UMP staff 'conquered' Mount Kinabalu

By: MOHD SHAHRUL AZUAR, D'PUNCAK EXPEDITION PROGRAMME DIRECTOR

September 6, 2019 was a historical and memorable date for 20 Universiti Malaysia Pahang (UMP) staff who conquered Mount Kinabalu, the highest peak in South East Asia, standing at 4,905.2 metres (13,455 feet) from sea level.

According to d'Puncak Expedition Programme Director, Mohd Shahrul Azuar, the participants who were from various departments received physical and mental training by having hiking trainings to ensure that they were fit for the climb.

"Planning for the expedition began early this year which was in support of the university's call for healthy life and physical fitness," he said.

"We took up the challenge that tested our mental and physical strength as well helped instil teamwork spirit and confidence. The climb was not easy but the team worked together and came out strong and sturdy self-confidence," he said.

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All of the participants started their climb at the Timpohan Gate after listening to a briefing at 9am before the challenging steps that included vertical ascends.

They reached the Laban Rata base camp which was located 3,272 metres from sea level and continued to climb their mission to be on top of the mountain, known as the Low's Peak.

They moved in smaller groups during the cold and dark climb, accompanied by the mountain guides.

Some managed to reach in time to see their hard work paid off to watch the beautiful scenery and sunrise.

After four hours of climbing that really tested their physical and mind strength, 10 of them completed their mission.

No words could explain their feelings upon reaching the top of Mount Kinabalu.

One of the participants, Dr. Amir Abd Razak said it was a proud achievement when all of them reached the top experiencing a 'summit attack' earlier in the morning.

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"We had to endure strong wind and cold weather with the temperature dipping at 3 degrees Celsius," he said.

The participants comprised heads of department, lecturers and staff members from Faculty of Civil Engineering and Architecture (FTCEA), Faculty of Electrical and Electronic Engineering Technology (FTKEE), Faculty of Chemical and Process Engineering (FTCP), Faculty of Mechanical and Automotive Engineering Technology (FTKMA) and College of Engineering. Previously, they were Faculty members of the former Faculty of Engineering.

According to Professor Dato' Dr. Zularisam Abdul Wahid of FTKA, it was difficult to breathe normally because of the cold weather.

"Although not everyone managed to reach to the top, it was not however the main objective. I am proud with the participants' achievement," he said.

"My advice for the participants was for them to believe in their own ability and to strive for their own goals. This expedition will be a valuable experience and valuable when facing with all kinds of challenges including those at work," he said.

He added that he was proud to see the spirit and commitment of the participants and those involved in managing the expedition.

"It was an exhaustive experience but it did not deter them from celebrating their accomplishment in completing the expedition. This will be a memory that they will remember for the rest of their lives.

"It was indeed very meaningful and historical as it was accomplished at the time when the faculty was undergoing organisational restructuring," he said.



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