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THE MONTHLY BULLETIN OF THE INSTITUTION OF ENGINEERS, MALAYSIA

DECEMBER 2022

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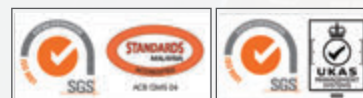
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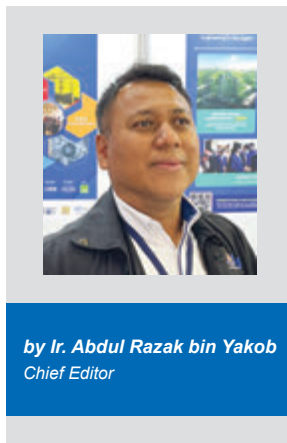
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by **Ir. Abdul Razak bin Yakob**
Chief Editor

COVER NOTE

Year End Special!

Salam and Hello All IEMers,
This month we have something truly special for our readers. With the intention to engage more with all our members and readers, the *JURUTERA* Bulletin Editorial Board humbly takes the centre stage to champion the issue.

No doubt it was a huge task but one we deemed as necessary so that we could show our leaders' plans to take IEM to the next level with Reimagining IEM.

We want to be engaging with our members. We want to be inclusive. We want to champion sustainability. We may be divided by disciplines, gender, race, religion, age and distance but, as IEM, we are one. We stand stronger together.

For the first time, the centre page of this magazine is allocated to the backbone of our organisation, the IEM Secretariat. Let us get to know them better.

We hope you will enjoy this special issue. Let's continue to engineer our country to greater heights! ■

EDITOR'S NOTE

Get to Know IEM Again

We know that within IEM, there are various Technical Divisions, Sections and Special Interest Groups. Do you know what roles the office bearers and the various committees play in IEM? More importantly, do you know what the aforementioned people intend to work on moving forward?

If you don't, you can find all the answers here, in this special edition of *JURUTERA*, brought to you by the Bulletin Editorial Board of the Information & Publication Standing Committee (InfoPub).

Meanwhile, the year 2022 is coming to an end soon. Have you achieved all the resolutions you made on 31 December 2021? Well, I have not, mainly because I have not made any resolution but my wish for everyone remains the same every year: May all of us have a better year ahead. Happy New Year 2023 in advance! And... Merry Christmas to everyone celebrating! ■



by **Ir. Dr Siow Chun Lim**
Principal Bulletin Editor

MERRY
Christmas
& HAPPY NEW YEAR





Reimagining IEM: Visions of Our Leaders

The “well-being” of any organisation or institution lies in the hands of those who have been entrusted to lead. IEM is no exception. In line with the theme, Reimagining IEM, we have assembled a list of questions for the President, Deputy President, Honorary Secretary and Treasurer to respond to. We want to know IEM from their perspectives and what should be the way forward.

Let's take a look.

Ir. Prof. Dr Norlida binti Buniyamin (President)

The focus of your presidency is members engagement and sustainability. How do you envision IEM getting its members engaged with the organisation?

IEM is a member-centric organisation. When members engage with us, they will be able to convey to us their needs, problems, issues related to the profession etc. With this information, IEM can better prepare strategies, initiatives and plans to cater to their needs.

In addition, as one of the largest professional bodies in the country, IEM is the voice representing the Malaysian engineering fraternity. We will put forward the views of local engineers, engineering technologists and engineering technicians to regulators, employers and decision makers. We will do our part in the growth and development of the country by contributing not only our views but also technical expertise via position papers, conferences and other activities.

Sustainability is a huge topic today. What will IEM focus on to help achieve the United Nation's Sustainable Development Goals (SDGs)?

There are many areas where IEM can contribute towards the SDGs. IEM has already developed a number of Position Papers which are in line with the SDGs, for example Water Quality, Cleanliness of Beaches and Water & the Environment which addresses SDG6. The IEM Position Paper on Benchmarking the Quality of Graduate Engineers, developed in 2012, advocates not only that university curriculum should be of quality but it also looks at improvements needed at primary

and secondary level education to ultimately produce engineering graduates of top quality.

Position Papers on Energy Efficiency, the annual IEM-Standards Malaysia-Suruhanjaya Tenaga ASEAN Electrotechnical Symposium to promote the "standards drive sustainable development goals", the IEM-ST Certified Energy Manager course and many other training programmes on energy efficiency management have been carried out by our Technical Divisions. In the face of fossil fuel depletion, IEM has also been organising the annual university level Chem-e-Car competition which is aimed at promoting and encouraging undergraduates to be more innovative and creative when facing challenges of the ever-changing world in future.

The Women Engineers Section of IEM has, since 2012, also been advocating the need to raise the image and improve the capabilities of women in Science, Engineering and Technology and to help women find balance between work, family and social life as well as capacity building. Since then, there have been two more conferences in 2018 and 2022 to study the issues preventing women from getting equal treatment at work. The IEM WE Section has also started a research study on Women in Science & Technology as well as Women Engineers at Management Level. The objective is to determine the percentage of women in the engineering workforce and to focus on how to further tap such talents. There may be a significant pool of women engineers who have stepped back to care for their families. The aim is to encourage and lure them back into the industry.



Do you think after 63 years, IEM has become irrelevant to the industry or even to the members?

I do not think IEM has become irrelevant at the moment but, as engineers, we are not very good at publicity or promoting ourselves. IEM needs to do more to improve the visibility of all our efforts. Of course, we need to put in greater effort to make us more relevant to the industry and to the members. We need to conduct a self-evaluation to see where we are now, what we are in pursuit of and then draw up the necessary strategies to get there.

IEM had embarked on the internationalisation of our engineers since we signed the International Engineers Agreement way back in 2000. This year, we have been accepted as a provisional signatory of 2 other international agreements involving engineering technologists and engineering technicians. With the international recognition accorded to technical personnel examined by IEM, our members will have a bigger market for their expertise.

At the last Council meeting, we received approval for IEM to join the FEIAP Graduate Engineering Personnel Register. This enables our Graduate Members to have a post nominal of FEIAP Grad. Eng. where they are recognised by all the 27 member economies of FEIAP. This will greatly enhance the employment opportunities for our graduate members on an international level.

IEM has also received grants and incentives from MATRADE to promote engineering products and services internationally. To date, IEM has led 3 delegations of engineering firms to international trade fairs in Singapore, Indonesia and The Philippines. We hope more members will come forward to take up this opportunity to promote their products or services overseas.

How do you see IEM in its role as a nation builder, say 10 or 20 years from now?

Members of IEM have always been the backbone of the country's growth and development. Pre- and post-Independence, engineers had contributed to infrastructure development such as road, rail, electricity generation and buildings. In the 1970s and 1980s, local engineers contributed to Malaysia's fast growth as the existence of highly qualified local engineers and the

country's policies attracted foreign direct investment (FDI) to our free trade zones and multinational companies flocked to Malaysia.

IEM has always looked after the welfare of its members. As a learned society, we ensure that Malaysian engineers are of quality and that they have the capability to contribute to the nation's development and to the world. We have always been involved with accreditation of engineering programmes and mobility agreements and will continue to do so. These activities are undertaken to provide Malaysia with engineers who are not only technically talented and innovative but who will also provide designs and solutions which incorporate sustainability of resources to help realise the UNESCO SDGs.

If you have an unlimited budget, how and where would you want to take IEM to?

I would love to be able to help our Branches grow and have their own properties to carry out IEM initiatives at regional level and to provide better services to the members at Branches as well as to assist in the growth and progress of their members.

I would like to be able to have sufficient facilities and amenities in IEM buildings at both HQ and Branches which can provide shared office spaces for upcoming engineering entrepreneurs to grow their business.

Do you think the current IEM Vision needs to be revisited? If yes, what do you have in mind?

In 2021, we introduced the current Vision as the previous Vision was tied to Vision 2020. I believe that, for the time being, this is the path that IEM wishes to pursue and it should be maintained.

Ir. Prof. Dr Jeffrey Chiang Choong Luin (Deputy President)

As Deputy, you will become IEM President in April 2024. Would you then continue the legacy of the Immediate Past President; if not, what will you focus on during your presidency?

As a collective team effort through the IEM Executive Committee and IEM Council, we are working together to achieve a common goal or a set of common goals, which have been covered by our current President in her first Presidential Address.

In a broad sense, I would like to address the issue of strengthening the Institution in policy implementation, smooth operation of the Secretariat in carrying out its duties and responsibilities and to ensure IEM remains relevant to the industry by

having close rapport with all external stakeholders (both public and private) in the form of local, regional and international partners and associates.

Do you think IEM needs a total revamp? If yes, what do you want changed? If not, why do you think IEM should just remain as it is?

I can safely say that it is not possible to carry out a total revamp of the Institution over a 2-year term of the Presidency. If, indeed, a total revamp is necessary, it will have to be an agreed process which may spread over 2 or more Presidents' terms of office. Nevertheless, every new President comes in with a set of resolutions and a wish list of things to be accomplished during his/her



term of office. My personal opinion is that the Institution does not need a total revamp but perhaps a slight change or restructuring is required, depending on the need to serve our members in a more effective manner.

How do you think IEM can enhance its image and branding?

To enhance IEM's image and branding, the current office-bearers and elected Council members should have more dialogues with IEM members at large and listen to the voices of our grassroots. Nothing beats reimagining and re-branding exercises where our



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members are giving those serving as volunteers at HQ and Branches, the thumbs-up for serving and dealing with our stakeholders, i.e. members, practising engineers, Government agencies, sister institutions and associations and, most importantly, the community or society at large.

Apart from these, other factors that play a major role include serving volunteers and employed secretariat staff projecting a professional work approach by tackling issues promptly and efficiently with the right parties, resolving conflicts and disputes amicably and in a timely fashion and last but not the least, all serving volunteers must project a united front when dealing with important issues once a decision has been made at the top level (i.e. at Excomm and Council levels) and then to follow through with the same voice and in the same direction.

Do you think the current IEM Vision needs to be revisited? If yes, what do you have in mind?

Let us take a look at the IEM's current Vision and mission:

Vision

The Institution of Engineers, Malaysia aims to be the premier learned engineering society championing the adoption of ethics and professional best practices in all sectors of the industry.

Mission

IEM shall

- **promote sound professional engineering practice in support of the socio-economic development objectives of the nation.**
- **service the needs and interests of its members and the public and uphold the social standing image of the engineering profession.**
- **contribute towards nation building and shall strive to enhance society's consciousness of science and technology.**

The Vision is quite encompassing, with a focus on adoption of ethics and professional best practices, so I do not think there is a need for change at this point in time.

As for the mission, which the question does not cover, I can safely say that IEM has a 3-prong approach to achieving our Vision through the practice of professional engineering for the betterment of our nation, to serve our members and the public

in terms of safety, health and welfare as well as to strive for professional excellence by applying the latest technology and development.

I am a bit biased in giving my views for this question, simply because I have had a direct hand in re-writing the Vision and mission of the Institution during my service as elected Vice-President and in my then capacity as Chairman of Standing Committee of Corporate Affairs (2018-2020).



Ir. Prof. Dr Zuhaina binti Zakaria (Honorary Secretary)

Honorary Secretary is a very important position as all communications go through you. What do you think IEM can change to make the process smoother?

The roles and responsibilities of the IEM Honorary Secretary, as written in the constitution, are very wide. However, this was written when the constitution was first drafted. Since then, IEM has grown to almost 50 times bigger. Therefore, in my humble opinion, there is a need to review the scope of responsibility of the Honorary Secretary.

When I first took the post, I found it quite overwhelming as I realised I would be responsible for all communications. With the current size of IEM, the Honorary Secretary should maintain overall supervision of the Secretariat but the running of the other portfolios should come

under the respective Vice-Presidents. Communications should be directly under the respective VPs. This will help IEM to be more efficient and effective in managing its operation.

Revamping an organisation involves many areas, such as Strategy (Work Process), People (Leadership & Management), Structure (Image) and Technology (ICT Infrastructure). Which area do you think we should be focusing on?

My suggestions: (1) IEM needs to work on getting the house in order in terms of management, work processes and the people to increase efficiency and responsiveness. (2) IEM needs to then rethink about enhancing its image, especially on its relevance to the engineering fraternity. We also need to have a centralised department on



promotion and marketing to create a unified brand image.

Do you think the current IEM Vision needs to be revisited? If yes, what do you have in mind?

The current IEM Vision had just been introduced in 2021 as the earlier Vision, which was in line with Malaysia's Vision 2020, was outdated. I believe the current Vision, which centres on championing the adoption of ethics and professional practice, is something that IEM should rightfully be championing; therefore it's very apt.



Ir. Dr Lee Yun Fook (Honorary Treasurer)

What is IEM doing to generate income apart from membership fees which is certainly not enough to sustain operations?

Besides membership fees, IEM is actively providing technical training/courses for members and the general public through our IEM Training Academy and Technical Divisions. Besides physical training, IEM also organised more than 100 webinars during the COVID-19 pandemic and these provided another source of income.

IEM is looking at further diversification of its income sources through advertisements and exhibitions. So far, we have managed to secure a partnership for an annual exhibition which will add a minimum annual income of RM200,000.00 to our coffers. Other initiatives being pursued at present include advertisements and sponsorships of IEM events, online subscriptions for training courses and boosting our income through our commercial arm,

IEM Training Academy.

What are your challenges in managing the IEM finances?

During the post pandemic period, IEM members were hugely affected, so we had to explore other ways to increase our income; at the same time, we tried to minimise expenditure in order to achieve a break-even account. IEM has always exercised budgetary control on the condition that it does not impair our services to members. In the past decade or so, my predecessors managed the finances very well and kept expenditures within our means. However, with the technological advancements in the world today, there are improvements that need to be made to our facilities and services in order to keep up with the times and to ensure that services to members are sufficient and not delayed. To do this, we have to generate more income to defray the expected expenditure and this is the challenge.



How can IEM be able to be seen as a great organisation that supports its members?

I believe that as a learned professional body with 50,000.00 members, IEM should make its stand when responding to important issues that affect the engineering fraternity. In addition, it is important to make use of social media platforms such as Facebook and Instagram to promote IEM activities and to reach out to more members.

IEM should also look at other avenues to generate income so that we can provide members with more training and professional development opportunities at affordable and competitive rates. If we are strong financially, we will be able to provide financial assistance/waivers to members in times of need, such as during the pandemic. Currently, IEM does have a Benevolent Fund which offers financial aid to members in times of calamity but the available funds are very limited.

Do you think the current IEM Vision needs to be revisited? If yes, what do you have in mind?

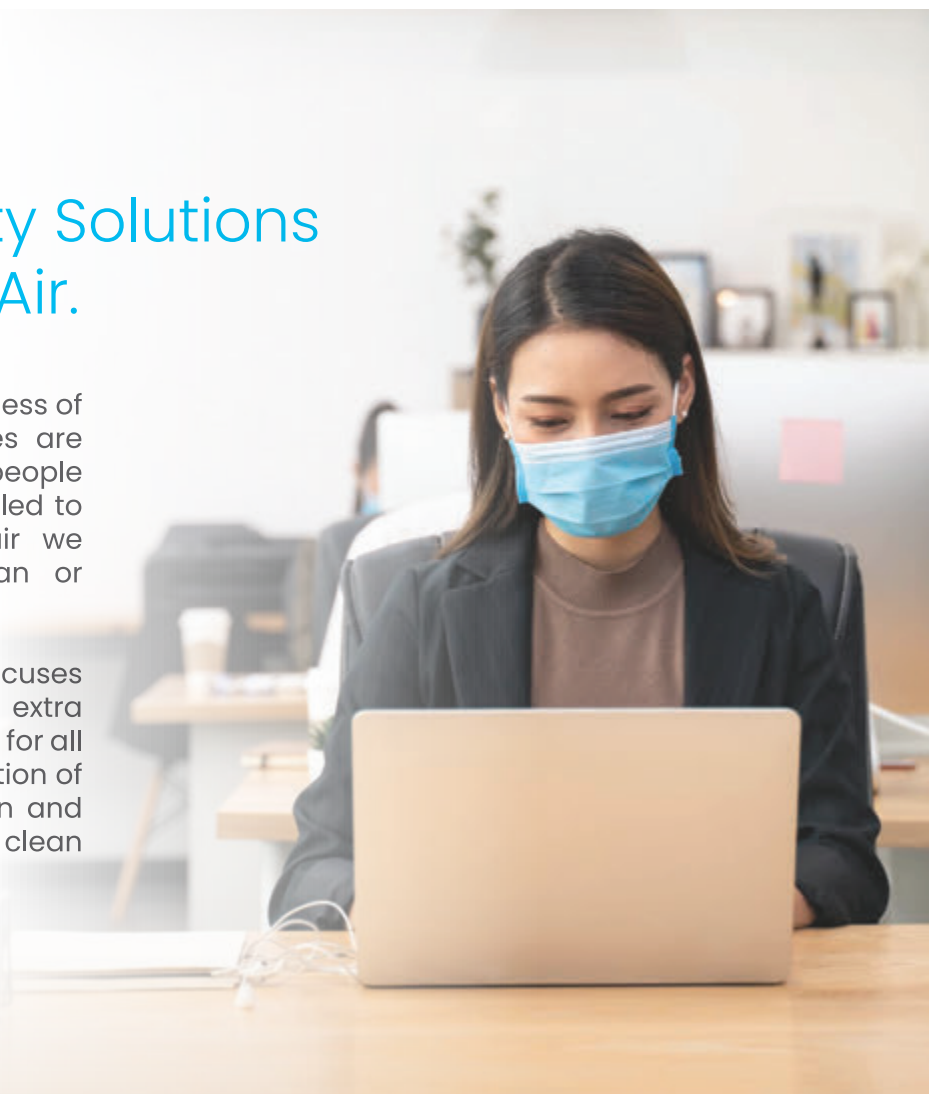
I believe it is good to revisit the Vision from time to time to ensure the Institution stays relevant to the engineering fraternity. However, we must always remember the main purpose for the establishment of IEM in 1959 and not deviate from that. ■



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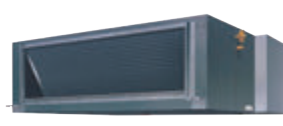
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Page 1	6,650	6,150	5,850	5,550	5,250
Facing Inside Back Cover (FIBC)	6,150	5,850	5,550	5,250	4,950
Facing Cover Note (FCN)	5,850	5,300	5,100	4,900	4,700
Facing Contents Page (FCP)	5,700	5,150	4,950	4,750	4,550
Centre Spread	11,200	9,500	9,000	8,500	8,000
ROP Full Page	4,900	4,500	4,300	4,100	3,900
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Reimagining the Standing Committees of IEM

IEM Standing Committees are formed to be executive arms that manage the daily affairs of the institution. There are 8 standing committees, each headed by a Vice-President or Deputy President and they undertake various functions. In this article, we will revisit the objectives and functions of each Standing Committee and their way forward.

Standing Committee on Activities (ACT): 481 Meetings and Counting

ACT was established to organise social functions, visits, talks, seminars, symposiums, conferences etc. which were related to the aims and objectives of the institution in promoting and advancing the science and profession of engineering in any or all its disciplines and to facilitate the exchange of information and ideas related to engineering. ACT has established various Technical Divisions (TD), Special Interest Group (SIG) and Sections (now called TeSS) to coordinate the various activities. In addition, ACT also spearheads special events such as the IEM Annual Dinner, IEM ENGINEER Convention & Exhibition, golf tournaments and other events.

Recently, ACT conducted a Brainstorming Session to brainstorm, discuss and deliver workable solutions which could be prioritised and executed by IEM for the betterment of the Institution moving forward. ACT is also looking at the engagement of its Committee Members with external organisations at national and international levels. The session also looks at proposing activities for IEM that can add value for IEM members and IEM's position in society.

The Brainstorming Session concluded with identification of the following Key Result Areas (KRAs) for ACT and TeSS.

KRA 1 – STEM Awareness: TDs/Sections/SIGs (TeSS) shall participate in STEM promotion activities

KRA 2 – External Engagements: ACT will have more engagements with external parties including Government agencies/International organisations/Local NGOs/MOU Partners

KRA 3 – Collaboration with Young Engineers Section (Graduates), Technologists and Technicians: ACT will further collaborate with Graduate Engineers, Technologists and Technicians between TDs/Sections/SIGs (TeSS)

KRA 4 – Current Activities Within the TDs/Sections/ SIGs (TeSS): ACT will further organise activities for TDs/Sections/SIGs (TeSS) including joint events, sustainable development goals (SDGs) and environmental, social, governance (ESG) related events as well as other events

Standing Committee on Admission & Practical Training (APT): 311 Meetings and Counting

The main responsibility of APT is to consider the suitability of candidates for admission, election or transfer to the grades of Fellow, Senior Member, Member, Senior Graduate Member, Graduate Member, Engineering Technologist Member, Engineering Technologist Graduate Member, Engineering Technician Member, Engineering Technician Graduate Member, Incorporated Member, Affiliate Member, Associate Member or Student Member and make recommendations to the Council. It will also monitor practical training from time to time. These responsibilities are under the care of the Membership Application Board (MAB) and IEM Training Board (TB) respectively. TB administers CPD evaluation and accreditation.

In addition, the Membership Drive & Promotions (MDP) Board was formed to spearhead initiatives to increase IEM membership. MDP oversees matters pertaining to the signing of MOUs between IEM and other institutions in order to drive and boost IEM membership. Upon request by institutions of higher learning and other organisations, MDP also sources for suitable speakers to deliver talks on Introduction To IEM. Suitable mentors are identified to help the members and the IEM Top Mentor Awards are put in place as a form of recognition of outstanding mentors.

The Special Committee on Structured Training looks into organising structured training courses for members while the Sub-Committee on IEM Engineering Competency Development (ECD) assists members in developing their competency as they journey towards attaining their professional qualification. Last but not least, the Engineering Technologist & Technician Sub-Committee (ETSC) was formed to drive the promotion of the relatively new membership grades, namely Engineering Technologist and Engineering Technician.

Moving forward, APT will continue to strengthen the core of IEM membership, covering the entire spectrum from Student Member to Fellow.

Standing Committee on Examinations and Qualifications (E&Q): 331 Meetings and Counting

E&Q has gone through a few name changes since its inception, to reflect its roles and functions at various stages in the history of IEM. For the information of the members, the Standing Committee was known as Standing Committee on Education & Training in

April 2003, Standing Committee on Examinations & Training in September 2006 and Standing Committee on Examinations & Qualifications in May 2013.

The key responsibility of the Standing Committee covers all matters in relation to examinations within the Institution, including the assessment of qualifications of graduate members who have attained sufficient experience to be registered as a Corporate Member (this entitles him/her to register as a Professional Engineer with BEM). Qualified engineers or graduate members can enter into professional practice through the IEM Professional Interview (PI) route; the pre-requisite is that the graduates must have obtained an engineering degree accredited by the Engineering Accreditation Council (EAC) or its equivalent, with a minimum of 3 years' working experience after registration with Board of Engineers, Malaysia as Graduate Engineer.

Over the years, the IEM PI has undergone various stages of improvement and upgrading to meet and cater to the needs of the engineering industry. The Professional Interview is recognised by the Board of Engineers, Malaysia for registration as PE and is accepted by the International Engineering Alliance (IEA) as an equivalent benchmark for International Professional Engineers' (IntPE) registration. In May 2018, IEM PI went through a revamp with the introduction of Outcome Based PI, in line with international practice. The Outcome Based PI was reviewed and accepted as complying with the international standards.

The E&Q is currently undergoing another evolution with the introduction of the Engineering Technologist and Engineering Technician Competency Assessment Examinations to provide a qualification and professional pathway for engineering technologists and technicians in the country, as well as to enable them to register with regional/international engineering organisations for international practice. By promoting these 2 other categories of engineering practitioners, IEM is now able to provide an effective platform for the entire value chain of the engineering practitioners (i.e. Engineers, Engineering Technologists and Engineering Technicians) to come together for the advancement of the fraternity.

E&Q hopes the qualifying assessments by IEM will be recognised by the industry as a reliable testimony to the competency of engineering practitioners.

Standing Committee on Finance: 482 Meetings and Counting

The principal duty of the Standing Committee on Finance is to maintain the financial position of the Institution under continual review and to report thereon to the Excomm and Council. Recommendations relating to subscriptions and other fees are given as and when necessary for the approval of the Council.

In the attempt to reduce the dependability on regular income sources such as annual subscriptions, rent

and activities, the Standing Committee ventured into diversifying IEM's income stream a few years ago. One major venture initiated was a joint annual exhibition known as ENGINEER. The inaugural event was held in March 2022. ENGINEER is expected to bring in a steady income of at least RM200,000.00 annually.

Whenever a threat surfaces, there will also be an opportunity hidden along the way. The COVID-19 pandemic inadvertently hastened IEM's move towards digitalisation. Prompt action was taken to ensure that IEM's services to members were not extensively interrupted and this brought about the opportunity to offer courses and seminars online. With the availability of resources to conduct meetings and activities virtually, IEM was able to generate more income with the participation of members who would otherwise not have attended as they were not prepared to travel to HQ. At the same time, IEM was able to save on travelling expenses as IEM representatives could now attend meetings online instead of travelling to the meeting location.

Reimagining IEM, from the financial point of view, not only enabled IEM's income generating programmes to reach a wider market but it also assisted members to enjoy services without having to incur travel expenses and time. This will make IEM even more relevant to members and boost the benefits they can get from IEM.


Standing Committee on Professional Practice (PPC): 470 Meetings and Counting

Prior to 30 December 1974, the IEM Council set up an ad-hoc Committee to deal with inter-professional matters of interest to engineers, architects and surveyors. However, the setting up of a permanent Professional Practice Committee was raised in the IEM Workshop paper presented during the 2nd IEM/IES Engineering Convention held in Kuala Lumpur on 1 December 1974.

The main duty of PPC is to review, co-ordinate and formulate policies on all aspects of professional practice among members of the Institution, including conduct, ethics, discipline and good technical practice. PPC consists of:

1. The Disaster Risk Reduction Advisory Board (DRRAB)
2. Sub-Committee on Engineering Contracts (SC on EC)
3. The Fire Advisory Board (FAB)
4. Sub-committee on Dispute Avoidance & Resolution Practice (DARP)
5. Sub-Committee on Street, Drainage & Building Act and Uniform Building Bylaws
6. IEM Arbitrator Appointment/ADR Advisory Board
7. IEM Engineering Practice Advisory Committee (EPAC)
8. Sub-Committee on Screening of Complaints & Queries
9. Sub-Committee on Legislation Affecting Engineering Profession



PPC adopts the inclusive approach to involve the IEM branches. PPC would also like to propose IEM For IEM Members initiatives to provide members from various



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grades and locations with a common platform to bring up the professional practice issues as well as to uphold the IEM members.

PPC also aspires to support IEM in moving forward to the next level by providing frequent extended trainings and knowledge, sharing workshops with as many engineers as possible from various disciplines with supplemental knowledge and risk management skills on dispute avoidance to mitigate potential delays and financial losses to projects which have always been a bane to the construction industry as well as to position IEM as a technical “third force” in disaster management and to assist both government and the private sector on strategies that will help them respond better when facing natural hazards. With this, DRRAB has been entrusted with studying and identifying gaps in understanding and proposing solutions to resolve issues and technical challenges related to disaster management.

PPC is also committed to keep creating awareness and to publicise the IEM Form of Contracts to IEM members as well to the public. Through FAB, PPC will continue to disseminate information to members on the latest regulations and circulars from the Fire & Rescue Department as well as focus on fire safety aspects by organising activities, open forums and dialogues to provide greater awareness.

Standing Committee on Corporate Affairs (CA): 207 Meetings and Counting

CA was formed in 2003 and its first meeting was held on 6 May 2003. Its principal duties are:

- To forge ties with other professional bodies, both locally and overseas
- To look into IEM’s representation in public and statutory authorities as well as other relevant organisations
- To foster closer relationships with such organisations to enhance the public image of IEM

CA is tasked with the responsibility for handling international matters under overseas representation in organisations such as World Federation of Engineering Organisation (WFEO), The Federation of Engineering Institutions of Southeast Asia and the Pacific (FEISEAP, now known as The Federation of Engineering Institutions of Asia and the Pacific, FEIAP), the ASEAN Federation of Engineering Organisations (AFEO), Commonwealth Engineers Council (CEC) and The Federation of Engineering Institutions of Islamic Countries (FEIIC).

CA also organises activities for IEM at public level such as courtesy calls, National Day projects and public lectures. Some of its committee members have been representing IEM in outside bodies and often create collaboration dialogue activities with these bodies. CA handles the vetting of all memorandums of understanding (MOU) and memorandum of agreement (MOA) between IEM and other organisations.

Moving forward, CA wants to build a greater engineering community centre which can help mould the younger generation engineers into great leaders.

Standing Committee on Welfare & Member Services: 370 Meetings and Counting

The objective of the Standing Committee on Welfare & Member Services is to look into welfare and member services for the betterment of those in the engineering profession and their dependents. For this purpose, the Committee may, from time to time, carry out such surveys as necessary on remunerations, working conditions, welfare and benefits of members in order to propose measures of improvement.



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Do you know that as an IEM member, you are entitled to the following benefits?

- Affinity credit card programme
- Corporate discount for cars
- Access to Benevolent Fund and Education Fund
- Discounts to attend all events organised by IEM

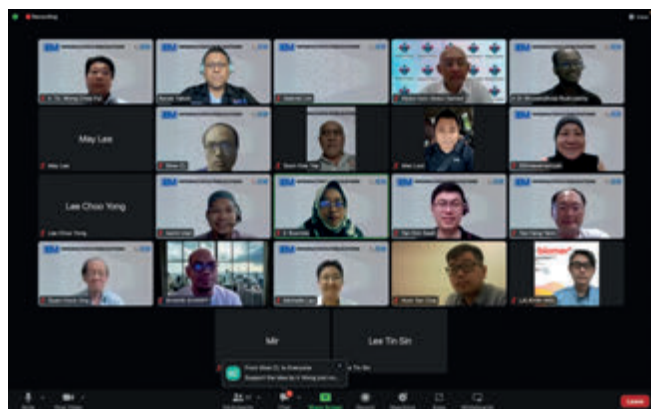
Moving forward, the Standing Committee on Welfare & Member Services intends to explore some of these initiatives:

- Further enhance the affinity credit card programme by bringing in more banks on board
- Work towards extending the corporate discount to more affordable car vendors
- Expand the job gallery on the IEM web portal
- Improve the application and approval processes for the IEM Benevolent Fund
- Relook at the Jurutera Wargamas scheme
- Enhance IEM Insurance schemes
- Introduce additional benefits for student/graduate members

Meanwhile, the Standing Committee will continue to organise Family Days, corporate leadership and business development talks and other activities that contribute to the betterment of our members' welfare.

Standing Committee on Information & Publications (InfoPub): 517 Meetings and Counting

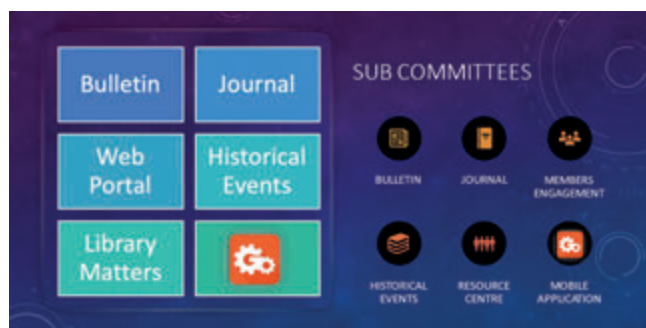
Beginning this term, all the monthly meetings of the standing committees and sub committees are fully virtual. This provides the opportunity for members who are far away from the HQ to join the committee and contribute.



InfoPub is here to:

- Manage the regular publication of the IEM Journal, the Bulletin and other publications
- Supervise the efficient operation of the library including the acquisition, accession and disposal of publications
- Maintain, monitor and oversee the IEM web portal, website and webpage

The above duties are performed by six Sub-Committees under InfoPub as shown on this page:



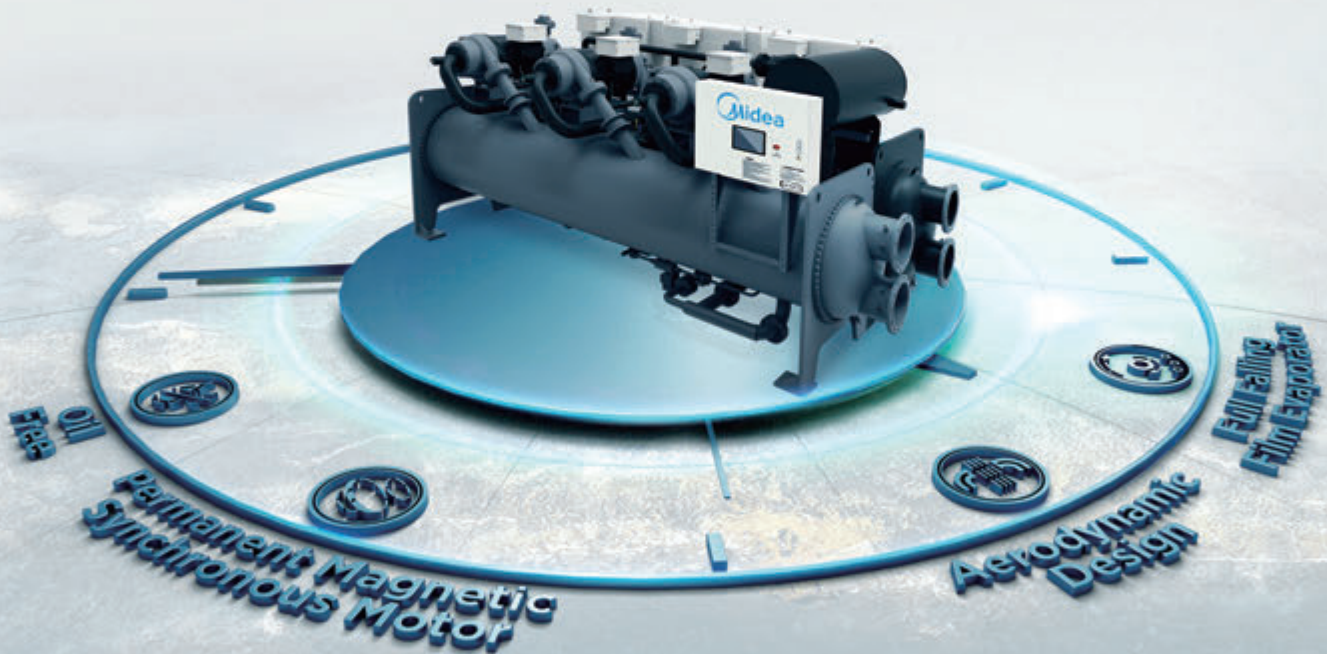
Here is a snapshot of the titles of our monthly JURUTERA publication for the year 2022:

Month	Title
January	<i>New Urban Development: Inclusive, Harmonious and Progressive</i>
February	<i>The World is Not Enough</i>
March	<i>Engineering a Resilient Future</i>
April	<i>Role of Chemical Engineers in the Pharmaceutical Industry</i>
May	<i>IEM: 63rd AGM</i>
June	<i>Dengue Menace in a Built Environment: From Cradle to Grave</i>
July	<i>The Government's Role in Transportation Project Management</i>
August	<i>COVID-19 Impacts on Marine Industry Sustainability and Way Forward</i>
September	<i>Electric Vehicle Infrastructure: Are We Ready?</i>
October	<i>Infrastructure Tunnelling Works in Malaysia</i>
November	<i>Sustainability in the Mining Industry</i>
December	<i>Reimagining IEM</i>

Moving forward, InfoPub will focus on intensifying efforts to reach out to and engage with members. Speaking of this, do you know IEM has developed a mobile application that gives you the latest information on happenings in IEM? Download IEMGo today and give it a try!



Finally, InfoPub will also be exploring means to digitalise IEM publications. This is in line with the digitalisation era as we strive to adopt more sustainable practices. ■



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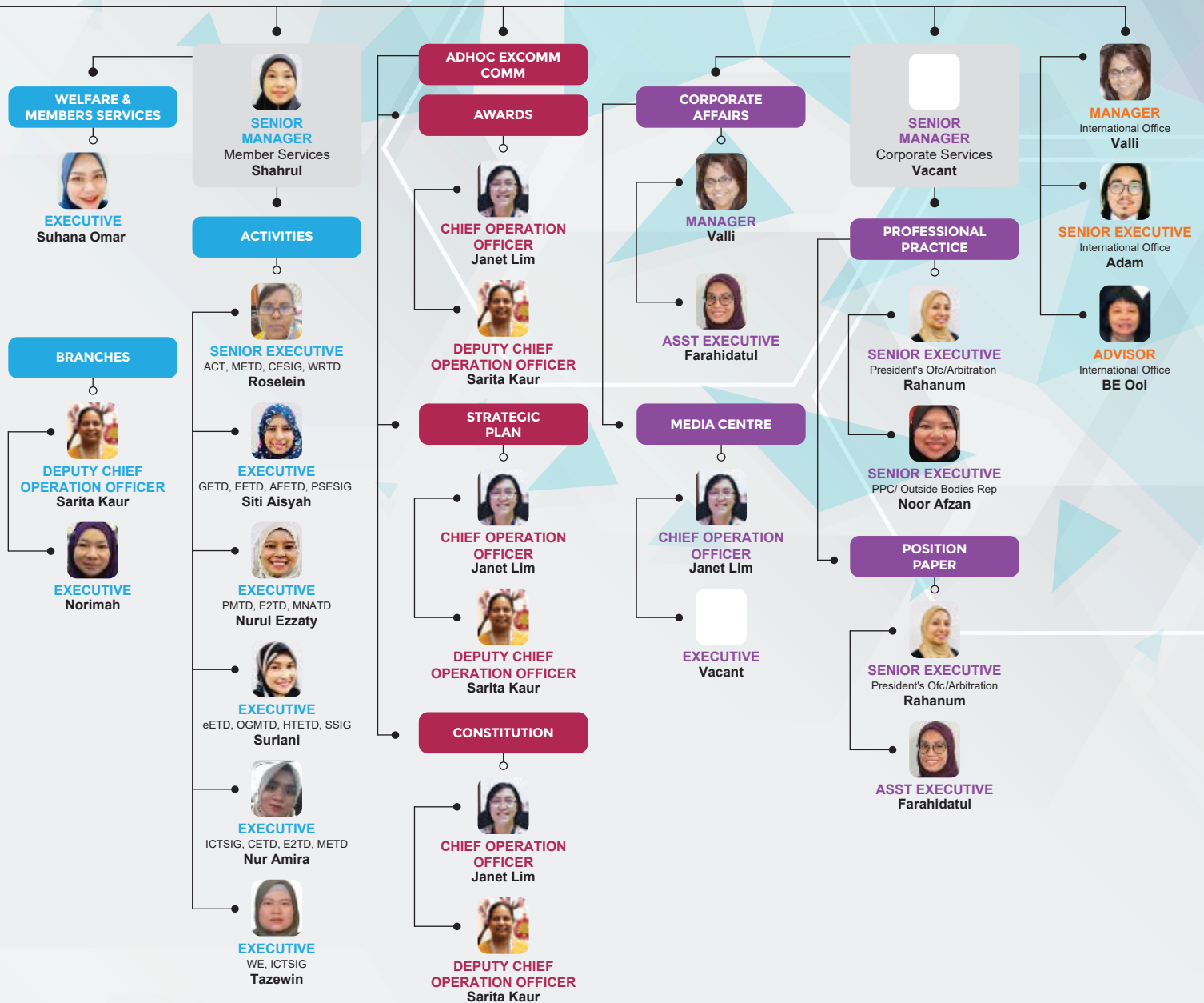
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Reimagining The Roles of Technical Divisions, Sections and Special Interest Groups

Technical Divisions, Sections and Special Interest Groups had long been established to assist IEM in realising its goals to promote and advance the science and profession of engineering. In this article, let's find out the specific reason why they were formed and what they aspire to do moving forward.

Agricultural & Food Engineering Technical Division (AFETD)

AFETD helps to promote and advance the science and profession of agricultural and food engineering through its involvement in national and international activities related to the said discipline. Moving forward, AFETD will continue to support IEM in safeguarding the interests of agricultural and food engineers.

Building Services Technical Division (BSTD)

BSTD promotes and advances the science and profession of building services and fosters the involvement of its members in national and international activities related to building services. BSTD will continue to do this through organising conferences, talks, seminars, visits and discussions on new developments and future trends as well as challenges in building services.

Civil & Structural Engineering Technical Division (CSETD)

CSETD's aim is to promote the professional practice of civil and structural engineering in Malaysia. Moving forward, CSETD will continue to organise conferences, seminars, talks, technical visits and publications which complement those of IEM but with a specific focus on civil and structural engineering.

Consulting Engineering Special Interest Group (CESIG)

CESIG is a special interest group under IEM that champions matters affecting the consulting engineering sector for the benefits of the members. The group practises inclusivity in its approach to IEM members. Moving forward, CESIG would like to contribute towards propelling IEM as an organisation at the forefront in nation building that is responsive to the global change.

Chemical Engineering Technical Division (CETD)

CETD serves as a platform for all chemical engineers in the country with the same interests to share their ideas and to hold discussions on topics which will bring impact to the local chemical engineering community. CETD organises technical talks and annual competitions for student members such as the Chemical Engineering Design Competition and international/local engineering conferences. Members of CETD also represent IEM upon request by outside bodies.

Moving forward, CETD will help IEM spearhead and aggressively voice out on public matters which require the expertise of engineers and be actively involved in policy making which will contribute to the nation in reaching its goal as a developed country.

Electrical Engineering Technical Division (EETD)

With the aim of advancing the science and profession of electrical engineering and energy related fields to fostering the involvement of its members in national and international activities related to electrical engineering, EETD will continue ongoing professional development by attracting, upskilling and enhancing talented individuals with tailored training solutions through talks, visits, courses, seminars and symposiums that reinforce the progress of our nation. EETD will play a pivotal role in shaping society with healthy, secure, prosperous and sustainable communities by speaking as the voice of the profession through government, community and media advocacy.

Electronic Engineering Technical Division (eETD)

eETD was established in 2008 in Penang to promote and advance the science and profession of electronic engineering and its related areas such as integrated circuit design, electronic devices fabrication, assembly, functioning testing and applications via various activities. As part of its outreach programmes and to inspire future generation engineers, prominent senior engineers and leaders in various engineering disciplines or multinational companies are invited to conduct "InspireMe" talks at secondary schools and universities. Moving forward, eETD hopes to cater to the technical needs of and offer training

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support for the talented workforce and engineering community in the electronics sector, especially the semiconductor sector.

Engineering Education Technical Division (E2TD)

E2TD defines the future education trends in areas of Continuing Professional Development (CPD) Programmes, Accreditation Requirements, Global Curricular at Technical/Graduate levels, professionalism among engineering lecturers and post graduate training. E2TD advises IEM on the need for financial support in engineering education and research and development (R&D) as well as monitors global development in the field of engineering education. Moving forward, it will invite volunteers from the various disciplines and backgrounds to conduct talks on any topic related to engineering education to Institutions of Higher Learning (IHL).

Environmental Engineering Technical Division (ENETD)

ENETD promotes and advances the science and profession of Environmental Engineering through its involvement in related national and international activities. ENETD strives to create awareness among IEM members on present technologies, issues and legislations related to natural resources. Moving forward, ENETD hopes to enhance and elevate existing functions to the next level by organising and co-organising various conferences, symposiums, seminars, webinars and technical visits for the benefits of the members.

Geotechnical Engineering Technical Division (GETD)

GETD helps to promote and advance the science and profession of geotechnical engineering by being involved in national and international activities related to the said profession. Moving forward, GETD will explore avenues to provide IEM members with complimentary online access to renowned international journals related to geotechnical engineering. In order to foster a stronger relationship among fellow geotechnical experts and to develop geotechnical interest in young engineers, GETD may explore the idea of organising more interaction discussion/forum/meet-up such as coffee sessions, forums and even open online discussions between engineers on geotechnical challenges/practical issues and ideas.

Highway & Transportation Engineering Technical Division (HTETD)

HTETD was established in 1992 to promote a safe, efficient and sustainable transportation system in Malaysia. It actively shares new developments in highway and transportation engineering so that members are well exposed to the latest technologies and skills, especially in the era of the 4th Industrial Revolution. Moving forward, HTETD hopes to contribute towards improving the reputation and role of highway and transportation engineers in the construction industry by working closely with other related institutions. HTETD also welcomes more young engineers to join the technical division.

Information & Communications Technology Special Interest Group (ICTSIG)

ICTSIG helps promote the professional practice of information technology in Malaysia by creating awareness of and facilitating the exchange of ideas in the field of Information Technology (IT). Moving forward, ICTSIG will continue to organise activities with the goal of realising its objective.

Material Engineering Technical Division (MaTD)

MaTD was established on 18 May 2022 to promote material engineering and advocate the importance of material engineering as an interdisciplinary engineering field, fostering involvement of its members in national and

international activities related to material engineering and acting as a referral source related to engineering materials. Moving forward, MaTD will strive to expand its network nationally and internationally through increased membership and close collaboration with learned societies, IHLs, governments and NGOs. MaTD will help synchronise Material Engineering Programmes offered by IHLs in Malaysia to fulfill the EAC standards, the expectations of industry and the requirements to become a Professional Engineer in the Material Engineering Discipline.

Mechanical Engineering Technical Division (METD)

Since its inception in 1985, METD had established collaboration with public sectors, academics and private industries in all disciplines related to mechanical engineering, provided a platform for interaction between members of the mechanical engineering fraternity, developed and enhanced mechanical engineering knowledge and practices as well as promoted good governance and safety practices in engineering across the nation through activities and initiatives. Moving forward, METD will continue with its existing efforts to better serve the members.

Marine Engineering & Naval Architecture Technical Division (MNATD)

The role of MNATD is to create awareness among members of new technology, issues and legislation related to marine engineering and naval architecture, to disseminate news and technological advancements in marine engineering and naval architecture, to create synergies between industry, academics and end users in the fields of marine engineering and naval architecture. Moving forward, MNATD will support initiatives to enhance the visibility of IEM as a key stakeholder in the development of the nation.

Oil, Gas, Mining Technical Division (OGMTD)

OGMTD has been advancing the contribution of engineers to the oil, gas and mining industry by connecting with engineers in both industry and academia in order to share knowledge, industry know-how and the latest technology with technical talks covering different topics on reservoir engineering, geotechnical, exploration, drilling, field planning, production engineering, onshore and offshore facilities/asset management, mining and quarrying, pipeline engineering and safety management. Moving forward and in support of IEM's aspiration towards UNSDGs, OGMTD will keep championing for safe, responsible and sustainable development of these finite minerals, as well as expose engineers to low-carbon production technology, more efficient energy-use and carbon capturing, usage and capture (CCUS) field of knowledge.

Project Management Technical Division (PMTD)

PMTD promotes sound project management practices in support of the socio-economic development objectives

of the nation, provides service to its members and the public, upholds the social standing image of the profession and contributes towards nation building by enhancing the society's consciousness of science and technology. PMTD brings together practitioners, researchers and academia in the various industrial sectors and stakeholders involved in project management. Moving forward, PMTD wants to enhance the digital learning approach on project management subject matters as well as provide coaching and mentoring services to the aspiring project management fraternity.

Public Sector Engineer Special Interest Group (PSESIG)

PSESIG promotes the participation of engineers from the government sector in relation to the Public Sector. PSESIG encourages engineers who are capable, competitive, skilled and diligent in the Public Sector and who meet the criteria, to hold important positions in their respective Ministries, where they can contribute more effectively to technical decisions and/or policies which will be implemented, such as resilient, agile and sustainable ways. Moving forward, PSESIG can act as the link bridge and be an effective networking platform for Public Sector engineers to interact, share ideas, collaborate and exchange knowledge with the Private Sector or vice versa.

Safety in Engineering Special Interest Group (SESIG)

SESIG wants to improve the safety culture, skills and knowledge of the engineering fraternity. It was formed to encourage engineers to provide services while upholding the Code of Ethics which includes the safety, health and welfare of workers as well as the public in the performance of their professional duties. Moving forward, it will organise more activities which promote safety in engineering.

Senior Special Interest Group (SSIG)

SSIG offers a "professional and social" home for seniors in IEM, especially those who may have been less active in IEM in recent years, allowing them to contribute to the engineering fraternity while continuing to enjoy the fellowship of their fellow engineers who have similarly completed an active and successful professional career. Seniors can look forward to meaningful fellowship and camaraderie with members especially in matters relating to health, exercise, longevity and fund management via talks, visits and discussions by experts. Moving forward, SSIG wishes to play a pivotal role in transitioning the nation from being manufacturing-centric to R&D-driven.

Tunnelling & Underground Space Technical Division (TUSTD)

TUSTD was formed in 1999 to assist in the planning of the International Tunnelling Association (ITA) Executive Council Meeting which was held in Kuala Lumpur on 24-28 February 2000. Since then, TUSTD has continued



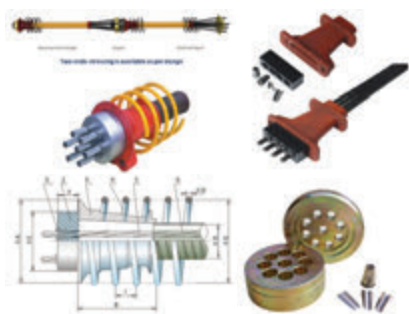
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to undertake activities related to the promotion and advancement of the science and engineering aspects of tunnelling and underground space technologies, both locally and internationally.

Urban Engineering Development Special Interest Group (UEDSIG)

UEDSIG was formed in 2016 to serve as a platform for members to discuss, among others, issues relating to urban planning and economics. It has organised technical sessions covering pertinent topics related to urban engineering development such as 5G, domestic plastic waste and pollution and Building Information Modelling (BIM). Moving forward, UEDSIG will continue to organise activities to discourse issues pertaining to urban engineering development.

Water Resources Technical Division (WRTD)

Since its inception in 1987, WRTD has established collaboration with the public sector, academics and private industries in all disciplines related to water resources. It also provided a platform for interaction between all members of the water resources fraternity, developed and enhanced water resources knowledge and practices as well as organised activities and initiatives which promoted good governance and safety practices in engineering across the nation. Moving forward, WRTD will continue to promote and advance the science and profession of water resources engineering and to foster the involvement of its members in national as well as international activities related to water resources engineering.

Women Engineer Section (WE)

WE held its inaugural AGM in 2014 but the idea for its establishment was conceived earlier, following the successful organisation of the first Women in Science, Engineering & Technology (WiSET) in 2012. It aims to ensure that the engineering profession values, supports and celebrates the contributions and achievements of women in engineering by building a network that connects Women Engineers and drawing strategic alliances among engineering professional bodies to inspire, support and celebrate women engineers in their professional development. Moving forward, WE will work to strengthen the network not only locally but also internationally.

Young Engineers Section (YES)

YES started as the Graduates & Students (G&S) Section in the late 1960s. The Inaugural Meeting of the G&S Division was held on 28 June 1970 in the Lecture Theatre of the Faculty of Engineering, University of Malaya. During the 2006/2008 session, G&S was rebranded as YES. Today, YES remains operational as planned at the beginning of its establishment. Changes are brought about every session by each member of the committee who heads this Section. At present, YES is focusing on garnering more members and retaining them in the IEM family. ■

CONGRATULATIONS

Heartiest Congratulations to:

Prof. Madya Ir. Dr Lai Khin Wee

for being awarded the "Tokoh Muda Kejuruteraan Malaysia LJM 2022".

Tan Sri Datuk Ir. Dr Ahmad Tajuddin bin Ali

for being awarded the "Tokoh Kejuruteraan Malaysia LJM 2022".



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The Vital Branches of IEM

The various IEM Branches play a pivotal role in ensuring that IEM is able to serve and better serve its members throughout the nation. IEM Headquarters can only reach out to as far as possible, which is why Branches are extremely important in ensuring that members in Perlis, Kedah, Penang, Perak, Negeri Sembilan, Melaka, Johor, Pahang, Terengganu, Kelantan, Sabah, Sarawak and even Singapore are taken care of. It is also worth noting that members in Sarawak can reach out to IEM in Miri and Kuching. The table below shows the incorporation of each IEM branch in chronological order.

Chronology of Incorporation	Name	Date of Registration
1st Branch	Northern Branch – name changed to Penang Branch	5 January 1968, name changed on 12 March 2002
2nd Branch	Sarawak Branch	3 February 1968
3rd Branch	Southern Branch	18 August 1971
4th Branch	Sabah Branch	10 January 1975
5th Branch	Eastern Branch	9 May 1983, In February 2012, split into IEM Kelantan, IEM Terengganu and IEM Pahang Branch respectively
6th Branch	Perak Branch	8 November 1983
7th Branch	Melaka Branch	20 January 1986
8th Branch	Negeri Sembilan Branch	20 July 1994
9th Branch	Miri Branch	24 June 1998
10th Branch	Kedah Perlis Branch	15 March 2000
11th Branch	Kelantan Branch	13 February 2012
12th Branch	Terengganu Branch	13 February 2012
13th Branch	Pahang Branch	24 February 2012

Every branch has a Committee that comprises of:

- The Chairman
- 2 Vice-Chairmen
- The Honorary Secretary

- The Honorary Treasurer
- The Immediate Past Chairman
- Not less than 4 and not more than 8 Ordinary Committee Members
- 1 Representative of the Graduate and Student Section of the Branch
- 1 Graduate Member appointed by the Branch Committee
- 1 Engineering Technologist Member appointed by the Branch Committee
- 1 Engineering Technician Member appointed by the Branch Committee

The Chairman of each Branch shall be a Member of the IEM Council, subject to the Rules of the Branch.

Last but not least, if you are in any of these states, do drop by our offices: ■

Penang Branch	1-04-02 E-Gate, Lebuhr Tunku Kudin 2, 11700 Gelugor, Pulau Pinang	Purchased in 2017
Sarawak Branch	A2-G-19 & A2-1-19, Isthmus Raintree Square, Lot 3249, MTL D Block 7, Jalan Keruing, 93450 Kuching, Sarawak	Purchased in 2021
Southern Branch	24-B, Jalan Abiad, Taman Tebrau Jaya, 80400 Johor Bahru	Purchased in 1985
Sabah Branch	Lot 25, 3rd Floor, Block C, Damai Point Commercial Centre, Lorong Damai Point, Off Jalan Damai, 88100 Kota Kinabalu, Sabah	Purchased in 2004
	IEM KKIP Training Centre Lot 5 Commercial Zone 2, Jalan 1, KKIP Timur, Zone 2 Sepanggar, 888450 Kota Kinabalu, Sabah	Completed in 2014
IEM Perak Branch	No. 60B, Jalan Lapangan Siber 1, Bandar Cyber (Business Centre), 31350 Ipoh	Purchased in 2010
Negeri Sembilan Branch	No. 77-A-1, Lorong Haruan 5/3, Oakland Commerce Square, 70300 Seremban, Negeri Sembilan	Purchased in 2008
Miri Branch	2nd Floor, Unit 14 (906-3-14), Soon Hup Tower Complex, (Mega Hotel) Jalan Merbau, 98000 Miri Sarawak	Purchased in 2018
Terengganu Branch	No. 23-02, Level 2, KT Business Centre, 21100 Kuala Terengganu	Purchased in 2008

Industry 5.0 to Complement the Industry 4.0

Written and Prepared by:



Ir. Ts. Wong Chee Fui

The Malaysian government realises the importance of adopting the 4th Industrial Revolution (4IR) or Industry 4.0. This is an overarching industrial transformation that will encompass both industrial and economic activities as well as our personal way of life. The digital transformation for the industrial sector will change the way that businesses are conducted as well as introduce a new way of living. Even as we are getting ready for the transition towards and implementation of Industry 4.0, we must start preparations to embark on the 5th Industrial Revolution.

The 1st Industrial Revolution began in the 18th century with the use of steam power and the mechanisation of production; these revolutionised the textile industry. The 2nd Industrial Revolution started in the 19th Century with the discovery of electricity and the mass production assembly line. The 3rd Industrial Revolution was the Digital Revolution which came about with the invention of the computer, the internet and automation.

In 2016, Klaus Schwab introduced the term Industrial Revolution 4.0 during the World Economic Forum in reference to digital transformation using Cyber Physical Systems (CPS). In its Policy Paper 2021, the European Commission defined Industry 5.0 for Mass Customisation. The timeline for Industrial Revolution 5.0 is shown in Figure 1.

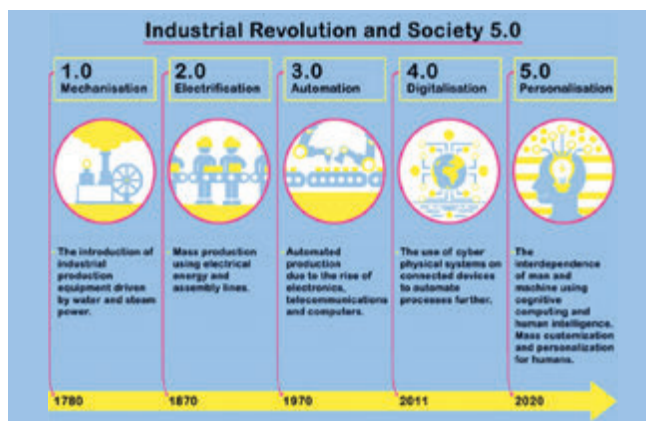


Figure 1: Timeline of Industrial Revolution 5.0
(Source: Sarfraz Z et. al 2021)

Industry 4.0 is defined as the era of Cyber Physical Systems (CPS) which comprises smart machines, storage systems and production facilities capable of autonomously exchanging information, triggering actions and controlling each other independently. To define 4IR in simple terms, Industry 4.0 integrates Human, Machine and Processes whereas Industry 3.0 only involved Automation.

In a policy paper published in 2021, the European Commission introduced the concept of Industry 5.0. This recognises the power of industry to achieve societal goals beyond jobs and grow to become a resilient provider of prosperity by making production respect the boundaries of our planet and placing the well-being of the industry worker at the centre of the production process. (European Commission, 2021)

Industry 5.0 focused on the following 3 pillars:

1. Human-centric Approach.
2. Sustainability.
3. Resilience.



Figure 2: The 3 pillars of Industry 5.0
(Source: European Commission, 2021)

Industry 5.0 will focus on the collaboration between humans and machines as human intelligence works in harmony with cognitive artificial intelligence. Workers will be upskilled to provide value-added tasks in production and manufacturing by putting humans back into industry production

alongside collaborative machine and robots. In simpler layman terms, 5IR will focus on personalisation and customisation to meet customer needs and expectations while adopting a sustainable and resilient approach.

Realising the paramount importance of the digital transformation in improving productivity and increasing the competitiveness of industry, the Malaysian government has launched various policies to promote the

transformation of industry towards embracing the digital transformation and innovations that enhance productivity. These include:

1. National Policy on Industry 4.0 (Industry4WRD)
– launched 31 Oct 2018
2. Malaysia Digital Economy Blueprint (MyDIGITAL)
– launched 19 Feb 2021
3. National Fourth Industrial Revolution (4IR) Policy
– launched 1 July 2021
4. CIDB construction strategic plan 4.0 (CR4.0) (2021-2025).

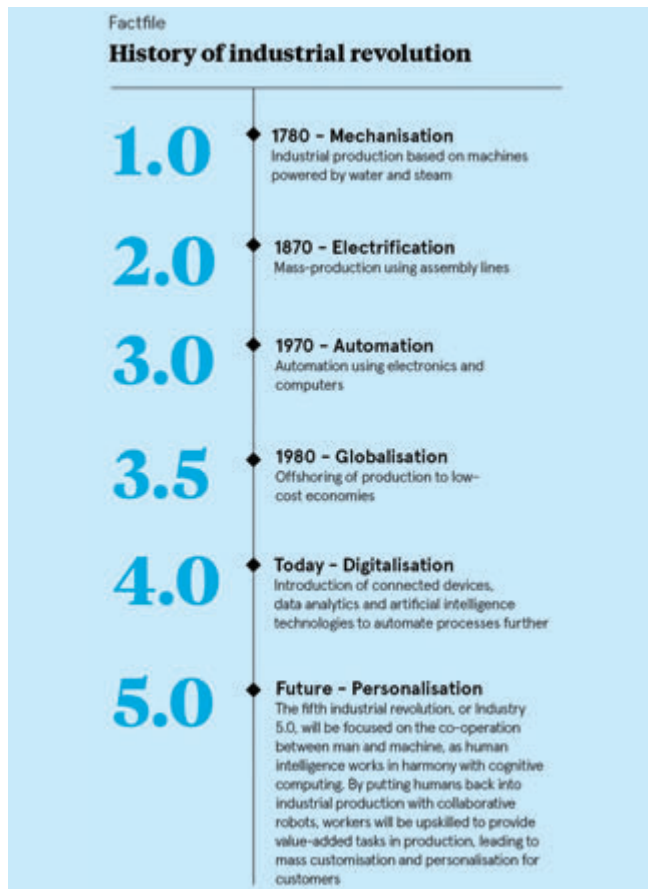


Figure 3: History of Industry Revolution
(Source: Ben Rossi, 2018)

These policies are aimed at harnessing the potential of digital transformation through the adoption of emerging and disruptive technologies to enhance productivity and competitiveness in industry. It is of paramount importance to adopt these emerging technologies to enhance productivity through automation, mass customisation and intelligent supply chain which removes manpower from the industries.

However, these current policies have overlooked the human-centric, sustainability and resilience factors. This is where the concept of Industry 5.0 will play an important role to complement Industry 4.0 as it will adopt all the enabling technologies of 4IR while putting the focus back on human-centric, sustainability and resilience. Industry 5.0 aims to bring manpower back to industrial productivity through mass personalisation and customisation. The human

factor will have a more important role to play as it can deliver customer experience and hyper customisation to provide a responsive and distributed supply chain as well as interactive experience activated product.

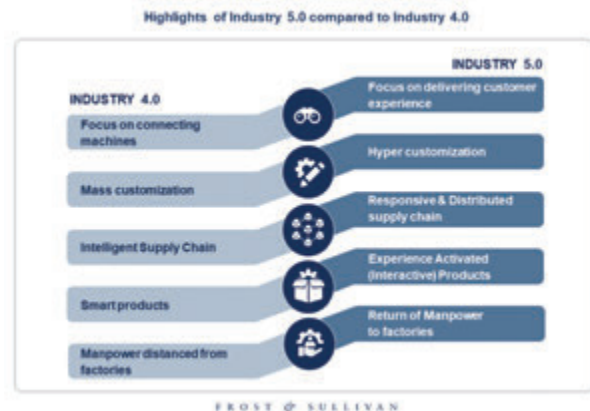


Figure 4: Highlight of Industry 5.0 compared to Industry 4.0
(Source: Frost and Sullivan, 2019)

It is important to understand that Industry 5.0 is not a chronological continuation or the next stage of Industry 4.0. We must not wait for Industry 4.0 to be fully implemented before we move into Industry 5.0. We should view Industry 5.0 as complementing the adoption of Industry 4.0 by having a clear policy and roadmap to drive the digital transformation towards a more human-centric, sustainable and resilient paradigm.

The Government must have the foresight to develop a policy roadmap, initiatives and incentives for industry stakeholders to adopt and implement Industry 5.0 as part of the national transformation and digitalisation agenda. Industry 5.0 will transform technology-driven digital transformation into a value-driven mass personalisation industry. ■

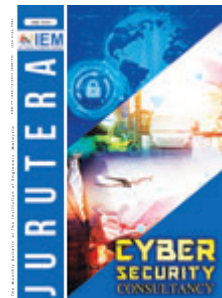
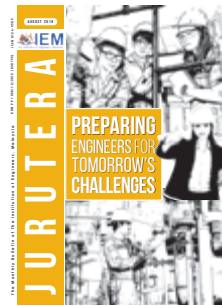
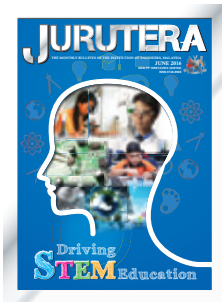
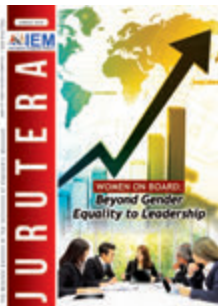
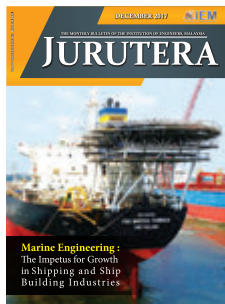
The views expressed here are the writer's own.

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IEM Initiatives to Engage Members

Written and Prepared by: _____



Ir. Abdul Razak bin Yakob

IEM has come up with a few new initiatives to strengthen its engagement with all its members and the public. After all, IEM is an organisation established “for the members, by the members” and the Secretariat acts as its muscles to transform initiatives into tangible efforts. IEM members are categorically divided by many factors, namely geographical distance, engineering disciplines, experiences, seniority, age gaps and gender.

So, can we introduce programmes that will be interesting enough to attract all parties? Members will become appreciative once they understand IEM's efforts to become inclusive and engaging. It is hoped that members who do not participate, can instead offer to be part of the organising committee. Let us become the agent of change rather than only be a commentator.

Sembang Chillex

Sembang Chillex Kejuruteraan Bersama IEM or Sembang Chillex in short, is created for the public, engineering students and young engineers. It is part of the “meet the public” initiative championed by the Standing Committee of Corporate Affairs. Its objectives are:

1. To educate the public on how engineers can contribute to society
2. To disseminate the right information to students and parents to help them select the right engineering career and
3. To recommend solutions on day-to-day engineering matters.

The initial programme was to assist secondary school students and their parents in their selection of suitable engineering disciplines. However, the later programme focused on describing engineering work in the various sectors.

The programme is conducted in a relaxed manner, akin to having a daily conversation as this makes it easier for most people to understand and learn. Each programme has 2-3 panellists and 1-2 moderators. Sembang means chit-chat in Malay. Chillex is the informal spelling of chillax, which is a combination of the words chill and relax.

Initially, due to covid pandemic, the programme was conducted virtually but later it turned into a hybrid form. It received positive feedback, with more Sembang Chillax sessions on different topics organised as shown in Table 1.

More topics for discussions will be organised in the future.

Table 1: Topics for Sembang Chillax sessions

Ep	Topic	Date
1	Pilot - Introduction to Engineering Disciplines	10 July 2021
2	Engineer, Engineering Technologist and Engineering Technician – What we do?	21 August 2021
3	Engineering Career in the Oil & Gas Industry	23 October 2021
4	Environmental Engineering - Kerjaya Kami	22 January 2022
5	Engineer Buat Bisnes (First hybrid mode, in conjunction with The Engineer 2022)	19 March 2022


The programme is also supported by the Board of Engineers Malaysia and the following 2 non-government organisations which provide support in our community.

1. Closing The Gap, Malaysia (powered by Yayasan Tunku Abdul Rahman) imparts knowledge and skills to bright but underprivileged students to help them reach their potential and to prepare them for entry to established universities.
2. Brain For Future, on the other hand, focuses on tertiary students from low-income families who are in need of financial aid and mentoring support.

Reaching out and supporting the community is part of an engineer's social responsibility. Through this programme, we hope to touch as many people as possible so as to motivate them to make engineering a part of their future career plan. We also hope to promote STEM (Science, Technology, Engineering and Mathematics) which is much needed for the development of Malaysia.

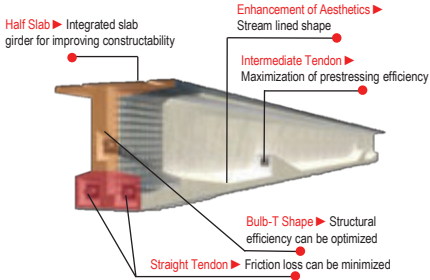
The programme did not just stop in Malaysia. An opportunity presented itself at the AFEO (ASEAN Federation






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- Minimization of prestressing friction loss



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of Engineering Organisations) Mid-Term Meeting in Johor Bahru. Sembang Chillex Regional became a spin-off of the Sembang Chillex programme. It now targets the engineering fraternity in ASEAN and is championed by AER (ASEAN Engineering Register), a working arm of AFEO and a trade register which provides a complete database of practising engineers in ASEAN countries.

The same relaxed format is used for Sembang Chillex Regional and the topics discussed are of concern to the engineering profession in the region:

- Industry focused engineering discussion
- Opportunities for ASEAN engineers to work in ASEAN countries
- Opportunities for ASEAN engineers to work outside of ASEAN countries
- Engineering-based business opportunities in ASEAN
- Engineering-based business opportunities outside of ASEAN

Session 1 of Sembang Chillex Regional was held on 26 August 2022 with panellists from Malaysia, Indonesia and Brunei who discussed the future of engineering in ASEAN. The discussion was fruitful and the feedback positive. As a result, Session 2 is being planned for CAFE 40 (Conference of AFEO) which will be held in Phnom Penh. All Sembang Chillex sessions are available on the official IEM YouTube Channel.



Ep. 5 Sembang Chillex Poster

IEM is also planning to launch the Sembang Chillex Podcast for members to interact with its management team which has been working hard to bring IEM to the next level. The management team to be called upon are vice presidents, past presidents and technical divisions leaders. It will be a one-to-one interaction of 20-30 minutes per session.

It will be kept short so that it can be more impactful and be beneficial to members trying to understand the work of the management team. It also will help to enlighten members on how IEM is run and

it's a chance for the management team to share its vision for IEM. The programme is organised by the IEM Standing Committee on Information & Publication. For a start, the programme will be made available on the official IEM YouTube Channel before it's switched to the podcast platform.

KISS

KISS (Kenali IEM Secara Santai or Knowing IEM Services & Structure) went live on 23 October 2021 from 9am to 1pm on the Zoom virtual platform. There were 3 main objectives.

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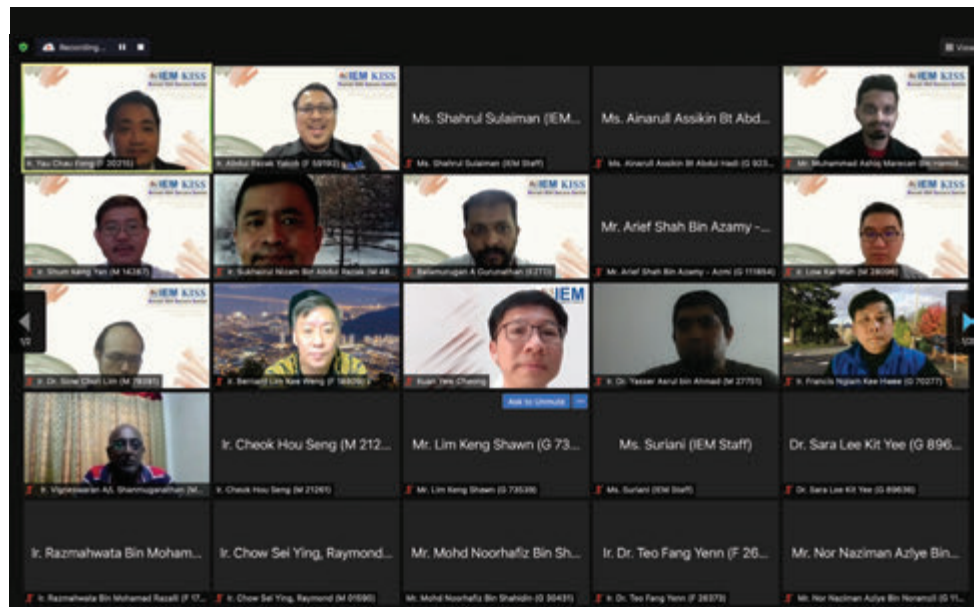
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- IEM Services: To let new members know what IEM can offer
- Networking: To expose and link new members with the right persons who can become mentors to assist in their career development or other common interests.
- Contribution: To match the interests of new members so that they can benefit as well as contribute to the engineering community.

The programme is targeted at new members who may need guidance on what is available in IEM. The realisation that student and graduate membership numbers did not translate to corporate membership numbers at an appropriate ratio was what triggered the setting up of KISS. The low ratio could probably be due to a lack of understanding about IEM.

The programme provides an opportunity for new members to meet with IEM Executive Committee members as well as representatives from the 17 technical divisions, 6 special interest groups and 2 sections. Pre-recorded videos, including introductory videos, are slotted into the programme with intervals for discussions and question sessions. Participants are given a chance to ask all key IEM persons serving on the various committees (either technical or management) questions "live" or



Meeting in progress

via chat box. The programme has been recorded and can be viewed on the official IEM YouTube Channel.



IEM KISS Logo

Reflection

A new section in *JURUTERA* magazine, Reflection is a space for readers to share their thoughts on national or global issues involving engineering in general. The articles do not reflect IEM's standing on any issue raised but rather, are the thoughts of those who wish to further discuss or share issues with other fellow readers. This is not a venue for debating on engineering technicalities or principles but is merely for discussing current issues. IEM members are welcome to submit their articles to the editorial board for preview.

These are just some of the new programmes featured in this short article. IEM will continue to create new

programmes for the benefit of its members. We encourage members to take part in these programmes. Feel free to provide feedback or improvement ideas/ways which can bring IEM closer to its members. IEM is an organisation established for the members, by the members. Together, let's continue to bring our nation to greater heights. ■



DEEPEST CONDOLENCES

On behalf of the IEM Council and Management, we would like to express our deepest condolence to the bereaved family of
Allahyarham Ir. Dr Hj. Ahmad Kamal Kunji
on his sudden passing.

On behalf of the IEM Council and Management, we would like to express our deepest condolence to the bereaved family of
Allahyarham Ir. Prof. Dr Rezuwan Kamaruddin
on his sudden passing.

On behalf of the IEM Council and Management, we would like to express our deepest condolence to the bereaved family of
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APU Robotech Week

Written and Prepared by:



Ir. Prof. Dr Leong Wai Yie

The annual ROBOTECH Week, organised by the Asia Pacific University of Technology & Innovation, was held on 3-6 October 2022. The event aims to showcase and celebrate the latest developments in robotic technology from the industry. It also creates opportunities for students to engage with industry for internship availabilities and job placements.

There were various activities lined up and these included talks on robotic technology development by industry leaders, industrial recruitment, Women in Tech. Project and industry exhibitions.

Three women leaders, Prof. Dr Abtar Kaur (Director, Digital Learning Hub of Asia Pacific University & Chairperson of UNESCO), Ir. Prof. Dr Leong Wai Yie (Chairperson, IET IR4.0 Technical Network) and Ts. Uma Shangery (Aviation Management), were invited to deliver talks.

According to the speakers, women previously shied away from careers in engineering as these were traditionally acknowledged as male-dominated jobs. However, the scenario today has changed as more women are participating in the engineering sector. The speakers said that with more women engineers, improvements to new product designs and solutions can be accomplished which can benefit mankind.

Women engineers can be good role models to inspire both girls and boys to study science and technology-based subjects as well as to foster a new generation of technically-inclined professionals. The speakers also highlighted the increase in the number of women taking up a career in engineering, the change in attitudes towards having women-friendly workplaces and the initiatives to promote STEM education in school. ■



Picture 2: Opening Speech by APU Vice-Chancellor Prof. Dr Ho Chin Kuan



Picture 3: Ir. Prof. Dr Leong Wai Yie



Picture 1: Speakers at the ROBOTECH Week



Picture 4: Group photo of speakers and event participants

Bringing Cheer to Old Folks in Conjunction with Deepavali

Written and Prepared by: _____



Ir. Dr Oh Seong Por

In conjunction with Deepavali, IEMNS and Technological Association of Malaysia Negeri Sembilan (TAMNS) held a joint community service activity to bring cheer to the old folks at Pusat Penjagaan Rumah Sejahtera Jimah (PPRSJ) in Port Dickson. IEMNS was represented by its Past Chairman, Ir. Dr Oh Seong Por who was also a committee member of TAMNS while TAMNS was represented by its Chairman, Ts. Raymond Ong Seng Keong. Food baskets were donated to the centre while the delegates distributed angpow (red packets) to all the residents. (Picture 1 & 2)

PPRSJ was established in August 1979 with an initial cost of RM50,620.00 on a 2-acre piece of land granted by the state government. At present, there are 2 single storey wooden dormitories housing 17 residents. The dormitories are surrounded by trees and greenery, with ample compound space for the residents to move about. The residents are not bedridden and are quite independent. The oldest is 95 years old and the youngest is 65.

PPRSJ is managed by volunteers who are also members of the governing board. According to the centre's Hon. Secretary, the Welfare Department provides some funds but this is insufficient in view of the rising cost of living and operations. Fortunately, there is support from the public in the form of donations from corporate organisations, associations like IEMNS-TAMNS and generous individuals.

The event was also reported by Ir. Dr Oh and published in The Star newspaper dated 31 October 2022. ■

Picture 2: Ir. Dr Oh Seong Por hands an angpow to the oldest resident, Mr. Wong



Picture 1 (l-r): Ir. Dr Oh, Soong Cai Juan, Tham Sook Chan, Ananthan, Siva, Chokalingam, Raymond Ong, N. Kandiah (PPRSJ Secretary), V. Bak. Krisnan (PPRSJ Deputy Chairman) and Karnanethe

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SENARAI CALON-CALON YANG LAYAK MENDUDUKI TEMUDUGA PROFESIONAL TAHUN 2022

Berikut adalah senarai calon yang layak untuk menduduki Temuduga Profesional bagi tahun 2022.

Mengikut Undang-Undang Kecil IEM, Seksyen 3.8, nama-nama seperti tersenarai berikut diterbitkan sebagai calon-calon yang layak untuk menjadi Ahli Institusi, dengan syarat bahawa mereka lulus Temuduga Profesional tahun 2022.

Sekiranya terdapat Ahli Korporat yang mempunyai bantahan terhadap mana-mana calon yang didapati tidak sesuai untuk menduduki Temuduga Profesional, surat bantahan boleh dikemukakan kepada Setiausaha Kehormat, IEM. Surat bantahan hendaklah dikemukakan sebulan dari tarikh penerbitan dikeluarkan.

Prof. Ir. Dr Zuhaina binti Zakaria

Setiausaha Kehormat, IEM

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115436	YEO WEI ZHE	BE HONS (UNITEN) (MECHANICAL, 2017) ME (UNITEN) (ENGINEERING MANAGEMENT, 2020)

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66373	MOHD IQBAL BIN MOHD ZAINUDDIN	BE HONS (UTM) (CIVIL, 2009)
73086	MOHD KHAMDY BIN MUKHTARUDDIN	BE HONS (UTM) (CIVIL, 2009)
75274	MOHD SAUFI BIN MOHD REDZUAN	BE (SAITAMA) (CIVIL AND ENVIRONMENTAL, 2011) ME (SAITAMA) (ENVIRONMENTAL SCIENCE AND CIVIL, 2018)

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KEJURUTERAAN MEKANIKAL		
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Pengumuman yang ke-169

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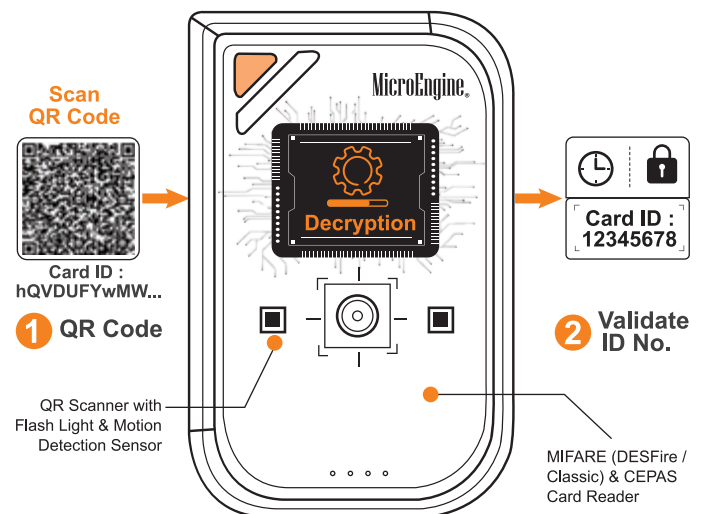
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