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UNIVERSITI MALAYSIA SABAH

FACULTY OF ENGINEERING NEWSLETTER

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Content Features 6 Key Categories

- Administration
- HEPA
- Presentation/Talk
- General
- Academic
- Research, Development & Innovation

2020 Newsletter Committee

Member	Portfolio
Dr. Aroland Kiring	Editor
Dr. Aroland Kiring	Graphic/ Content Designer
Damme Bin Daim	Webmaster

Fakulti Kejuruteraan,
Universiti Malaysia Sabah
Jalan UMS, 88400
Kota Kinabalu,Sabah,
Malaysia
Tel:088-320000 ext:3991
Fax:088-320348
Email: fkj@ums.edu.my

SCAN ME

Message From The Dean

Assalamualaikum and Salam Harmony FKJ, Faculty of Engineering, UMS to all respected readers and it is my pleasure to welcome you to our second quarter (April- June) year 2020 FKJ Newsletter.

The movement control order (MCO) has been a very challenging period for Malaysian and during MCO, Malaysians are required to stay at home and even work from home. For educators, the e-learning suddenly becomes an integral component for teaching and learning activities. Lessons are conducted virtually, and educators are advised not to let any students left out. Posed with the challenges, FKJ had taking initiatives to strategize the best methods in carrying out its teaching and learning activities especially for courses such as Industrial Training (LI), Final Year Project (FYP), Lab work, Field-work and Integrated Design Project (IDP). This edition demonstrated the dedications and endless efforts taken by FKJ throughout the MCO period from April to June. I am very pleased to officially launch this second edition newsletter and I hope that you will find this newsletter informative.

The second issue of our newsletter starts with an article on new norms practices then followed by webinars on various issues on academics, teaching & learning, assessments and research. It also features the Faculty research and innovation report, list of successful COVID-19 grants recipients and published books written by our staffs. In the general section, congratulation, greetings and birthday wishes are a highlight to acknowledge the contributions and achievements of our staffs. Overall, the articles are group into 6 different sections; Administration, Academic, HEPA, Presentation/Talk, Research, Development & Innovation, and General. We hope that you will find great value in its content and through our upcoming issues, we will continue to provide updates on the many activities in which the faculty are involved. I like to take this opportunity to sincerely thank all members for the contribution given in making the newsletter successful despite many challenges faces during this movement control order (MCO) period. To the readers, we always welcome your feedback and suggestion to help us improve.

In the meantime, stay safe and healthy!

Together we are stronger.

With warmest regards,

Associate Professor Ts Dr. Ismail Saad
Dean of FKJ, Faculty of Engineering, UMS

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FACULTY OF ENGINEERING

Administration

FKJ Online Meetings – A New Norms

Reported by Azmi Bin Jumat & Nurhani Sugianto.

The Faculty of Engineering (FKJ) has conducted an online meeting, hosted from Google Meet platform from April to June 2020. Here is the list of meetings that have been conducted so far:

01 April 2020	Mesyuarat Pelaksanaan LI, FYP, IDP, LAB WORK DAN FILED WORK Bil.2/2020.
06 April 2020	Mesyuarat Kewangan Fakulti Kejuruteraan Bil. 02/2020 (Kali Kedua).
08 April 2020	Mesyuarat Jawatankuasa Akademik Bil. 3/2020 (70).
22 April 2020	Mesyuarat Jawatankuasa Eksekutif Fakulti Kejuruteraan Bil. 02/2020 (Kali Ke Sepuluh)
24 April 2020	Mesyuarat Jawatankuasa Akreditasi dan Kualiti Akademik Bil. 2/2020 (17).
29 April 2020	Mesyuarat Jawatankuasa Akademik (Khas) Bil. 2/2020.
20 May 2020	Mesyuarat Jawatankuasa Akademik Bil. 4/2020 (71).
29 May 2020	Minit Mesyuarat Jawatankuasa Eksekutif Fakulti Kejuruteraan (Kelulusan Secara Edaran) Bil. 1/2020.
9 June 2020	Mesyuarat Jawatankuasa Akademik Bil. 5/2020 (72).
10 Jun 2020	Mesyuarat Penyediaan Cadangan Prosedur Operasi Standard (SOP) Semasa & Pasca PKP WABAK COVID-19 Di FKJ, UMS.
24 Jun 2020	Mesyuarat Jawatankuasa Eksekutif Fakulti Kejuruteraan Bil. 03/2020 (Kali Ke Sebelas).

FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

Administration

COVID-19 Changing The T&L Approach In Universities

Reported by Dr. Yew Hoe Tung, Dr. Chiam Chel Ken, Nurhani Sugianto & Dr. Aroland Kiring.

The implementation of the Movement Control Order (MCO) to curb the spread of Covid-19 was implemented from 18 March 2020 and continue until several phases have changed the teaching and learning (T&L) approach in all universities, including Universiti Malaysia Sabah (UMS). Following the implementation of the MCO, the Universiti has been instructed to postpone administrative operations and academic activities, rescheduled the academic calendar and continue T&L via an online platform. With the implementation of T&L using the online platform becomes one of the new norms, the Faculty of Engineering (FKJ) had designed the implementation strategy to ensures the T&L can be implemented effectively. The following summarizes the action taken by the universiti and FKJ in strategizing the implementation of T&L during MCO and Post MCO:

Date	Action
15 March 2020	UMS has announced the implementation of virtual lectures from March 16, 2020, and continue until further notice. With this announcement, all lectures/tutorials will be conducted virtually using the SMART2 UMS or SMARTv3 platform. Other academic activities in the form of practical and out of class were postponed.
16 March 2020	The Prime Minister has officially announced the implementation of the Movement Control Order (MCO) throughout the whole nation effectively 18 March 2020 until 31 March 2020.
17 March 2020	UMS has announced the postponement of university operations and services from 18 March 2020 to 31 March 2020 in line with the implementation of the MCO to curb the spread of Covid-19.
20 March 2020	The Ministry of Higher Education (MOHE) issued a media statement informing that all universities in Malaysia are allowed to continue their online learning provided that all students have internet access, lecturers and infrastructure are fully prepared.
23 March 2020	UMS has issued a media statement allowing all T&L to be conducted online via various platforms including SMART2UMS, SMARTv3, Google Classroom, Schoology, Facebook, Edmodo, Kahoot, Padlet, WhatsApp application and email.
27 March 2020	The Faculty of Engineering (FKJ) has held discussions to find the best methods in implementing Industrial Training (LI), Final Year Project (FYP), Lab work, Fieldwork and Integrated Design Project (IDP) under the MCO.
28 March 2020	Due to the announcement of the extension of MCO phase 2 (1 April 2020 to 14 April 2020) on 25 March 2020, UMS has rescheduled its academic calendar. The changes involved the second term lecture after the Mid-Semester break of Semester 2 Session 2019/2020, which was originally scheduled to start on 13 April 2020 has been postponed to 09 June 2020. In the meantime, the online T&L can be continued with mutual agreement between lecturers and students using various platforms during the implementation of MCO.

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Administration

Date	Action
29 March 2020 / 31 March 2020	The Malaysian Quality Agency (MQA) and the Engineering Accreditation Council (EAC) / Engineering Technology Accreditation Council (ETAC) have issued guidelines on the implementation of T&L and assessment on March 29, 2020. Then followed by March 31, 2020 for the implementation of Industry training (LI), Final Year Project (FYP), Lab work, Fieldwork and Integrated Design Project (IDP), respectively.
01 April 2020	FKJ has held discussions to re-coordinate the best methods in implementing Industrial Training (LI), Final Year Project (FYP), Lab work, Fieldwork and Integrated Design Project (IDP) under the MCO following the recent guidelines issued by the MQA and EAC / ETAC.
08 April 2020	UMS under the Center for Excellence in Teaching and Academic Quality has directed any changes implemented to T&L and assessment courses for semester 2, session 2019/2020 can be considered subject to guidance issued by the Malaysian Qualifications Agency (MQA) and the Agency Professional recognition, and shall ensure that the constructive alignment for each course has been met and the learning outcomes achieved.
23 April 2020	The Academic Development Committee (JKPA) meeting has come up with a guideline for the implementation of T&L remotely during the MCO and post-MCO periods. In the implementation of T&L remotely, consideration is based on one method for all (one measure fits all) or method based on the level of access (delivery method based on the level of access). This is in line with the ministry's policy of ensuring nobody left out where all students should have the opportunity to be involved in the online T&L activities. The meeting also requested that all faculties to conduct a survey to obtain information on their students who do not have ICT equipment such as laptops and computers as well as having the difficulty of purchasing internet data, and other related issues. The information is important to determine the settlement measures, such as proposing purchase loan facilities to students, data purchase assistance and other measures.
29 April 2020	Special Academic Committee Meeting No.2/2020 of the FKJ was held. The meeting discussed the implementation of T&L following the remote T&L guidelines, T&L operational planning for each program, implementation of examinations for diploma programs and internet access survey of FKJ students.
30 April 2020	FKJ student internet access survey is distributed through Google Form Survey that lasted until 12 May 2020
11 May 2020	Remote T&L guidelines for all faculties.
27 May 2020	The official statement by MOHE on online T&L is to be implemented until 31 December. In the meantime, all face-to-face T&L is not allowed. However, exceptions are given to five categories namely postgraduate students of research mode; final semester / final year students for Certificate, Diploma, Bachelor's degree level who

Date	Action
	perform clinical work, charity training, laboratories, workshops, design studios, practical or who require special equipment and who do not have the necessary access and conducive environment; students with special needs who follow the Technical and Vocational Training (TVET) program; and new students for the 2020/2021 academic session at the Certificate, Diploma and Bachelor Degree levels coming in stages. MOHE also directs the implementation of academic activities to fully comply with the Standard Operating Procedures (SOP).
17 June 2020	UMS issued a letter of notification to all faculties on the implementation of Industrial Training for semester 2 session 2019/2020. The university has no objection allowing students who will conduct their industrial training on semester 2 session 2019/2020 according to their respective faculties in compliance with the prescribed SOP.

The implementation of MCO since it came into force on 18 March 2020 has drastically affected the implementation of T&L and course evaluation. The following are the changes and adjustments made by FKJ to the delivery and evaluation methods, Industrial Training (LI), Final Year Project (FYP), Lab work, Fieldwork and Integrated Design Project (IDP) and final examination.

Changes and implementation of T&L before MCO and During / Post MCO:

Items	Before MCO	During and Post MCO
T&L	▪ Blended learning.	▪ E-learning (synchronous or asynchronous). ▪ Revision on Student Learning Time (SLT).
Evaluation Methods	▪ Face-to-face examination. ▪ Continuous assessment (Blended assessment).	▪ Online Final exams and continuous assessments. ▪ Lecturers are allowed to replace the final examination with other assessment methods.
FYP & IDP/DP	▪ Duration 14 weeks. ▪ Face-to-face demonstrations and presentations. ▪ Hardcopy or softcopy FYP / IDP report.	▪ Students are given more time (> 14 weeks) to complete the project, subject to faculty permission. ▪ Simultaneously (synchronous) or non-simultaneous (asynchronous) that is by pre-recorded video. ▪ Softcopy FYP / IDP report.
Industrial Training	▪ Planned from 22 June 2020 to 31 August 2020 (10 weeks).	▪ Postponed until further notice. ▪ With the MCO recovery phase, UMS allows the plans of their respective faculties by complying with the prescribed SOP. ▪ FKJ recommends any students who get placement to undergo industrial training on 03 August 2020 until 11 October 2020.
Laboratory	▪ Hand-on experiments.	▪ Simulation based experiments.

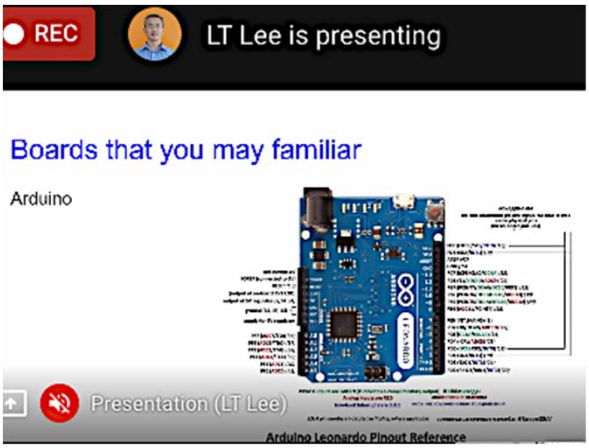
FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

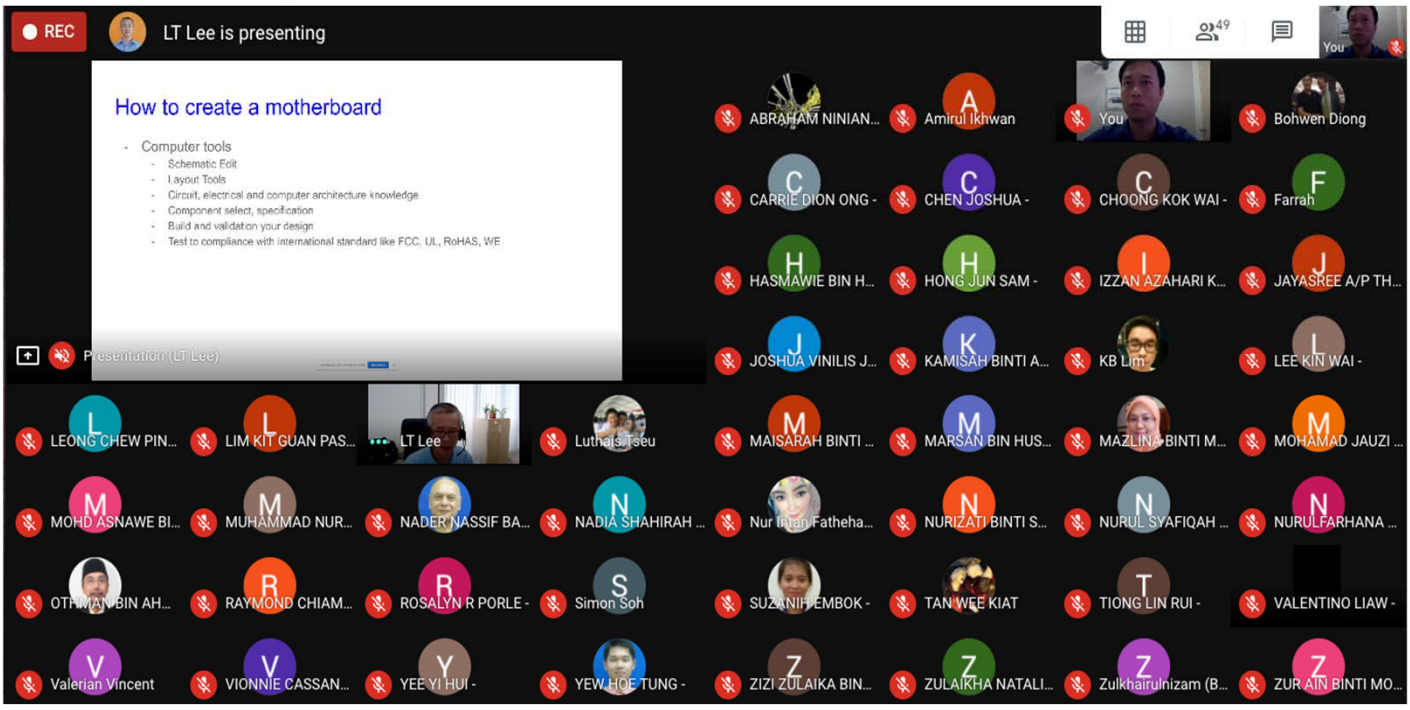
Academic

Webinar On Computer Architecture Overview & Design A Computer Motherboard

Reported by Dr. Aroland Kiring.

On 14 May 2020, a webinar on "Computer Architecture Overview & Design A Computer Motherboard" was conducted. The talk was organized by the Electronic Engineering (Computer) programmes, Faculty of Engineering (FKJ), Universiti Malaysia Sabah (UMS) in collaboration with OnLogic Malaysia. The virtual talk was delivered by Mr. Lee Leong Thai, a director at OnLogic Malaysia who has 27 years of experience in silicon design, board design, Intel Graphic card and SATA SSD validation, managing CPU, and post-silicon validation team. The state-of-the-art motherboard design and the challenges were thoroughly discussed and explained. Mr. Lee also shared his insight on what the future would look like with COVID-19 pandemic. He believes that artificial intelligence and automation will become one of the solutions for the next generation of technology. The event was attended by lecturers and students from the Electronic Engineering (Computer) programmes.





FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

Academic

Webinar On Technopreneurship: A New Edge Entrepreneur

Reported by Dr. Aroland Kiring.

A webinar on "Technopreneurship: A New Edge Entrepreneur" was organized by the Electronic Engineering (Computer) programmes, Faculty of Engineering (FKJ), Universiti Malaysia Sabah (UMS) in collaboration with Sabah Net Sdn Bhd. The talk, hosted via Jitsi Meet, was presented by Dr. Julian Paul Sidin, a Chief Corporate Officer at Sabah Net, on the 3rd June 2020 explaining the importance and challenges of technopreneurship. The event was open to all Electronic Engineering (Computer) students, but most of the attendees are students taking KS09903, management and accounting course. Overall, students were benefited from the talk and valuable knowledge was gained.

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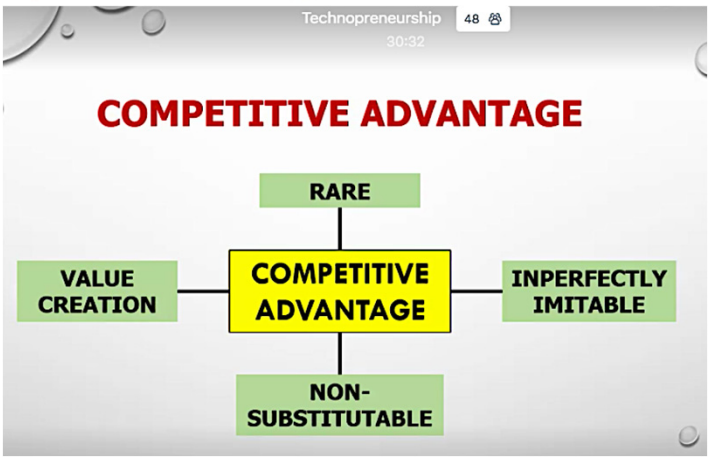

FAKULTI KEJURUTERAAN
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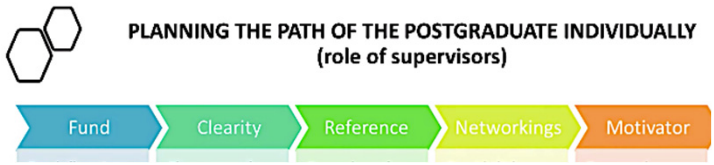
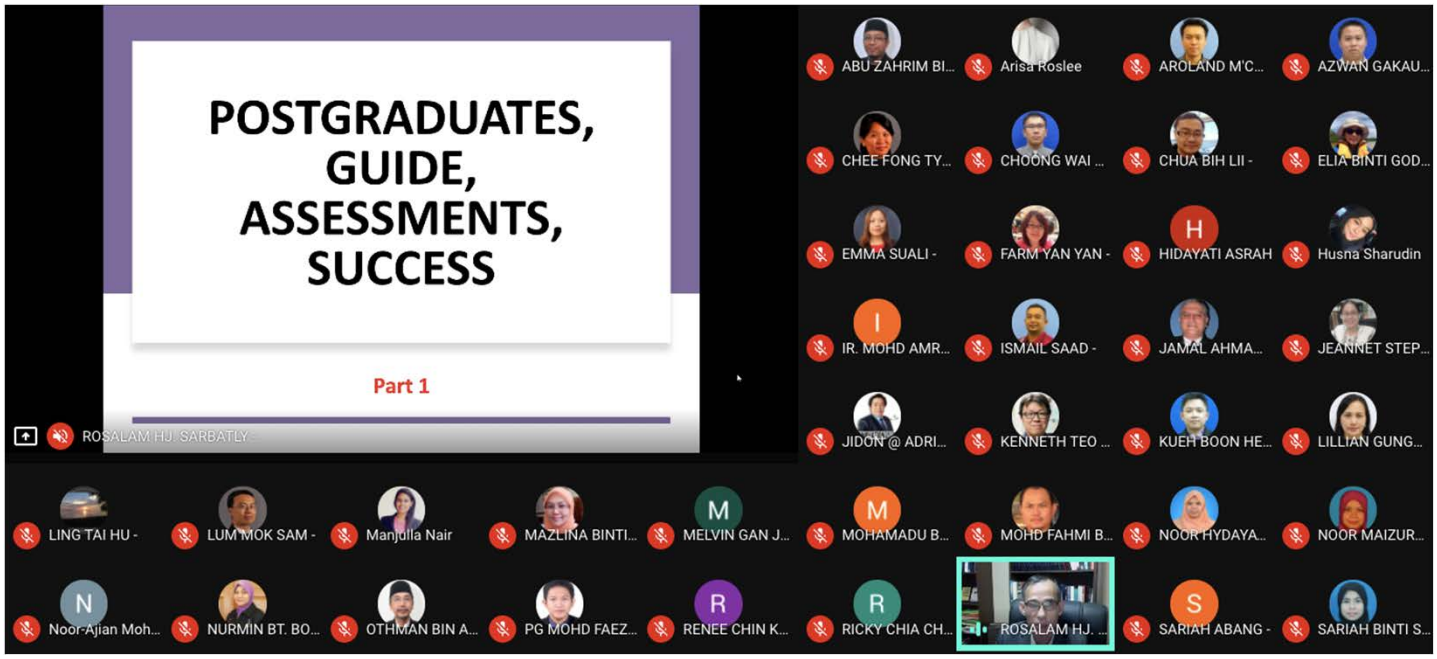
Academic

Webinar On Securing The Postgraduate & Guiding Them Successfully

Reported by Dr. Aroland Kiring.

On 11 June 2020, Prof. Ir. Dr. Rosalam Hj. Sarbatly had shared his experience on "Securing The Postgraduate & Guiding Them Successfully", via online Google Meet. Prof. Ir Dr. Rosalam gave an hour-long talk, from postgraduate assessments to securing postgraduates, explaining the challenges to increase the number of postgraduates, and sharing his own experiences managing postgraduates. The event was attended by lecturers and students from the FKJ and other faculties. Overall, students were benefited from the talk and valuable knowledge was gained.





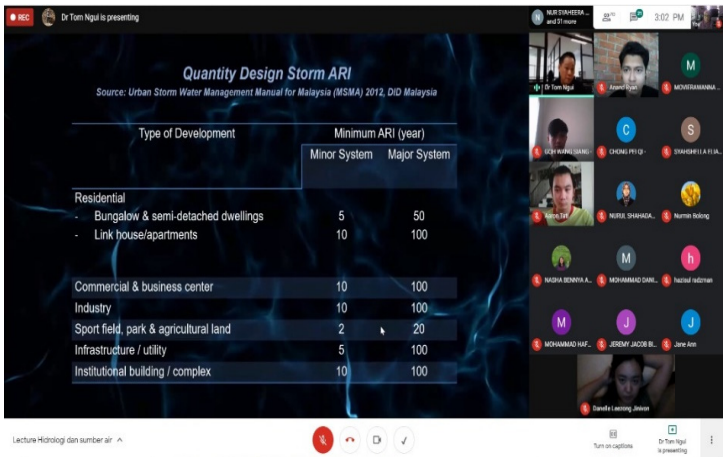
FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

Academic

Industry Talk Learning Through MSMA Design & Application With Invited Speaker Ir. Dr. Tom Ngui

Reported by Assoc. Prof. Dr. Nurmin Bolong and Mr Anand.

30 Jun 2020 - With the purpose to expose students to the real engineering practical design work highlighting the Urban Stormwater Management Manual or MSMA application, Civil Engineering programme under the hydrology and water resource course recently hosted a webinar industry experience talk. The invited industry speaker, Ir Dr. Tom Ngui Fui, the principal consultant of Eramaju Synergy Sdn Bhd describe the MSMA technical design method and approach of Kota Kinabalu High Court project.



Seventy participants consist of undergraduate (3rd year and final year) and postgraduate students have benefited the talk and gained a deep understanding on the calculation and design strategies in applying drainage design guidelines and requirements with solutions especially when facing design challenges to ensure sustainable drainage systems. Positive feedbacks were received, it was an eye-opening experience for students and inspired that the talk had given beneficial real design work specifically in applying the urban stormwater management design manual or MSMA spirit for sustainable stormwater system design in control-at-source approach.

"Engineers often start with 'what' & 'how' but should stop to think about the 'why' first."

- Ir. Dr. Tom Ngui

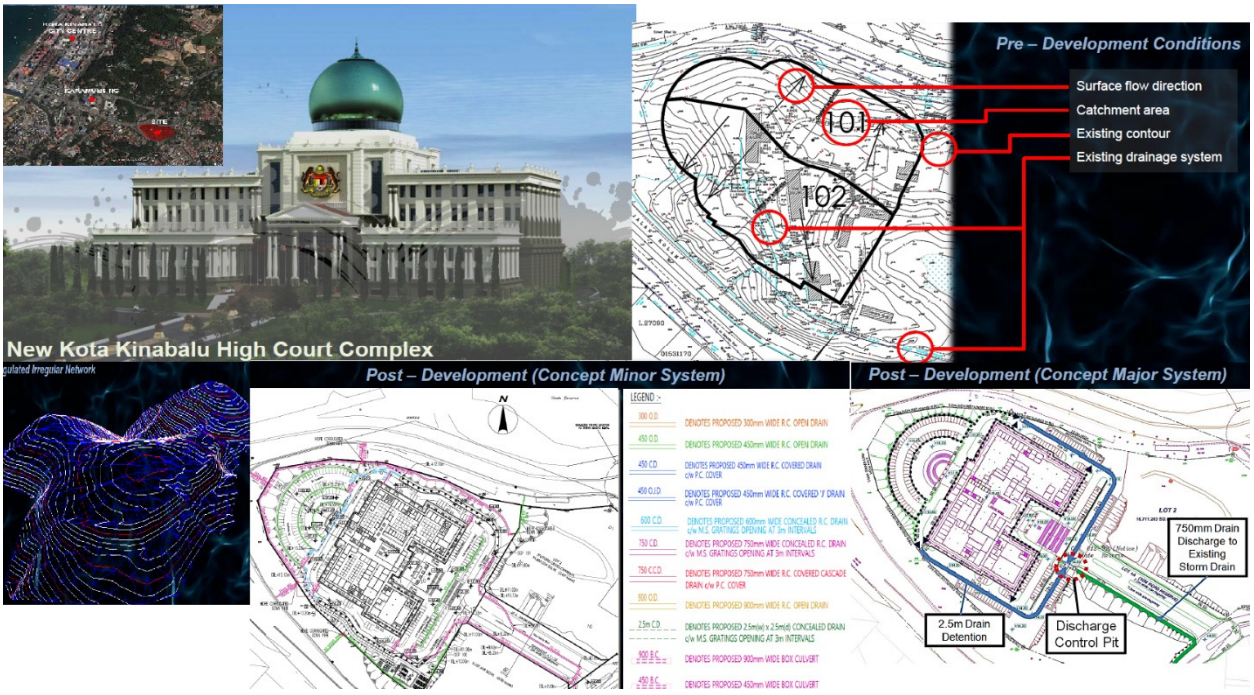
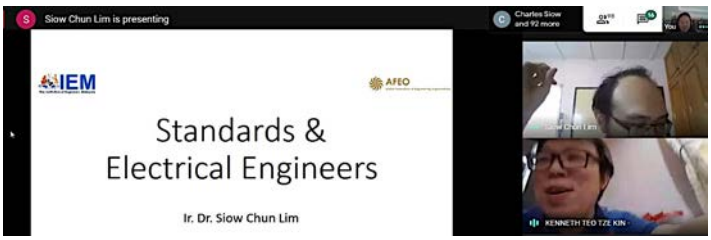


Fig. Snapshot of technical design for KK high Court highlighted in the industry talk

Webinar On Standards For Electrical Engineers

Reported by Dr. Renee Chin.

A virtual talk on "Standards for Electrical Engineers" was conducted on 30 April 2020. Ir. Dr. Siow Chun Lim, a senior lecturer at Multimedia University (MMU) and an active member of the National Working Group of ASEAN Engineering Inspectorate (Electrical Installation), gave an hour-long talk, promoting awareness of the importance of standards for electrical engineers. Current standardization initiatives in the ASEAN region was briefly discussed as well. The event was attended by 104 lecturers and students from the Electrical and Electronic Engineering, and Electronic Engineering (Computer) programmes. Students and lecturers benefited from the interactive talk, which introduced electrotechnical standards, highlighting of standards relevant to practising electrical engineers. The talk was organized by the IEEE Student Branch (UMS), in collaboration with the National Working Group of ASEAN Engineering Inspectorate (Electrical Installation) (AEI-EI).



HK03 Students won 1st Runner Up in 8th IEM Chemical Engineering Design Competition 2019/2020

Reported by Assoc. Prof. Dr. Jidon Adrian Janaun.

Universiti Malayisa Sabah (UMS) was represented by Md Ameynuddin bin Md Anis, Marsha binti Omar Ali, Elysandra Peter, Chai Wan Ying, and Muhammad Shafiee bin Roslan (Left to Right of the photo) of the Chemical Engineering Final Year Students in the National Level Competition, which run from 1st of. Dec 2019 to 13th of June 2020. The Plant Design project entitled "Monetization of POME into renewable gas and green chemicals", won 1st Runner Up with the prize of RM500 and a plaque, the group was guided by Assoc. Prof. Dr. Jidon Adrian Janaun and Assoc. Prof. Dr. Rachel Fran Mansa. Taylor's University won this competition, with 11 groups from public and private universities participated. UMS PD team has maintained top two position in this competition for 4 consecutive years.

IEM
The Institution of Engineers, Malaysia

THE INSTITUTION OF ENGINEERS, MALAYSIA, IEM

8th IEM Chemical Engineering Design Competition

2019/2020

FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

Presentation/Talk

Webinar On Outcome-Based Competency Assessment (Insight & Tips For A Successful PE Applications)

Reported by Ir. Ts. Dr. Habib Musa bin Mohamad and Assoc. Prof. Dr. Nurmin Bolong.

It was our pleasure to organize a one-day Webinar – Outcome-based Competency Assessment (Insights and tips for a successful Professional Engineer application) on "How to become a Professional Engineer (P.Eng) for Academicians" through online Google Meet due to the Movement Control Order (MCO) enforced by the government during Covid-19 outbreak. The workshop was supported by the Faculty of Engineering (FKJ), Universiti Malaysia Sabah (UMS) and it was held on May 20th, 2020 in collaboration with an industrial practitioner and expert from the Institute of Engineer Malaysia (IEM), Ir. Dr. Tom Ngui Min Fui. The workshop had exposed the participants to the introduction and overview of a Professional Engineer (P.Eng). The aims of the Webinar were focusing on the application and what it takes to become a P.Eng with useful tips. With great knowledge and experiences as a Professional Interviewer, and as an Assessor with the IEM towards PEng/PEPC licensing, the speaker had started the first session by sharing the knowledge about the process of application through route 1 (Board of Engineers Malaysia (BEM) Professional Assessment Examination), route 2 (IE Conventional and Enhanced Professional Interview) and route 3 (Overseas Regulatory Bodies). In the next session, the speaker shared his experiences as a P.Eng and guided the participants to write technical, training and experience report for P.Eng application with the aim to clearly explain the requirements of a P.Eng according to different routes, through interactive Q&A session.

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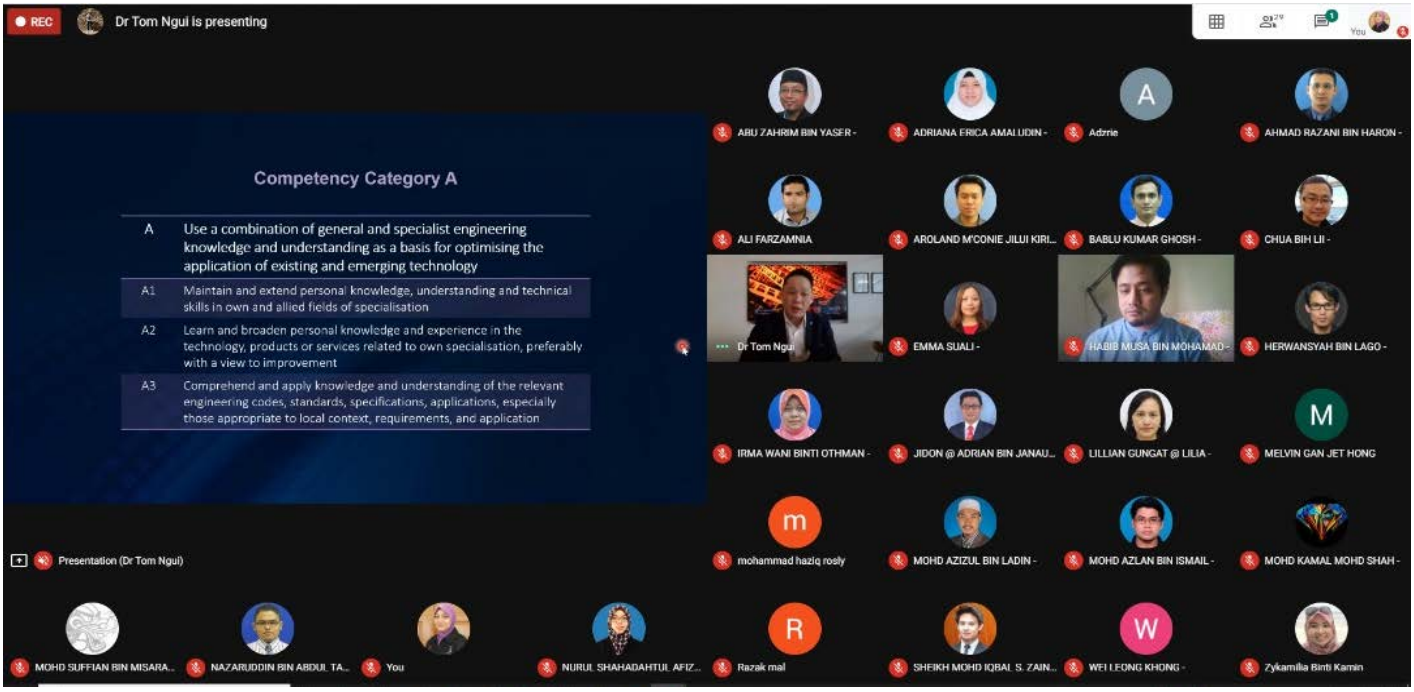
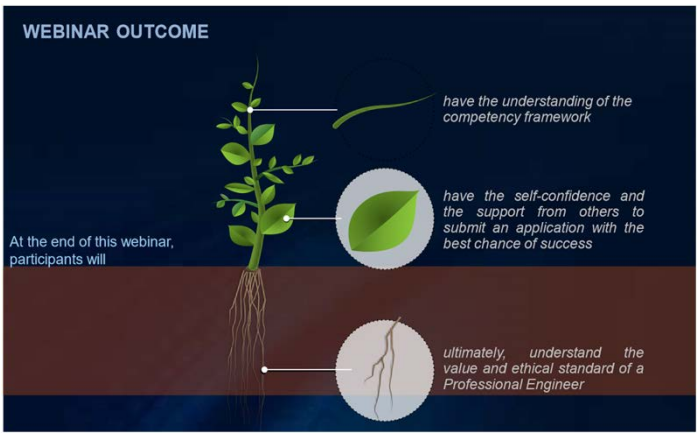
Presentation/Talk





The webinar was encouraging and success in extensively exposed useful information to the participants among 33 FKJ's academic staff including those who had undergone industrial training. Supplementary requirements, the applicant must select and satisfy one of the following Routes to become a Professional Engineer. Route 1 and 2 shall be done from the date of approval as Graduate Engineer with BEM. The general requirement explained by Ir. Dr. Tom Ngui includes at least one year of the above training must be obtained in Malaysia under the supervision of a Professional Engineer in the same branch of engineering as practiced by the Graduate Engineer. This talk is in line with the efforts to meeting the target of 30% or more professionals within the academic staffs. Positive feedbacks were received, and the participants agreed that the talk had given enough information and helpful in guiding specifically for writing reports and early preparation.

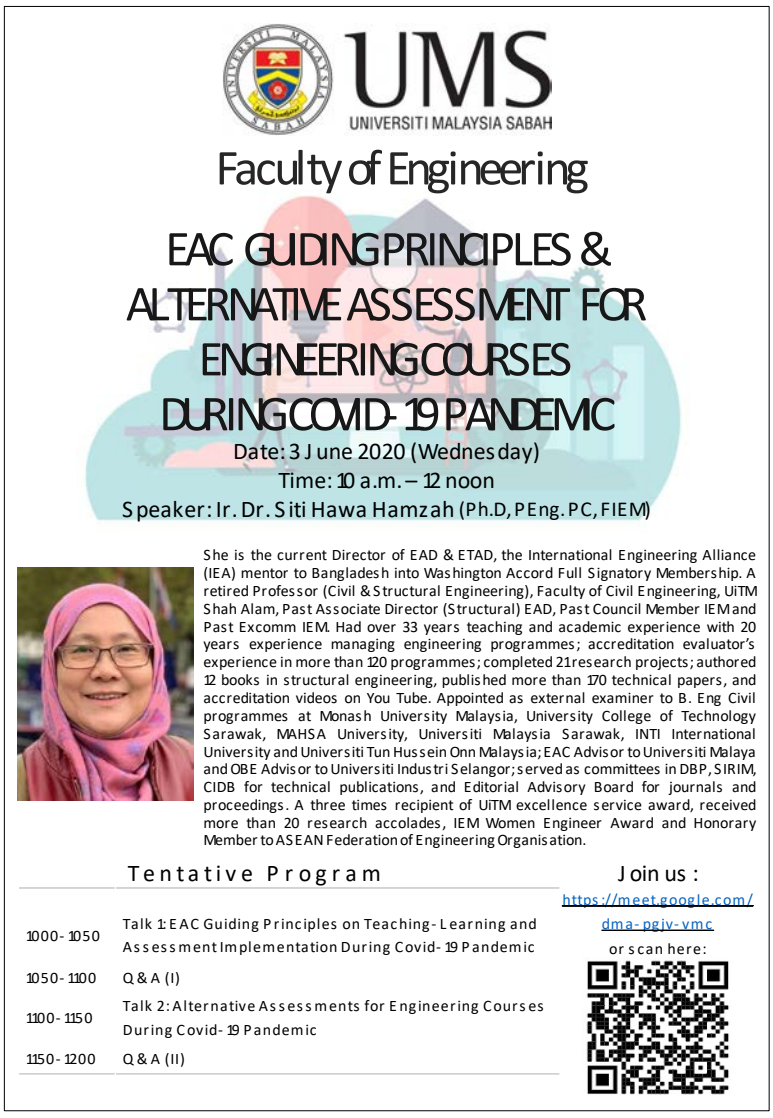
FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

Presentation/Talk

Webinar On EAC Guiding Principles & Alternative Assessments for Engineering Courses During Covid-19 Pandemic

Reported by Dr. Aroland Kiring.

On 3 June 2020, The Faculty of Engineering (FKJ) had invited Ir. Dr Siti Hawa Hamzah, the current Director of Engineering Accreditation Department (EAD) & Engineering Technology Accreditation Department (ETAD) to give a talk on "EAC Guiding Principles & Alternative Assessments for Engineering Courses During Covid-19 Pandemic", virtually on Google Meet. The first part of the presentation is about the EAC Guiding Principles on Teaching-learning and Assessment Implementation During Covid-19 Pandemic. Ir. Dr Siti Hawa Hamzah has briefly announced the new Engineering Programme Accreditation Standard 2020 and Engineering Technology Programme Accreditation Standard 2019 Manuals. The new manuals are to be implied in the upcoming accreditation process that focuses on the outcomes and the internal system developed by the Faculty. The second part of the presentation is about Alternative Assessments for Engineering Courses During Covid-19 Pandemic. Some alternative assessments for non-face to face approaches were discussed. Overall, the session was well-received with several questions were raised and discussed during the presentation.



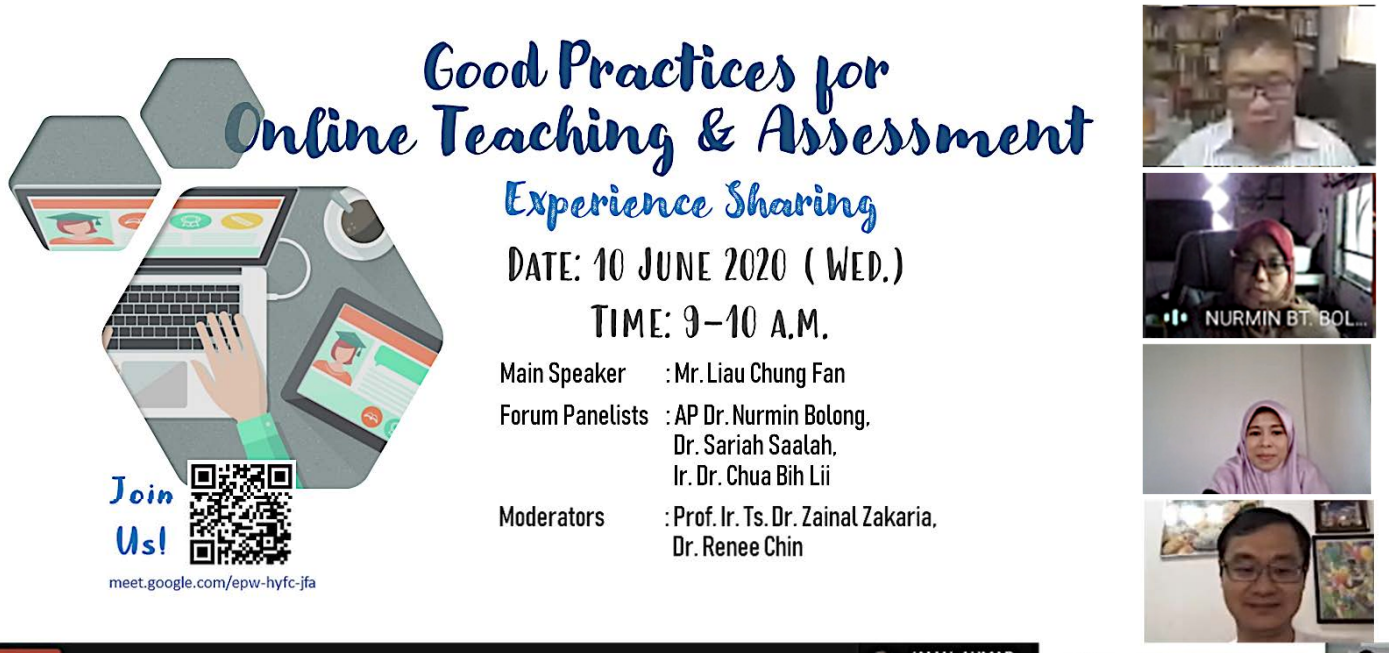
FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

Presentation/Talk

Webinar On Good Practices For Online Teaching & Assessment

Reported by Dr. Aroland Kiring.

A virtual forum on "Good Practices For Online Teaching & Assessment - Experience Sharing" was conducted on 10 June 2020. The forum was organized by the Faculty of Engineering (FKJ) with Mr Liau Chung Fan as the main speaker and Assoc. Prof. Dr. Nurmin Bolong, Dr. Sariah Saalah, and Ir. Dr. Chua Bih Lii as the panellist. The forum was moderated by Dr. Renee Chin and was attended by lecturers from the FKJ. The forum hosted on Google Meet was started by Mr. Liau sharing his own experiences, highlighted the pros and cons of conducting online teaching and learning. Then, followed by Assoc. Prof. Dr. Nurmin sharing her experiences in using Schoology to conduct assessments. Next, the forum continues with Dr. Sariah Saalah sharing her experiences using Smart-UMS to conduct online tests. Lastly, but not least, Ir. Dr. Chua Bih Lii shared his experiences using e-portfolio to make a continuous assessment in his course. Overall, lecturers are benefited from the experiences shared by the speakers.



FAKULTI KEJURUTERAAN
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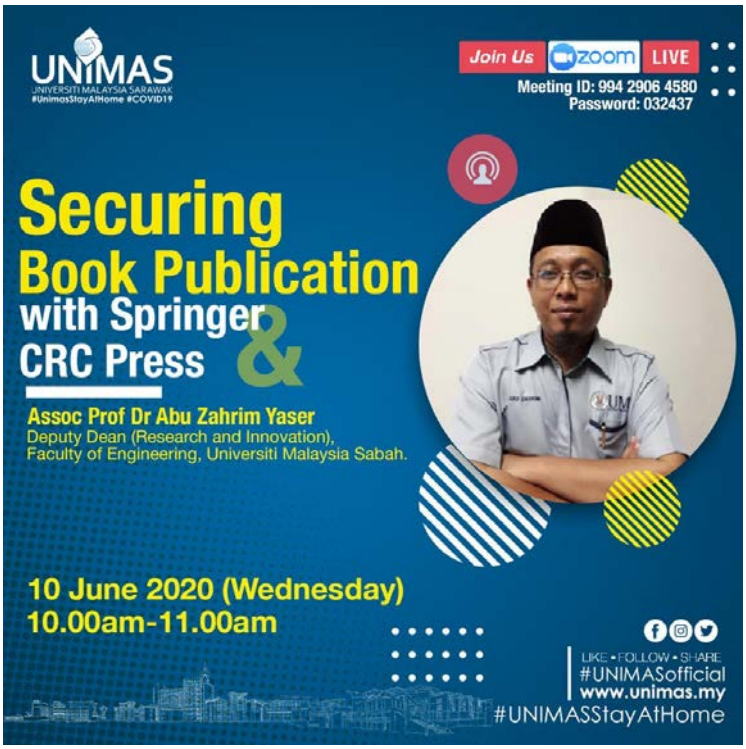
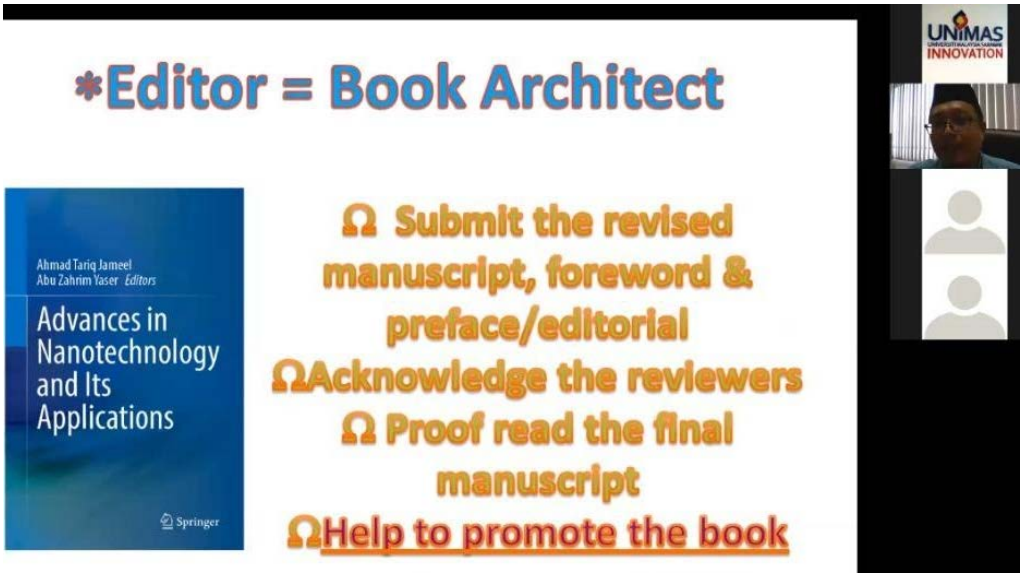
Presentation/Talk

Webinar On Securing Book Publication With Springer CRC Press

Reported by Assoc. Prof. Dr. Abu Zahrim Yaser.

Universiti Malaysia Sarawak (UNIMAS) has invited Assoc. Prof. Dr. Abu Zahrim Yaser to deliver an online seminar entitled "Securing Book Publication with Springer & CRC Press" on 10th June 2020. During 1 hour talk with 55 participants, Dr. Zahrim explained several things: Edited Book vs. Authored Work, Editor = Book Architect, How to Capture Publisher's Trust?. In addition, he also shares his experience in writing book proposal and concludes the seminar with important advices to be an Editor for well-known international publishers.





FAKULTI KEJURUTERAAN
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Presentation/Talk

Experience sharing via UMS FB Live Steaming Programme

Reported by Assoc. Prof. Dr. Jidon Adrian Janaun.

Dr. Jidon from the Chemical Engineering Programme was invited to share his experience on commercialization of innovation and Innovation for COVID-19 on 30 April 2020, via UMS FB Live Steaming programme hosted by Mr. Azmi Haris. To date, the interview session has a view of 3.3k. The video can be accessed via https://www.facebook.com/UMS.official/videos/2908100439270619/

FAKULTI KEJURUTERAAN
FACULTY OF ENGINEERING

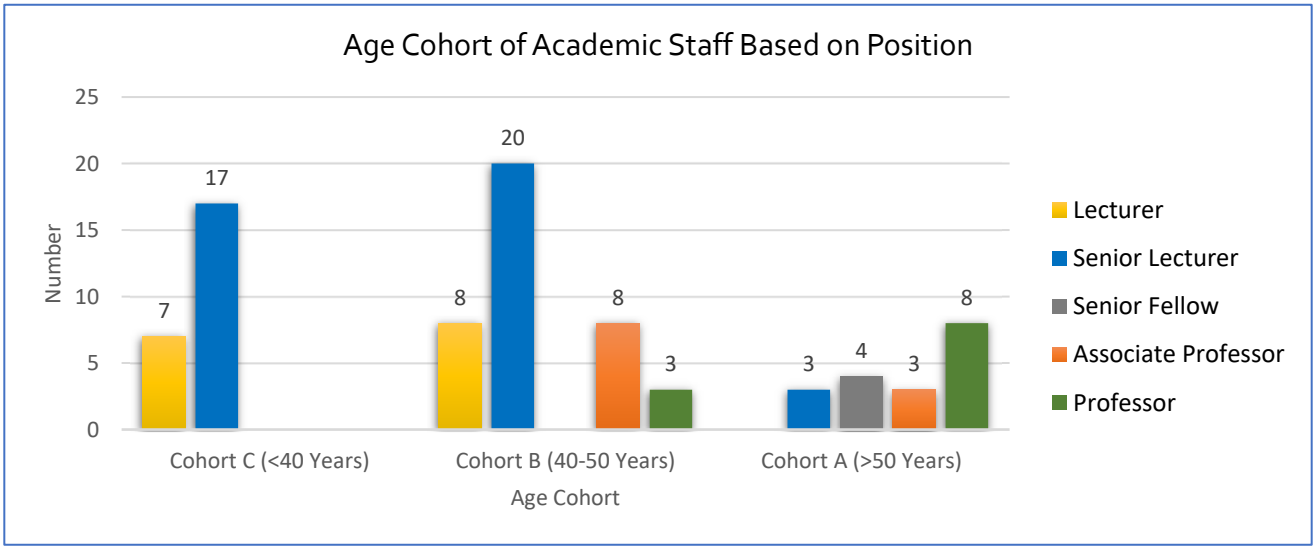
Research, Development & Innovation

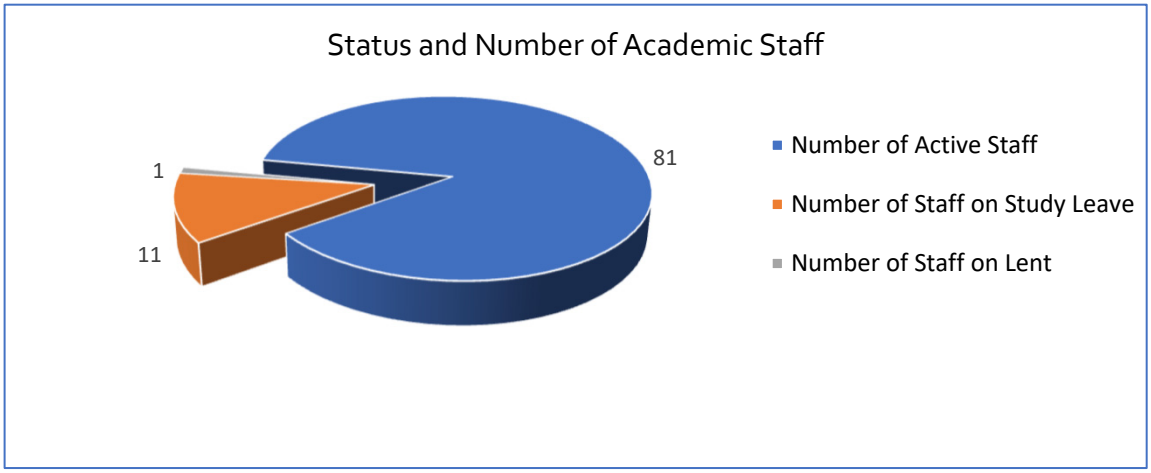
FKJ Research & Innovation Report

Reported by Assoc. Prof. Dr. Abu Zahrim Yaser, Dr. Aroland Kiring & Malcolm Boxey Jilimin.

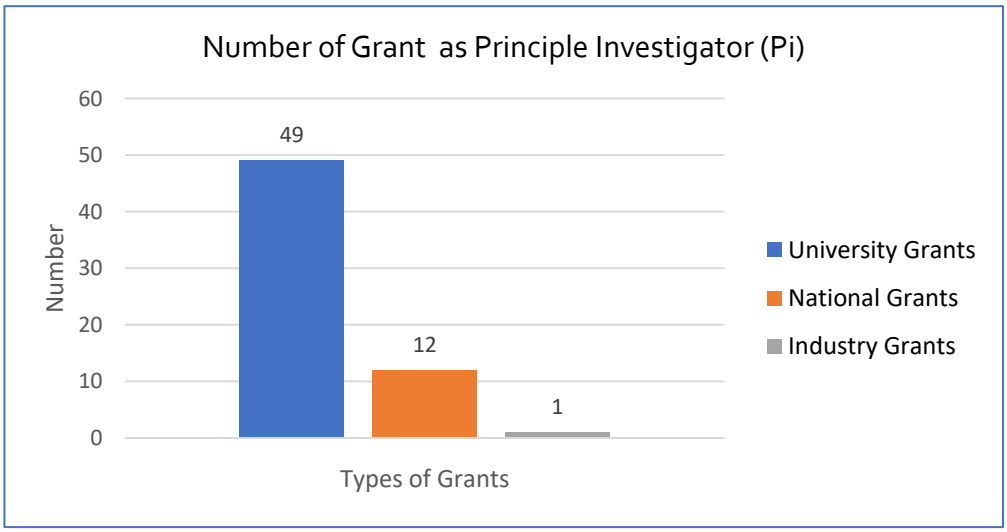
The report is presented based on five sections: FKJ Academic Staff Information, Quantity & Quality of Researchers, Quantity & Quality of Researchers of Postgraduates, Professional Services and Gifts, and Networking & Linkages. Up until June 2020, FKJ has 81 active academic staffs and 12 non-active academic staffs, bringing a total of 93. FKJ also manages to secure various research grants in national and international level. The Faculty holds a total of RM4,396,420.00 in research grants after receiving an additional RM837,260.00 this year. In early January of this year, FKJ had organized International Symposium on Carbon and Functional Materials for Energy and Environment (C-MEE 2020) and able to generate a net profit of RM6644. On the publication side, amongst other publications, this report featured 6 books with 18 indexed journals, 18 indexed proceedings, as well as others. There are 117 national students as well as 12 international students are currently pursuing their postgraduate studies in various disciplines in the Faculty. Further details and break down of the information is given in the following.

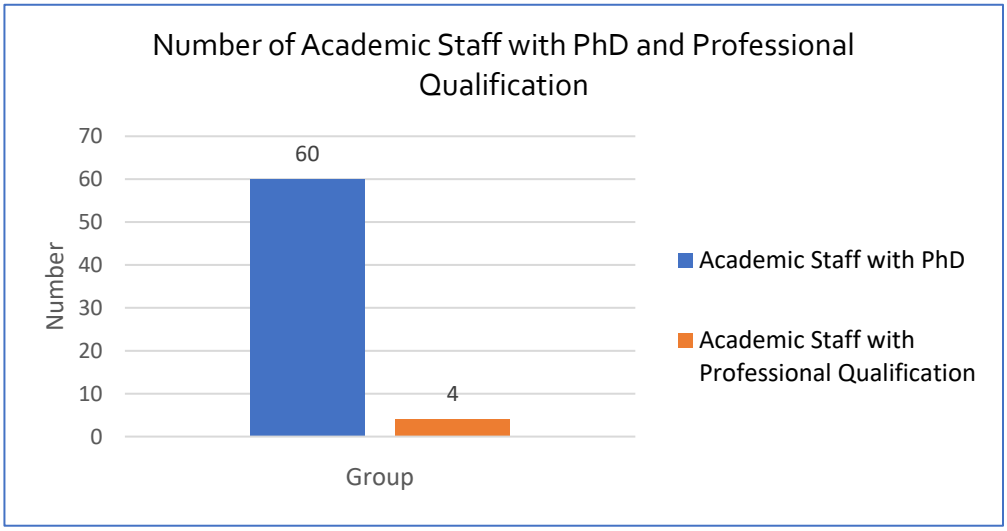
FKJ ACADEMIC STAFF INFORMATION

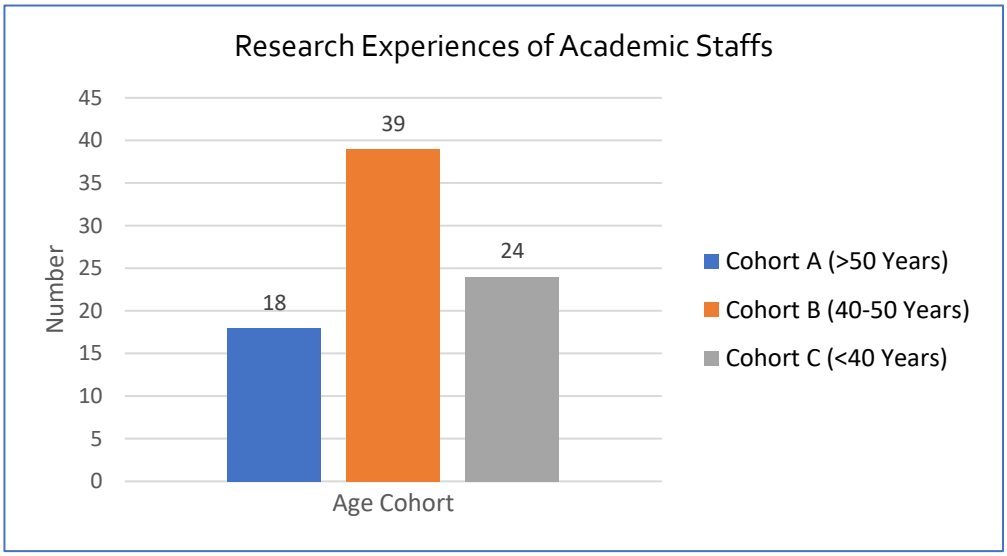




QUANTITY & QUALITY OF RESEARCHERS







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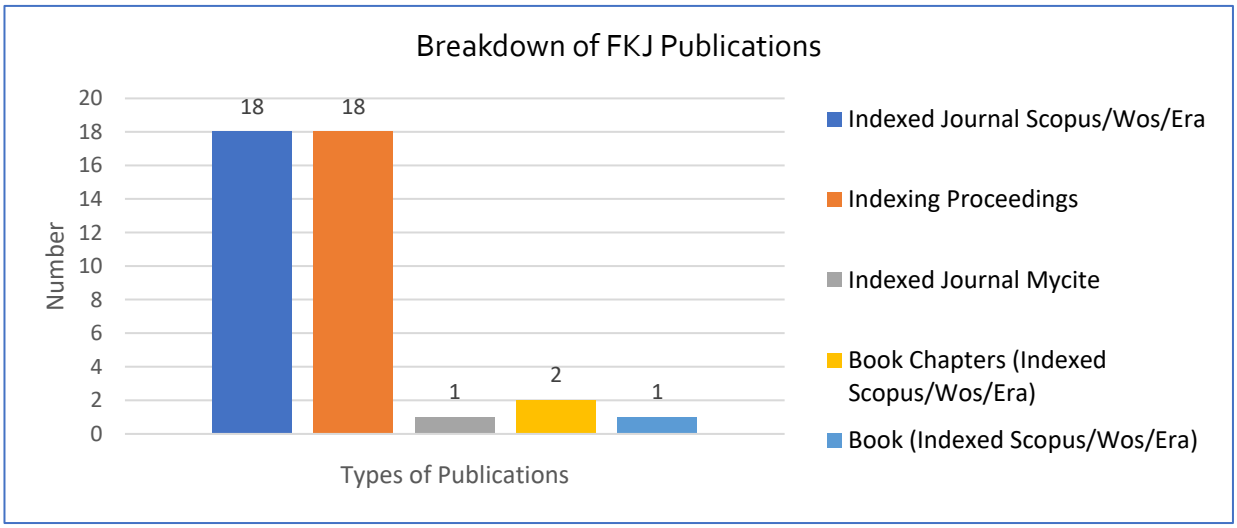
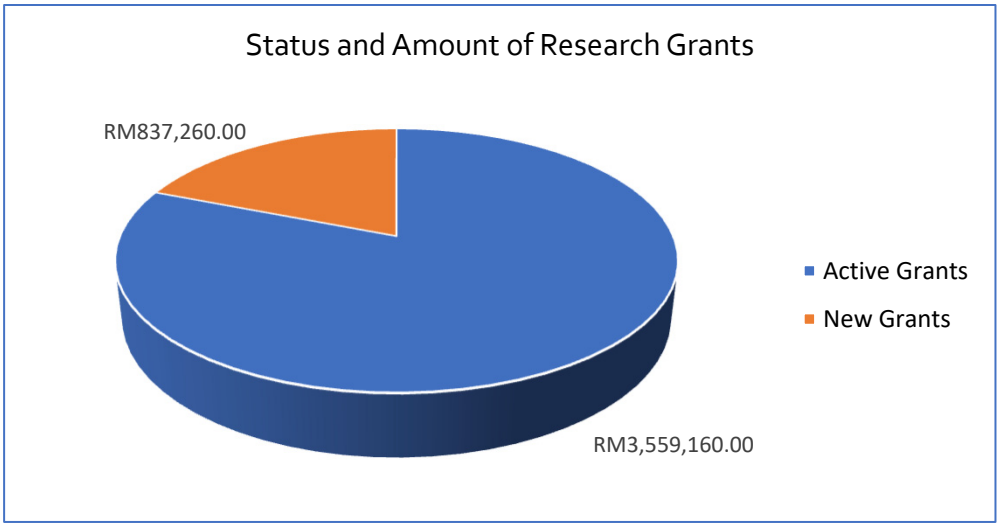
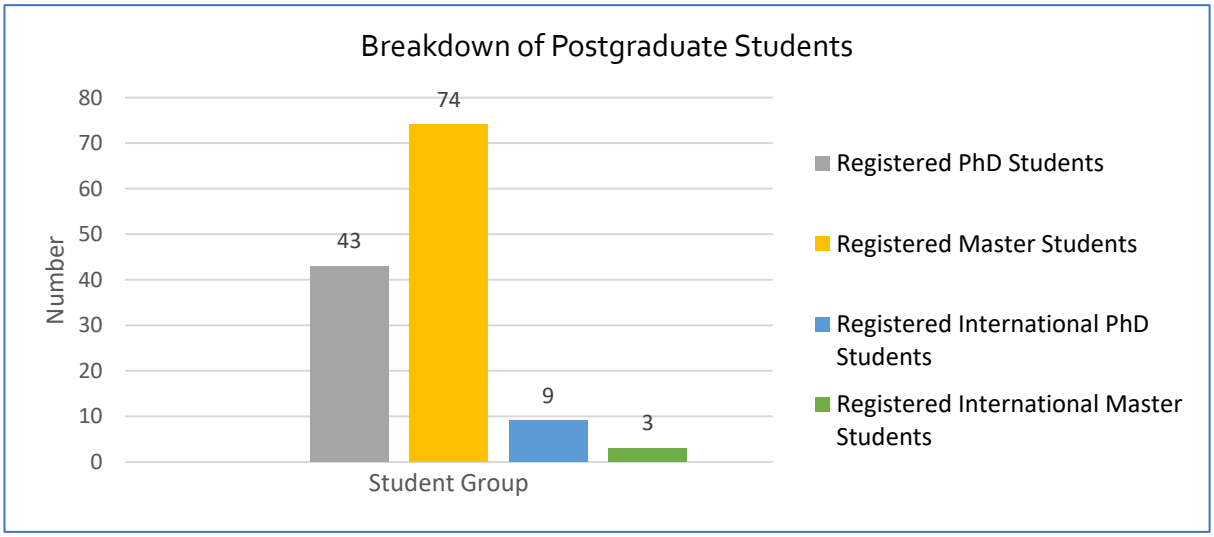
QUANTITY & QUALITY OF RESEARCHERS

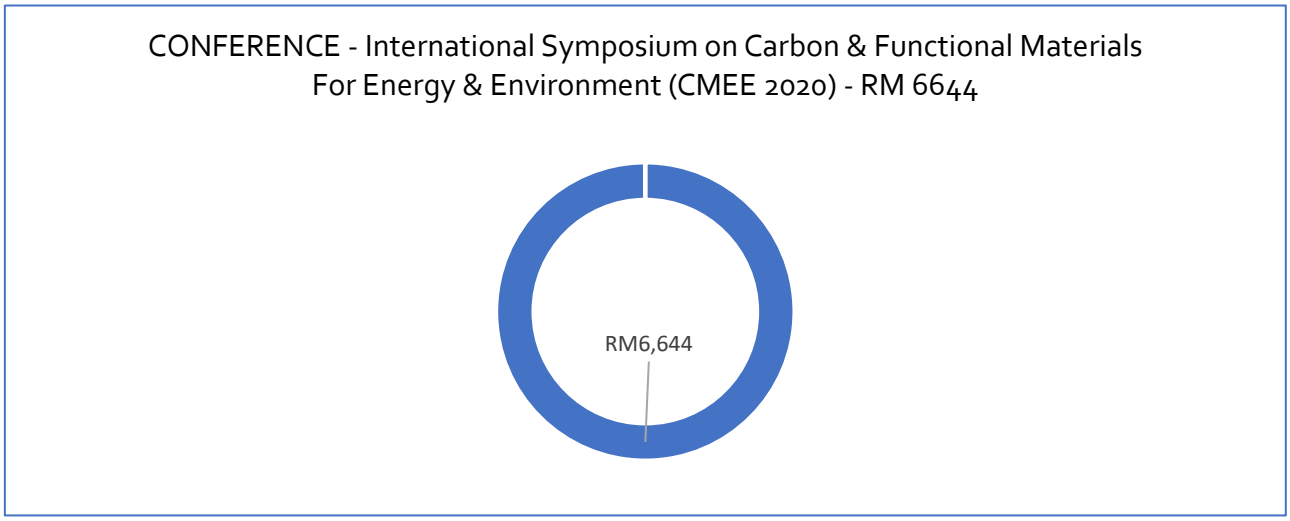




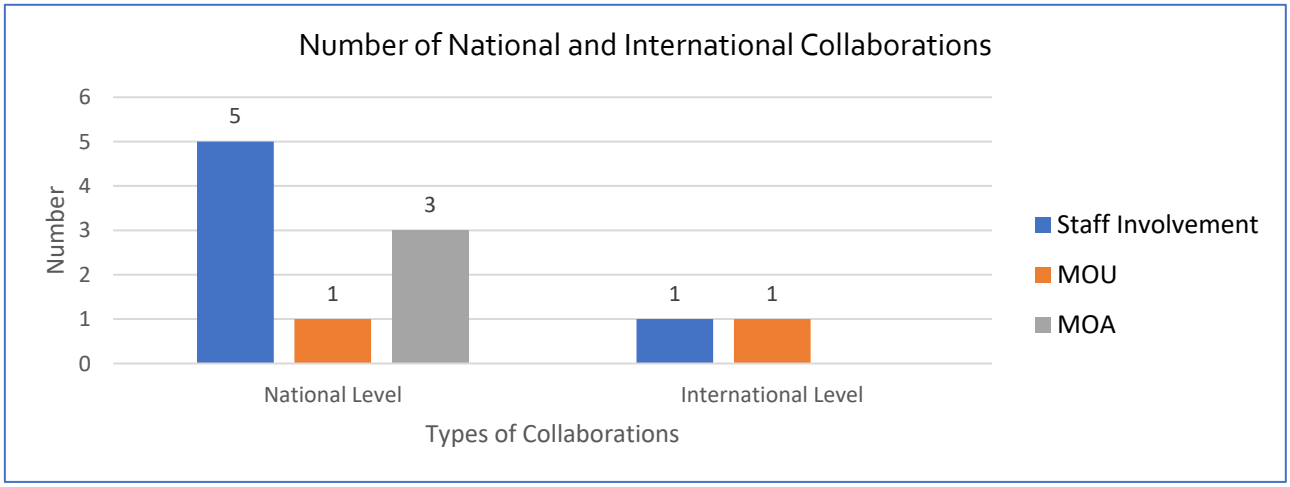
QUANTITY & QUALITY OF RESEARCHERS OF POSTGRADUATES



PROFESSIONAL SERVICES & GIFTS



NETWORKING & LINKAGES



FKJ Successfully Secured 15 Covid-19 Projects Under Special Grants SGI & SDK

Reported by Assoc. Prof. Ts. Dr. Ismail Saad & Malcolm Boxey Jilimin.

The Coronavirus (COVID-19) outbreak has been the main highlight for the year 2020. Ever since the World Health Organisation (WHO) had declared it as a pandemic, researchers around the world have been racing against time to find solutions to alleviate the wide-scaled effects of this virus. Impetuously, Universiti Malaysia Sabah (UMS) have set up an innovation and research grant with hopes that its dynamic researchers and academicians could achieve some breakthrough in the tackling of the COVID-19 problem. The Faculty is proud to announce that 15 projects with a total grant amount of RM 647,260.00 have been awarded to its members. The faculty would like to congratulate all recipients of the grant and will be looking forward to their innovation and research with great interest.

No.	Project Leader	Project Title	Amount (RM)
1	AP. Dr. Rachel Fran Mansa	Temperature Autoscanner Handsanitizer Autodispenser, TASHA.	81,000.00
2	AP. Ir. Dr. Yang Soo Siang	Non-Contact Thermal Gun with Mobile App.	50,000.00
3	Dr. Kenneth Teo Tze Kin	Auto-Trigger Thermal Logger with Augmented Display.	50,000.00
4	Dr. Lillian Gungat	Mobile Non-Contact Testing Chamber.	10,000.00
5	Dr. Yew Hoe Tung	Wearable Real-time Remote Patient Monitoring System Using Heterogeneous Wireless Networks.	36,200.00
6	Dr. Herwansyah Lago	Patrolling Device (Logger) with Mobile Monitoring.	50,000.00
7	Ir. Dr. Ahmad Mukifza Harun	Designing a new face mask layers for current COVID19 needs.	38,000.00
8	Dr. Mazlina Mamat	Post COVID19: Real Time Remote Experiments to support online learning.	16,500.00
10	Cik Zykamilia Kamin	Use of Pressure Swing Adsorption to Produce Gases for Modified Atmospheric Packaging for the Preservation of Vegetables and Seafood Freshness in a Collection Center to Support Vegetables and Seafood Supply Chain as an Adaptation to Current and Post COVID –19 Pandemic Situations.	99,200.00
11	Dr. Kenneth Teo Tze Kin	Intelligent Virtual Diagnosis of Coronavirus using Computed Tomography (CT) Scans.	30,000.00
12	Dr. Yoong Hou Pin	Remote-Controlled Pick Cart System for Grocery Retail.	80,360.00
13	Dr. Rosalyn R Porle	Requirements for an Efficient Online Assessment Moderation System for Electronics (Computer) Engineering Program (HK20) in Universiti Malaysia Sabah (UMS).	24,000.00
14	Dr. Renee Chin Ka Yin	Data Augmentation of Covid-19 Lung Infection Images for Deep Learning Algorithm.	38,000.00
15	Dr. Ali Farzamnia	Automatic Detection of Pneumonia (Healthy, Viral, Bacterial and COVID19) from of the Chest X-Ray Images based on Deep Convolutional Neural Networks.	44,000.00
		TOTAL	**647,260.00**

Published Books Written By FKJ Staff Members

Reported by Dr. Aroland Kiring.

Academic writing serves as a tool of communication for academicians to share their knowledge and experiences in a specific field of study. Most academic work is published in conferences, journals, books and etc. The Faculty of Engineering (FKJ) always encouraged the academicians to write and published their research works and findings. Here are some of the published books that were written by our faculty's staff members:

Book 1 – "Pengkomposan Suatu Pengenalan" by AP. Abu Zahrim Yaser and *et. al*.

Book 2 – "Green Materials and Environmental Chemistry" by Ap. Abu Zahrim Yaser and *et al*.

Book 3 – "Advances in Waste Processing Technology" by AP. Abu Zahrim Yaser.

Book 4 – "Advances in Nanotechnolgy and Its Applications" by Ahmad Tariq Jamel & AP. Abu Zahrim Yaser.

Book 5 – "Asas Teknologi Elektrik" by Dr. Ahmad Mukifza Harun.

Book 6 – "Membrane Technology for Water and Wastewater Treatment in Rural Regions" by Prof. Ir. Dr. Rosalam Hj. Sarbatly.

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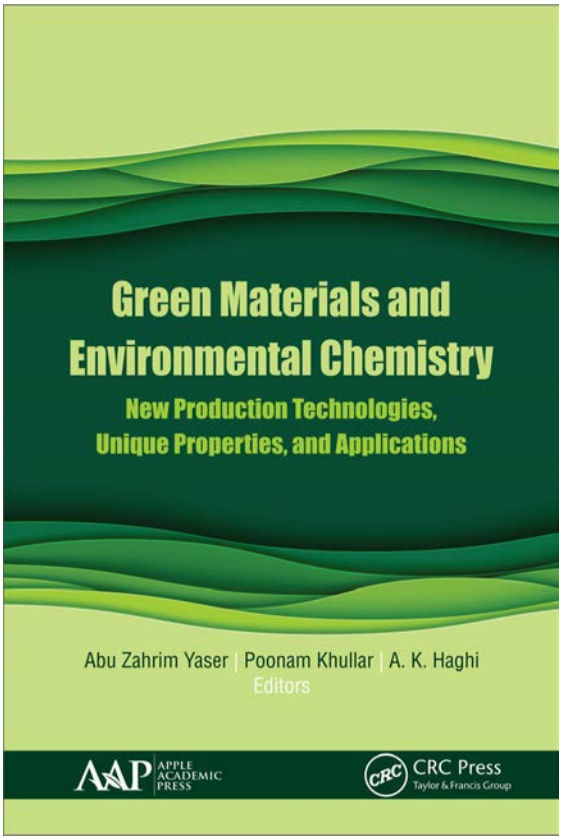

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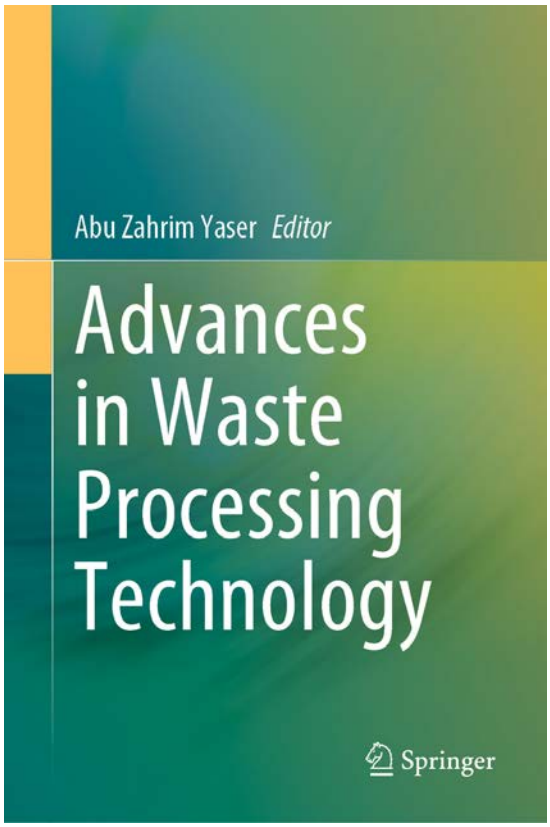

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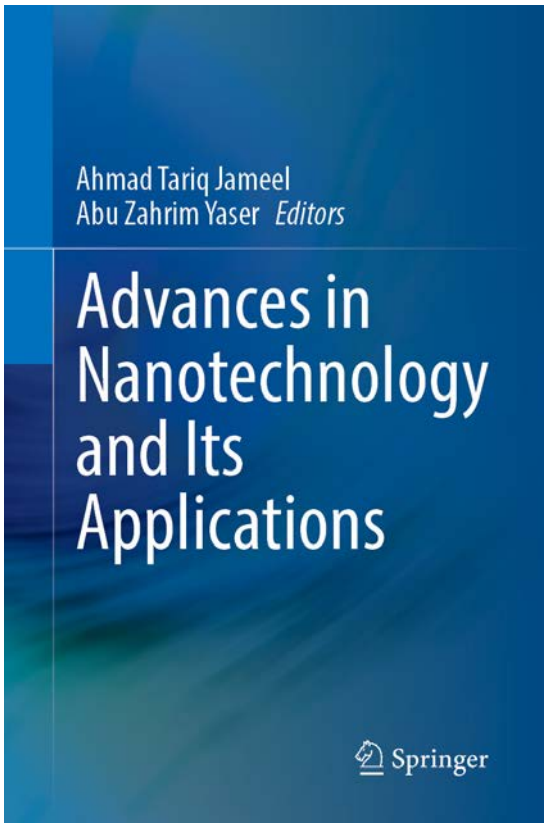

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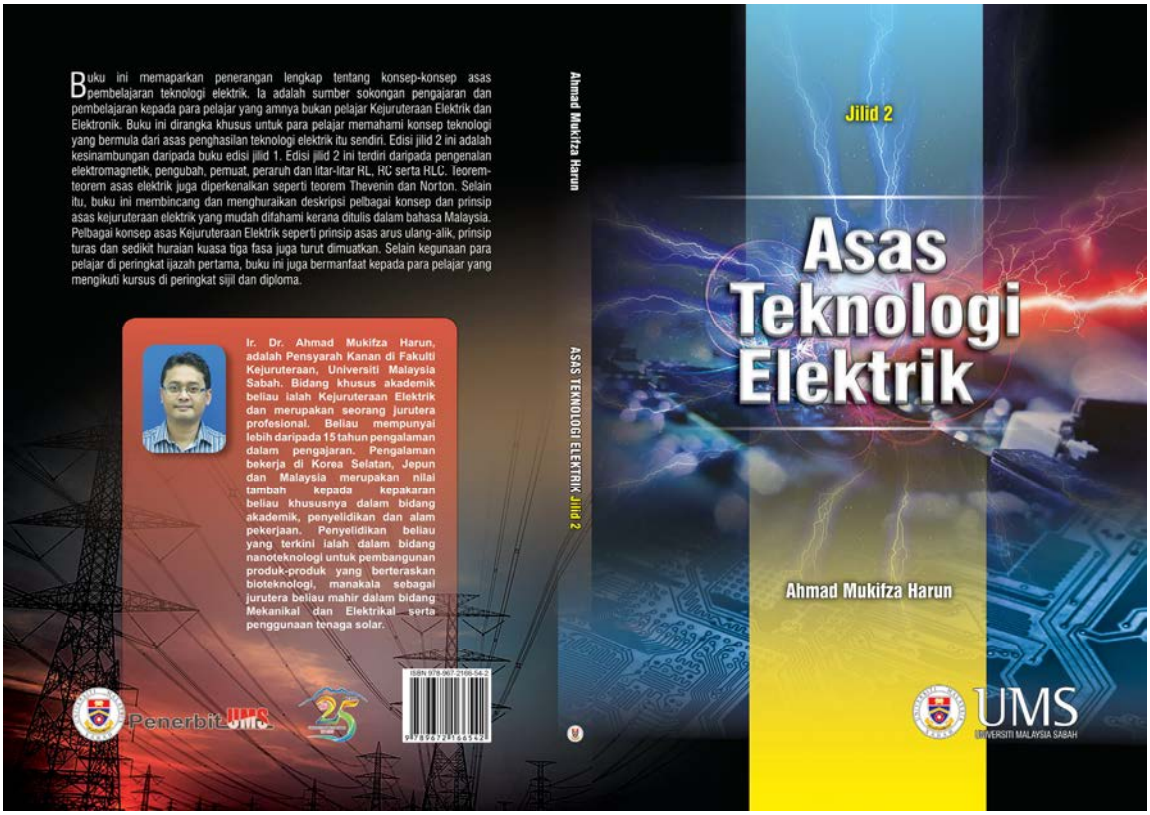

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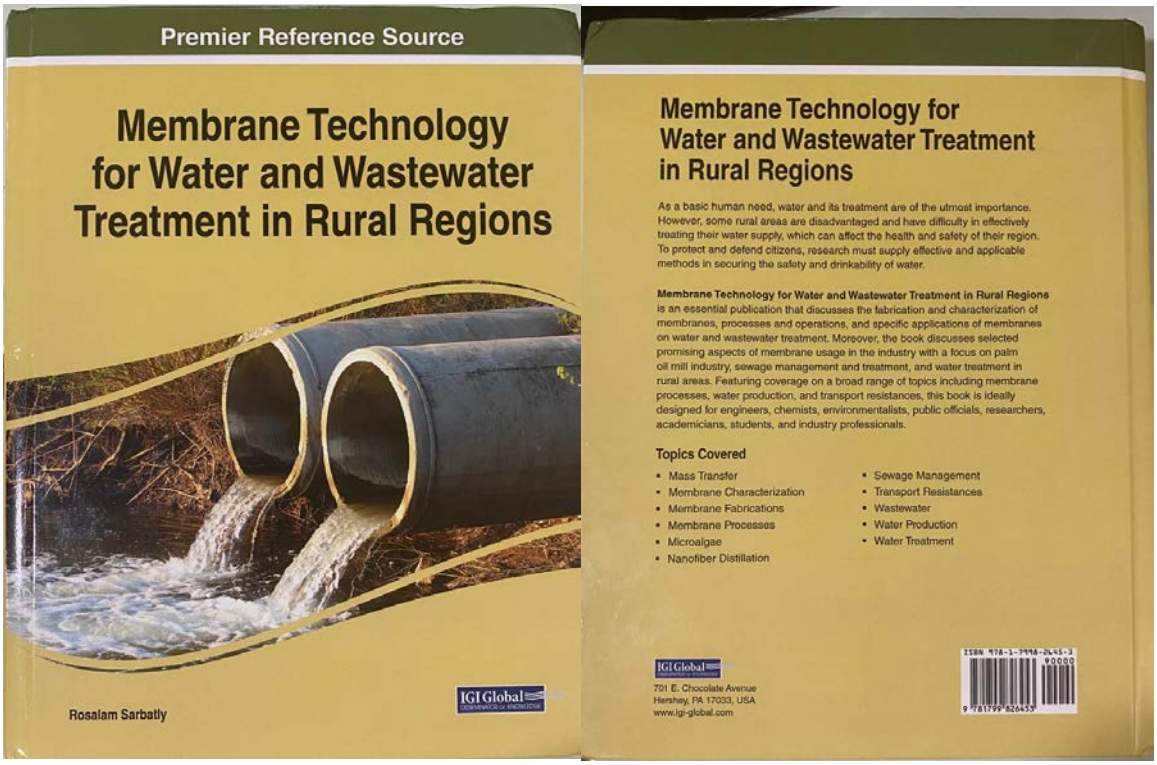
Premier Reference Source
Membrane Technology for Water and Wastewater Treatment in Rural Regions
Rosalam Sarbatly
IGI Global
Membrane Technology for Water and Wastewater Treatment in Rural Regions
As a basic human need, water and its treatment are of the utmost importance. However, some rural areas are disadvantaged and have difficulty in effectively treating their water supply, which can affect the health and safety of their region. To protect and defend citizens, research must supply effective and applicable methods in securing the safety and drinkability of water.
Membrane Technology for Water and Wastewater Treatment in Rural Regions is an essential publication that discusses the fabrication and characterization of membranes, processes and operations, and specific applications of membranes on water and wastewater treatment. Moreover, the book discusses selected promising aspects of membrane usage in the industry with a focus on palm oil mill industry, sewage management and treatment, and water treatment in rural areas. Featuring coverage on a broad range of topics including membrane processes, water production, and transport resistances, this book is ideally designed for engineers, chemists, environmentalists, public officials, researchers, academicians, students, and industry professionals.
Topics Covered
Mass Transfer
Membrane Characterization
Membrane Fabrications
Membrane Processes
Microalgae
Nanofiber Distillation
Sewage Management
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Science & Technology Progress In Human Civilization

Written by Prof. Ir. Dr. Rosalam Hj. Sarbatly.

FAIR AND EQUITABLE IN EDUCATION - Education is a never-ending task. The task has been entrusted by God since Adam and Eve were sent to the earth as the leader. For Muslims, surah al-Baqarah verse 30, God says, "And (remember) when your Lord spoke to the Angels; "Indeed I want to make a caliph on the earth". They asked (the wisdom of the decree of the Lord) saying: "Do You (our Lord) want to make the earth a disaster and shed blood, while we are still praising You and purifying You?". God says: "Indeed I know what you do not know".

As leaders and educators, the main task is to build the community of believers, knowledgeable, and practice what they have learned for the good of all. Education has produced prominent figures and philosophers such as Socrates (470 - 399 BC), Plato (424/423 - 348/347 BC) and Aristotle (384-332 BC) who were philosophers during the Greek era.

Prophet Muhammad (570-632 AD) and his companions succeeded in developing Islamic teachings. Muhammad ibn Musa al-Khwarizmi (780-850 AD) introducing Algebra, Ibn Sina or better known as Avicenna in Europe is well known in medicine with his book is still a reference to the present day "The Canon of Medicine, and a medical encyclopedia" and Albert Einstein (1879 - 1955) was a German-born physicist who introduced the theory of relativity that has successfully shaped human civilization today.

Educational access and opportunity for all levels; primary, secondary, and higher education must be fair and equitable opened to all levels of the society. The intention and responsibility of a leader in providing the education should on the concept of "no one should be left behind" irrespective of the people's background and position.

What are the major challenges in ensuring equal access to education especially in Sabah is the geographical shape, polar distribution of population, community economics, and mixed culture. With covid19 pandemic, it has suppressed further education equality when online teaching has to be implemented. This challenge demands leaders who have been entrusted by the government to be proactive in seeking solutions, not just waiting for directions or simply surrendering to God's destiny without efforts.

Higher institutions of learning reflect the future of society in the country. They should start the lead, move ahead of time to produce human capital and discover the fact-findings guided by potential explosive multiplier effect based on the future world mega trend and the country direction. With the new normal due to covid19 and the current trending of IR4.0 development, the university must lead the way.

TECHNOLOGICAL DEVELOPMENT PROGRESS - Fire gives power to the human. At the beginning of the Paleolithic era, known as the rock age about 2 million years ago, Homomids, the earliest human species according to some scientists, have moved from eating only cereals and fruits to learning to eat meat and hunt. From the Paleolithic era around 250,000 years ago, humans began to cook well because of their ability to control fire and this was due to the need to diversify their diet. Some food sources could not be eaten without cooking because some could be harmful to health.

The first agricultural revolution of the Neolithic revolution around 10,000 BC saw the transition from relying on hunting and livelihoods to regular farming to produce foods such as grain crops and sheep herds. The Levant region or today is known as Syria, Lebanon, Palestine, Israel, and most of southeastern Turkey is the earliest area of group farming from around 10,000 BC followed by the Middle East to the Neil River in Egypt.

As early as the 8th century saw the agricultural revolution of the Arab world while in the 17th and 19th centuries the British and Scottish became the second agricultural revolution through the use of machinery that started the first industrial revolution (IR1.0). During the golden age of Islam from the 8th century to the 14th century, the cultural, economic, and scientific had been flourishing.

The first recognized industrial revolution began in Britain around 1765 when water and steam resources through combustion was used to move mechanical machinery for agricultural and transport activities such as railway came about. It began only after about 200 years from the earlier scientific revolution when the publication of Copernicus' De revolutionibus in 1543 and Newton's Principia in 1687 modern science was created in a unique burst of intellectual activity.

The second industrial revolution took place around 1870 when people manufactured large factories of vehicles and machinery through electricity. The third agricultural revolution took place in 1930-1960 in developing countries especially in Europe known as the green revolution when the machinery began to mass-produce known as the second industrial revolution (IR2.0). The third industrial revolution (IR3.0) began around 1969 with the introduction of digital computer technology and has improved the automation system.

Nuclear technology began with the discovery of nuclear reactions by Ernest Rutherford in 1932. This scientific revolution has led to the ability of humans to control and apply nuclear fusion technology in various fields such as energy, x-ray, medicine and radiotherapy, agriculture for example in the treatment of diseases and productivity improvements, and as weapons of mass destruction.

"Science and technology destroy human". It is true when nuclear technology has been misused as a weapon of mass destruction. The United States developing a project in Manhattan dropped the Atom bombs on August 6 and 9, 1947 in Hiroshima and Nagasaki, ending the second world war and killing about 129,000 and 226,000 respectively. The bombing also changed the lives of Japanese people who were initially not united.

Subsequently, many nations rushed to develop nuclear technology to protect the country's sovereignty from the threat of enemies. Among those countries are India-Pakistan, Iran, Israel, North Korea, China, as well as European countries such as the UK, France, Germany, and Russia and the United States. Again our country is lagging in this technology race.

Allegations of Iraq developing a nuclear weapon of mass destruction have been made by George W. Bush and Tony Blair to invade Iraq starting March 19, 2003. The one-month-long attack, however, failed to find the weapons of mass destruction as alleged. What are the justice that Iraq have received after the country has been destroyed, sorry?

FOURTH INDUSTRIAL REVOLUTION (IR4.0) - The history of technological development has clearly shown that human civilization relies heavily on technology to stay ahead, but it should fall on the right hand. Thus, our challenge is to build a community that understands it. The knowledgeable society will be able to build the future with a high degree of civilization and ability to maintain sustainable.

The first industrial revolution used water and steam power to mechanize production. The second used electric power to generate mass production. The third used electronics and information technology to automate production. The fourth industrial Revolution is structuring on the third, the digital revolution that has been taking place since the middle of the last century. It is identified by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.

Now the world is in the era of the IR4.0 while we are still far behind. The fourth industrial revolution has begun and is part of the present and future needs that combine the physical and the virtual. The process of digitizing the entire automation system as well as enabling interaction and control processes for human-machine relationships will enable activities to take place regardless of place and time.

Given the worldwide IR4.0, with the population of Asia reaching about 4.6 billion, about 60% of the world's 7.8 billion by 2020, with the number continuing to grow exponentially, the IR4.0 is a promising technology for meeting the needs of human beings. Looking at the technology change scenario and after the pandemic covid19 affecting our life, where is our country stand right now?

The chances of billions of people connected by mobile devices, with unprecedented processing power, storage capacity, and access to knowledge, are limitless. And this likelihood will be multiplied by emerging technology breakthroughs in fields such as artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing.

In light of the recent changes in the civilization of human technology, it is a clear picture that there is a megatrend race for this new technology. The struggle for control of 5G technology between the United States and China proves the importance of the education chain working to produce the result that graduates from higher education institutions can meet the country's current and future needs.

The development of the 5G technology debate is a clear indication that the application of the IR4.0 is booming. Although Malaysia cannot be the world leader in IR4.0, we must strive to be the leader in the Asian region in shaping sustainable development.

Interview With VOKfm, A Local Radio Station

Reported by Assoc. Prof. Dr. Jidon Adrian Janaun.

Bual Bicara VOKfm conducted a live interview session with Dr. Jidon on 12th June 2020. The interview session was broadcasted via VOKfm FB Live Streaming also on the radio. The topic of the interview was "How to become an inventor?". The interview was conducted in Bahasa Malaysia, via ZOOM application and it can be accessed via https://www.facebook.com/vokfmsabah/videos/554004428590890/

Congratulations, Greetings & Birthday Wishes From FKJ

Setinggi-tinggi Tahniah

Prof. Ir. Dr. Abdul Karim Mirasa

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UNIVERSITI MALAYSIA SABAH

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Dr. Rosalyn R. Porle
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KEJURUTERAAN ELEKTRONIK (KOMPUTER) (HK20)
FAKULTI KEJURUTERAAN
1 Jun 2020 sehingga 31 Mei 2022.
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Setinggi-tinggi Perhargaan
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DI ATAS PERKHIDMATAN YANG TELAH DIBERIKAN SEBAGAI
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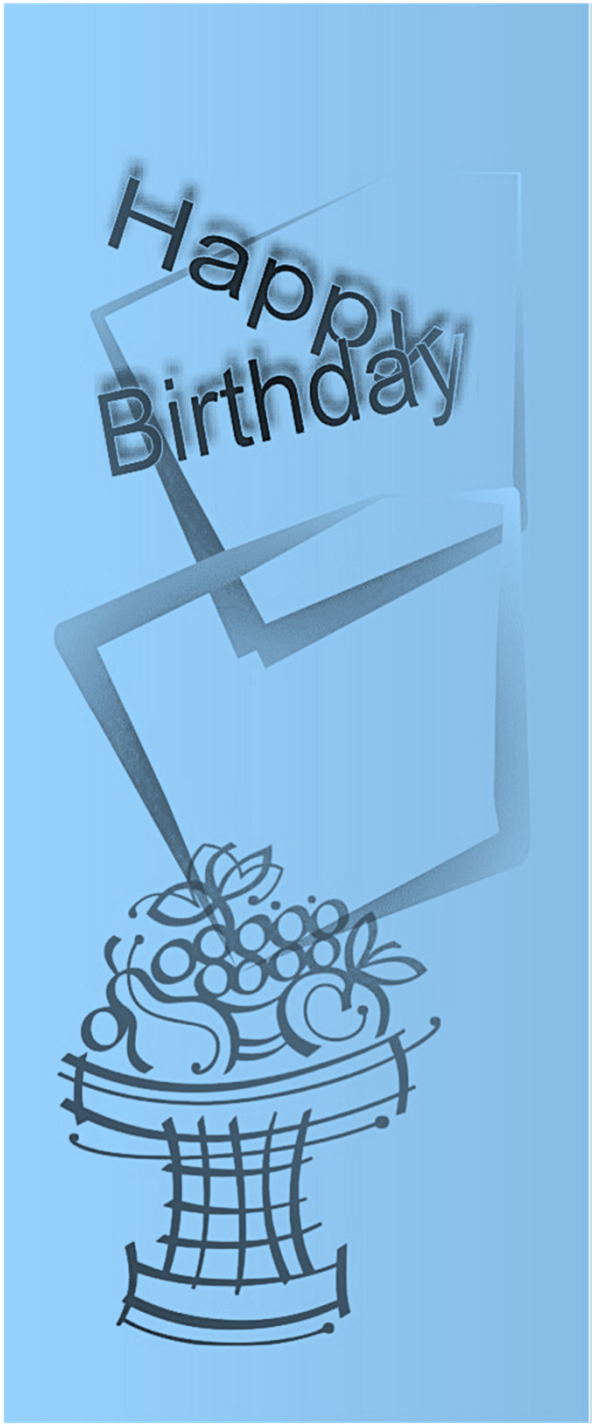
For all those born from April to June, we wish you a Happy Birthday and many happy returns.



ADRIANA ERICA AMALUDIN
AHMAD NURFAIDHI RIZALMAN
AROLAND M'CONIE JILUI KIRING
DUDUKU KRISHNAIAH
EDDY SYAIZUL RIZAM BIN ABDULLAH
JASMI BIN JAYA
JOHN PAULUS DUA ABDULLAH
JULIUS BIN SOKODOR
JANICE LYNN AYOG
MAZLINA BINTI MAMAT
MOHAMMAD RADZIF BIN TAHARIN
MOHD SAIYFUL @MOHD ADZAS SAFIC AWANG
MOHD. KAMEL WAN IBRAHIM
MOHD.RUSLAN BIN NOORJAYA CHEW
MUNAP BIN SALLEH
MURNI BINTI SUNDANG
MUS MULYADY B. MATLIN
NELLY BINTI MAJAIN
RAYSIUS MODI
RAZIS BIN MASTERI
SAM BIN SANAN
THAM HENG JIN
WONG HOCK TZE @ FARRAH WONG
YOONG HOU PIN
NOOR SHEENA HERAYANI BINTI HARITH
MOHD AZIZUL BIN LADIN
AZWAN GAKAU @ SALLEH
HARIMI DJAMILA
MANAS KUMAR HALDAR
MOHD. KHAIREE IZWAN BIN SHAM
KHONG WEI LEONG

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General


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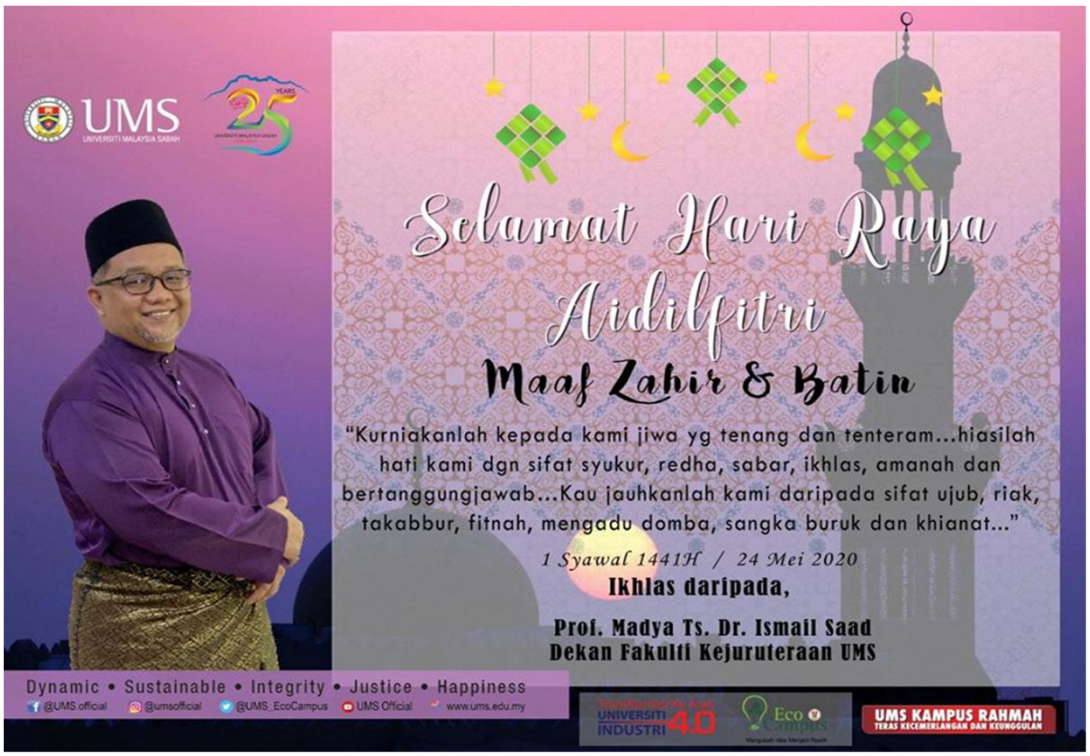
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Selamat Hari Raya
Aidilfitri
Maaf Zahir & Batin
"Kurniakanlah kepada kami jiwa yg tenang dan tenteram...hiasilah hati kami dgn sifat syukur, redha, sabar, ikhlas, amanah dan bertanggungjawab...Kau jauhkanlah kami daripada sifat ujub, riak, takabbur, fitnah, mengadu domba, sangka buruk dan khianat..."
1 Syawal 1441H / 24 Mei 2020
Ikhlas daripada,
Prof. Madya Ts. Dr. Ismail Saad
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TERAS KECEMERLANGAN DAN KEUNGGULAN


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