

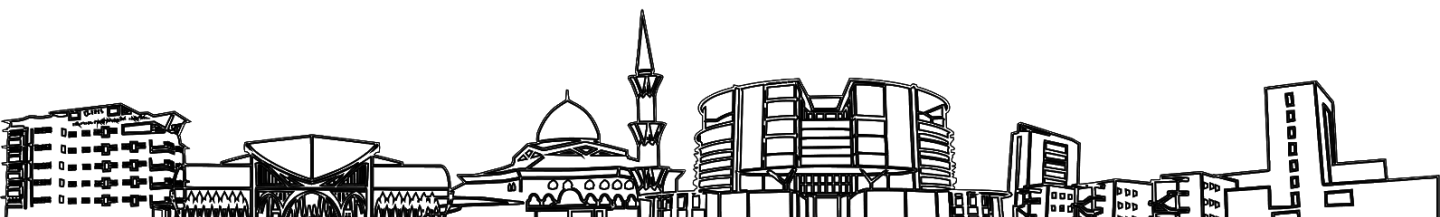
Welcome to Institute for Integrated Engineering

BULLETIN



Oct-Dec 2022

RESEARCH AND ACTIVITIES HIGHLIGHTS



DIRECTOR'S OFFICE



Senior Assistant Registrar

Mrs. Nur Faezah Binti Mohamed Noor



Research Officer

Ms. Maizatulazrina Binti Yaakob



Senior Administrative Assistant

Mrs. Jalilah Binti Mohd Bajuri



Administrative Assistant

Mr. Mohamad Fadhil Bin Ja'afar



Operation Assistant

Mrs. Nomi Binti Ab Latiff

DIRECTOR OF THE INSTITUTE



Professor Ts. Dr. Mohd Khairul bin Ahmad

Head of MiNT-SRC



Assoc. Professor Ir. Dr. Soon Chin Fhong

Head of AMMC



Assoc. Professor Dr. Anika Zafiah Binti Mohd Rus

Head of RECESS



Ts. Dr. Azizi Bin Yusoff

Head of EMCenter



Assoc. Professor Dr. Samsul Haimi Bin Dahlan

Head of MPRC



Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Binti Radin Mohamed

INTEGRATED GROUP (IG)



Ts. Dr. Mohd Fahmy Bin Abdullah



Assoc. Prof. Dr. Mohd Zainizan Bin Sahdan

Aims & Objectives

- To lead applied research in integrated engineering for green and sustainable development
- I²E is committed to conduct comprehensive research, consultation and innovation as a solution provider to the needs of the nation and global

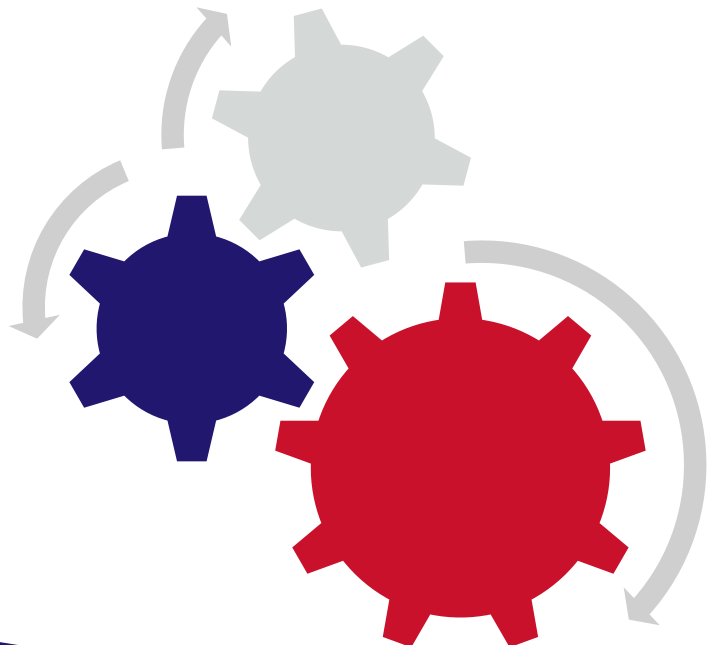


Motto

Integrated Engineering Solution Provider

Words from director

As the director of Institute for Integrated Engineering, I am proud to work the dedicated research teams from the Centre of Excellences (COEs). They have been working very hard to ensure that UTHM is contributing to the community.



Director of Institute for Integrated Engineering

Professor Ts. Dr. Mohd Khairul bin Ahmad, akhairul@uthm.edu.my

PROJECT PROPOSAL PRESENTATION



Advanced Manufacturing and Materials Center (AMMC) researchers led by Prof. Dr. Yusri bin Yusof had received invitation to present the project proposal regarding “Digital & Retro-Fit CNC Machine for Future” project at the Fund Division, Ministry of Science, Technology and Innovation (MOSTI). Institute of Integrated Engineering (I²E) pray that this project will be considered by MOSTI in order to obtain funds for research projects undertaken.

THE DEPUTY VICE-CHANCELLOR OF UNIVERSITI MALAYSIA SARAWAK (UNIMAS) COURTESY VISIT TO UTHM

The Center of Excellence (CoE), Institute for Integrated Engineering (I²E) are honored to receive a courtesy visit from the delegation of the Deputy Vice-Chancellor of University Malaysia Sarawak (UniMas).

Hopefully, this visit will open opportunities for more collaboration and cooperation between the two universities and further drive excellence in research, innovation and commercialization.



PROFESSOR TS. DR. ZAIDI EMBONG LISTED AMONG 30 SUCCESSFUL DISABLED PEOPLE IN A BOOK PUBLISHED BY ISM

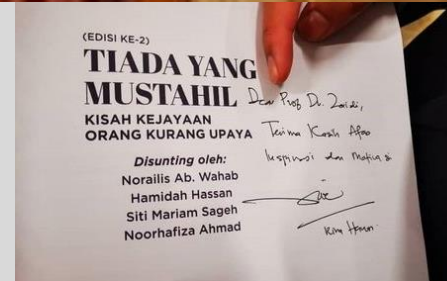


Congratulations to Professor Ts. Dr. Zaidi bin Embong, Principal Researcher (PR) of Research Center of Soft Soil (RECESS), who has been listed among the 30 successful disabled person in a book published by the Institute Social of Malaysia (ISM).

The success story of Professor Ts. Dr. Zaidi Embong has been featured in a book entitled "Nothing is Impossible Success Story of the Disabled (Second Edition)". This success deserves to be a role model for the younger generation in pursuing their dreams without setting a limits on imperfection.

On the other hand, this imperfection becomes a catalyst to strive for excellent and succeed to contribute to back to the society, religion and nation.

This book was launched by the Minister of KPWKM, Datuk Seri Rina Haron at the Citra Tiga Warta Council on 11 October 2022 which was held at Dewan Perdana Nur, Ministry of Women, Family and Community Development (KPWKM). Besides that, ISM Director, Dr. Faridah Awang and Chief Executive Officer of Yayasan Kebajikan Negara, KPWKM, Nordinah Haron who is UTHM alumni, also attends the ceremony.



MUAR LIVING LABORATORIES (UTHM) EXHIBITION IN CONJUNCTION WITH CUSTOMER MEET & GREET



MUAR LIVING LAB (UTHM) EXHIBITION IN CONJUNCTION WITH CUSTOMER MEET & GREET ORGANIZED BY MUAR DISTRICT OFFICE AND JOHOR STATE AGRICULTURE DEPARTMENT

Research Center for Soft Soil (RECESS), Institute for Integrated Engineering through the Muar Living Lab was invited to promote the success story on the development of composite materials from paddy straw waste in Sg. Balang. The joint development undertaken by various government agencies, private sector and local community as its having potential to be commercialize at the national level. This initiative was succeeded due to collaboration between Muar District Office, UTHM, SIRIM STV, Thermasite Sdn. Bhd., Muar District Agricultural Office, Muar Municipal Council, Sungai Balang Farmers Group Association and local community.

RECESS also collaborate with researchers from the Faculty of Civil and Environmental Engineering (FKAAB), UTHM in terms of understanding real problems related to the soft soil in this paddy field. Besides that, Soil testing equipment which used for engineering verification purposes were displays in the exhibition booth.



UNIVERSITY COMMERCIAL LABORATORIES (UCL)



University Commercial Laboratories (UCL), IIE progress meeting with Madam Elain Lockman. ISO17025 team is very lucky to receive positive vibes and advised from Madam Elain for strategize future plan regarding UCL. The progress meeting was chair by Assoc. Prof. Dr. Samsul Haimi bin Dahlan and Mr. Mohd Rostam bin Anuar. This UCL was initiate by honorable Deputy Vice Chancellor (Research and Innovation), Prof. Dr. Mohd Shahir Shamsir bin Omar.



COURTESY VISIT FROM LIBYA BIOTECHNOLOGY RESEARCH CENTRE

A courtesy visit from Libya Biotechnology Research Centre, Authority Natural Science Research and Technology, Ministry of Higher Education and Scientific Research, Tripoli, Libya for potential collaboration in research and innovation. This Libya delegation was led by Dr. Adel Mokhtar Mohamed El-Maghrabi, followed by Dr. Farag Ibrahim Mohammed El-Taib, Dr. Ammar Khalifa Abdusslam Asloug, and Dr. Salah Aldeen Salih



PRINCIPAL RESEARCHER ACHIEVEMENT

THANK YOU & GOOD LUCK ON NEXT JOURNEY

The Top Management of Institute for Integrated Engineering (I²E) would like to express their highest appreciation and thanks to the former Director of Institute for Integrated Engineering, Professor Dr. Nafarizal bin Nayan for all his contributions, time and commitment throughout his service at I²E from 1st April 2019 until 24th Oct 2022.



Terima Kasih & Selamat Maju Jaya

PROFESOR DR. NAFARIZAL BIN NAYAN
Pengarah
Institut Kejuruteraan Integrasi
Universiti Tun Hussein Onn Malaysia
1 APRIL 2019 - 24 OKTOBER 2022

"Terima kasih atas segala jasa bakti yang telah diberikan selama berkhidmat di I²E dan selamat menjalankan tugas dengan penuh dedikasi di tempat baharu"

Ikhtisar daripada,
Seluruh Warga Institut Kejuruteraan Integrasi




INSTITUTE FOR INTEGRATED ENGINEERING <https://iie.uthm.edu.my>

GOLD AWARD RISE 2022 – PR MINT-SRC

The Top Management of Institute for Integrated Engineering (IIE) would like to congratulate Assoc. Prof. Ts. Dr. Nur Hanis Hayati Binti Hairom, the Principal Researcher (PR) of the Microelectronics and Nanotechnology- Shamsuddin Research Center (MINT-SRC), who has won the "Gold Award" at the International Research & Innovation Symposium & Exposition (RISE) 2022 with a project titled "Hybrid Membrane Photocatalytic Reactor".



CONGRATULATIONS!

Prof. Madya. Ts. Dr. Nur Hanis Hayati binti Hairom

GOLD AWARD

International Research & Innovation
Symposium & Exposition (RISE) 2022

PROJECT TITLE:
HYBRID MEMBRANE PHOTOCATALYTIC REACTOR




SILVER AWARD RISE 2022 – PR MINT-SRC

The Top Management of Institute for Integrated Engineering (IIE) would like to congratulate Assoc. Prof. Dr. Marlia Binti Morsin, Principal Researcher (PR) of the Microelectronics and Nanotechnology - Shamsuddin Research Center (MINT-SRC), who has won the "Silver Award" at the International Research & Innovation Symposium & Exposition (RISE) 2022 with a project titled "Gold Nanobypyramids for Sensing Application and Medical Treatments".



CONGRATULATIONS!

Dr. Marlia binti Morsin

SILVER AWARD

International Research & Innovation
Symposium & Exposition (RISE) 2022

PROJECT TITLE:
GOLD NANOBYPYRAMIDS FOR SENSING APPLICATIONS AND MEDICAL TREATMENTS




PRINCIPAL RESEARCHER ACHIEVEMENT

MINISTRY OF FINANCE SOCIAL ENTERPRISE PROJECT (SE-MOF)

Congratulations and well done to the Head of Research Center of Soft Soil (RECESS), Ts. Dr. Nor Azizi bin Yusoff who received funds from the Ministry of Finance's Social Enterprise Project (SE-MOF) worth RM150,000.00 through the "Community Living Laboratory for Mukim Ayer Hitam, Muar, Johor" project.



Congratulations!

Ts. Dr. Nor Azizi bin Yusoff

RM150,000.00

Living Laboratory Community Project for Mukim Ayer Hitam, Muar, Johor

Awarded by:

MINISTRY OF FINANCE SOCIAL ENTERPRISE PROJECT (SE-MOF)







Congratulations!

Dr. Nadirul Hasraf bin Mat Nayan (Head)
Mr. Wan Muhammad Idham Wan Mahadi,
Mr. Mohd Syahir Anwar Hamzah,
Mr. Adil Ikram Sharuddin

RM565,000.00

Self-made Poultry Farming (DIY) Programme by Rural Community Category B40 in Parit Sulong, Johor

Awarded by:

MINISTRY OF FINANCE SOCIAL ENTERPRISE PROJECT (SE-MOF)





MINISTRY OF FINANCE SOCIAL ENTERPRISE PROJECT (SE-MOF)

Congratulations and well done to the Principal Researcher (PR) of the Oasis Integration Group (OIG), Dr. Nadirul Hasraf bin Mat Nayan and his team who received funds from the Ministry of Finance's Social Enterprise Project (SE-MOF) with a value of RM565,000.00 through the project "Do-It-Yourself (DIY) Poultry Farming Program by Category B40 Rural Communities in Parit Sulong, Johor".

INDUSTRIAL GRANT – PR MPRC

Congratulations and well done to the Head of the Micro Pollutant Center of Excellence (MPRC), Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira binti Radin Mohamed who received an industry grant from Eco Solution Services Sdn. Bhd. worth RM10,000.00 through a research project entitled "Optimization Study of Decoloring Agent Formulation for Efficiency of The Colored Wastewater Treatment".



Congratulations!

Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed

INDUSTRIAL GRANT

Optimization Study of Decoloring Agent Formulation for Efficiency of The Colored Wastewater Treatment

RM 10,000.00

ECO SOLUTION SERVICES SDN. BHD.





INSTITUTE FOR INTEGRATED ENGINEERING <https://iie.uthm.edu.my>

PROMOTION TO GRADE DS54 – AR EMCENTER

Congratulations and well done to Associate Researcher (AR) of Applied Electromagnetic Research Center (EMCenter), Assoc. Prof. Dr. Syarfa' Zahirah Binti Sapuan who has been promoted to Associate Professor Grade DS54.



Congratulations

ASSOC. PROF. Dr. SYARFA' ZAHIRAH BINTI SAPUAN

For being promoted to

ASSOCIATE PROFESSOR GRADE DS54





STAFF PROMOTIONS

PROMOTION TO GRADE DS53 – PR MPRC

Congratulations and well done to the Principal Researcher (PR) of the Micropollutant Center of Excellence (MPRC), Assoc. Prof. Ts. Dr. Adel Ali Saeed Abduh Algeethi who has been promoted to Associate Professor Grade DS53.



UTHM
Universiti Tun Hussein Onn Malaysia

Congratulations!

ASSOC. PROF. Ts. Dr. ADEL ALI SAEED
ABDUH ALGHEETHI

for being promoted to

ASSOCIATE PROFESSOR GRED DS53

IIE INSTITUTE FOR INTEGRATED ENGINEERING
RECESS MALAYSIA
EMC CENTER
MINT-SRC
AMMCE
MPRC
UTHM

Global Technopreneur University 2030

PROMOTION TO GRADE DS54 – PR EMCENTER

Congratulations and well done to the Principal Researcher (PR) of the Applied Electromagnetic Research Center (EMCenter), Associate Professor Dr. Xavier Ngu Toh Ik who has been promoted to Associate Professor Grade DS54.



UTHM
Universiti Tun Hussein Onn Malaysia

Congratulations

ASSOC. PROF. Dr. XAVIER NGU TOH IK

for being promoted to

ASSOCIATE PROFESSOR GRADE DS54

IIE INSTITUTE FOR INTEGRATED ENGINEERING
RECESS MALAYSIA
EMC CENTER
MINT-SRC
AMMCE
MPRC
UTHM

Global Technopreneur University 2030

PROMOTION TO GRADE DS54 – PR MINT SRC

Congratulations and well done to the Principal Researcher (PR) of the Shamsuddin-Microelectronics and Nanotechnology Research Center (MiNT-SRC), Associate Professor Dr. Marlia binti Morsin who has been promoted to Associate Professor Grade DS54.



UTHM
Universiti Tun Hussein Onn Malaysia

Congratulations

ASSOC. PROF. Dr. MARLIA BINTI
MORSIN

for being promoted to

ASSOCIATE PROFESSOR GRED DS54

IIE INSTITUTE FOR INTEGRATED ENGINEERING
RECESS MALAYSIA
EMC CENTER
MINT-SRC
AMMCE
MPRC
UTHM

Global Technopreneur University 2030

SPECIAL ADMINISTRATIVE INCENTIVE EQUIVALENT TO GRADE 48

Congratulations and well done to the Senior Assistant Registrar of the Institute for Integrated Engineering, Madam Nur Faezah binti Mohamed Noor who has been awarded with a special administrative incentive equivalent to grade 48.



UTHM
Universiti Tun Hussein Onn Malaysia

Congratulations

MDM. NUR FAEZAH BINTI MOHAMED NOOR

for receiving

**SPECIAL ADMINISTRATIVE INCENTIVE
EQUIVALENT TO GRADE 48**

IIE INSTITUTE FOR INTEGRATED ENGINEERING
RECESS MALAYSIA
EMC CENTER
MINT-SRC
AMMCE
MPRC
UTHM

PRINCIPAL RESEARCHER ACHIEVEMENT

GOLD MEDAL PECIPTA 2022 – PR OIG



Congratulations and well done to the Principal Researcher (PR) of the OASIS Integrated Group (OIG), Assoc. Prof. Ts. Dr. Suliadi Firdaus Bin Sufahani who has won the gold medal at the International Conference & Exposition on Inventions by Institutions Of Higher Learning (PECIPTA), 2022 with a project titled "Malaysian Secondary Boarding School Menu Planning System with Post-Optimality Process".

SILVER MEDAL PECIPTA 2022 - PR WATE

Congratulations and well done to the Principal Researcher (PR) of the Water Technology Engineering (WATE) Integrated Group, Ts. Muhammad Shukri bin Ahmad who has won the silver medal at the International Conference & Exposition on Inventions by Institutions of Higher Learning (PECIPTA), 2022 with a project titled "ISOBOT".



GRANT PROPOSAL –INVITED SPEAKER

Congratulations and well done to the Assoc. Prof. Ts. Dr. Nur Hanis Hayati Binti Hairom (PR MiNT-SRC) and Ts. Dr. Noraini Binti Marsi (PR AMMC) who has been invited as speaker for grant proposal writing workshop at Meeting Room 1, Block A, UTHM Pagoh Campus.

This invited speaker having good track records as grant receiver and listed as Top 10 UTHM Outstanding Researcher 2022.



CEO@UNIVERSITY: THE MANAGEMENT TOOLS IN SEMICONDUCTOR INDUSTRY



November 3, 2022 | Industry CEO@University (ICON): The Management Tools in Semiconductor Industry with Honorable Dato' Dr. Mohd Sofi bin Osman. This seminar was successfully organized by Institute for Integrated Engineering (I²E) and carried out at Meeting Room, Block G2, Faculty of Mechanical and Manufacturing Engineering (FKMP) from 10.00am to 12.30pm.

In the semiconductor industry, management tools are essential for successful product development. This management tools can reduce the time to market their end product in bulk. Leader in an organization are compulsory to learn and leading a project from start to finish, involving planning, organizing, and managing resources to achieve a specific goal.

Dato' Dr. Mohd Sofi bin Osman who has vast experience in semiconductor industry shares his point of view and tips on how management tools can be implemented by leader to their own organization in terms of activities such as budgeting, scheduling, risk management, quality assurance, resource allocation, communication, and problem-solving.

Thank you to everyone whom attend this seminar session and committee involved directly and indirectly to make this seminar as successful event.



OFFICIAL TASKS HANDOVER TO NEW DIRECTOR OF I²E



Effectively, on 1st November 2022, Institute for Integrated Engineering (I²E) was led by new director, Professor Ts. Dr. Mohd Khairul bin Ahmad. The task handover session was successfully handed by former director, Professor Dr. Nafarizal bin Nayan in Institute for Integrated Engineering Director's Office, Level 2, Research Management Building, Block F6, UTHM.

This session was witnessed by Head of CoE: Head of MiNT-SRC, Head of EMCenter, Head of AMMC, Head of MPRC, and also Head of RECESS. I²E welcoming Prof. Ts. Dr. Mohd Khairul bin Ahmad aboard and hopefully he'll continually to excel in carrying out the duties and trust in driving the excellence of the Centers of Excellence (CoE) and Integrated Group (IG) to the next level.

Besides that, this is the first official meeting between new director and head of CoE's in terms of turning the direction and scope of work at I²E. Cooperation is highly needed to achieved more in the future.



PERIODIC MONITORING OF UTHM PEAT FIRE DETECTION SYSTEM



Peat fires harm the economy by irreversible losses of forest and high-precision early detection of peat forest fires is essential to make sure correct information sent to the users, rangers or authorities.

Muar Living Laboratory Research Team collaborate with local communities and Johor State Forestry Department was conducting periodic maintenance and monitoring of peat fire system detection at Hutan Simpan Negeri Ayer Hitam Utara, Johor.

The Peat Fire Detection System has been successfully launched in Hutan Simpan Negeri Ayer Hitam Utara on February 2022. This peat fire monitoring and detection system was able to detect changes in temperature and humidity in the peat area and can be monitored using a smartphone.

This fire detection system was created as a result of collaboration between Universiti Tun Hussein Onn Malaysia (UTHM), the Johor State Forestry Department and Muar District Office. Peat fire detection system can certainly help the authorities monitor forest fires more effectively and smoothly. Besides that, this system also had been tested and verified before being installed on site.



LOI SIGNING CEREMONY BETWEEN MPRC & LIBYA BIOTECHNOLOGY RESEARCH CENTRE

Micropollutant Center of Excellence (MPRC) was successfully signing Letter of Intent (LOI) with the Libya Biotechnology Research Centre, Authority Natural Science Research and Technology, Ministry of Higher Education and Scientific Research.

MPRC was led by Assoc. Prof. ChM. Ts. Dr. Radin Maya Saphira Radin Mohamed, Assoc. Prof. Ts. Dr. Rafidah Binti Hamdan and Assoc. Prof. Ts. Dr. Adel Ali Saeed Abduh Algeethi. Whereas delegation from Libya Biotech was led by Dr. Adel Mokhtar Mohamed El-Maghrabi, Dr. Farag Ibrahim Mohammed El-Taib, Dr. Ammar Khalifa Abdusslam Aslougi, Dr. Salah Aldeen Salih Amhimmid Dulayoum.



UNIVERSITY OF APPLIED SCIENCES HEILBRONN (HHN), GERMANY COURTESY VISIT

University of Applied Sciences Heilbronn (HHN), Germany having a courtesy visit to the laboratories of the Center of Excellence (CoE). The HHN delegation was led by Vice President International Affairs & Diversity, Prof. Dr. Ruth Fleuchaus, followed by the Dean of the Faculty of Mechanics and Electronics, Prof. Dr.-Ing. Carsten Wittenberg, International Director, Prof. Dr.-Ing. Ansgar Meroth, Head of the Mechatronics and Robotics Program, Prof. Dr.-Ing. Uwe Gleiter, and International Coordinator, Ms. Evelyn Teng.



The delegation of HHN visits Microelectronics and Nanotechnology – Shamsuddin Research Center (MINT-SRC) laboratories and Advanced Materials and Manufacturing Center (AMMC) laboratories, Institute for Integrated Engineering (I²E), UTHM. This courtesy visit objective is to see high-tech research and innovation facilities that available in UTHM.



FUNWALK ACTIVITIES

I²E staff club through Sports & Recreation Bureau was successfully organized a fun walk activity to cultivate healthy lifestyle among I²E members. The Club President, Prof. Ir. Dr. Erwan bin Sulaiman and Club Advisor, Prof. Ts. Dr. Mohd Khairul bin Ahmad also participates in this fun walk activities.

Besides that, club members take this opportunity to clean up mango planting plot area near to student residential college.



THE DEPUTY VICE-CHANCELLOR (RESEARCH & INNOVATION) & DIRECTOR OF THE OFFICE OF SAFETY, HEALTH AND EMPLOYMENT (OSHE UTHM) VISIT COE's LAB

The Deputy Vice Chancellor (Research & Innovation), Prof. Dr. Mohd Shahir Shamsir bin Omar and Director of the Office of Safety, Health and Employment (OSHE UTHM), Dr. Balkis binti Haji A. Talip having a visit to Center of Excellence (CoE) Laboratory to discuss more on chemical risk and indoor air quality of the building. Also present in this session was the Director of the Institute for Integrated Engineering, Prof. Ts. Dr. Mohd Khairul bin Ahmad, Head of Radiation and Chemical Safety Unit (OSHE), Assoc. Prof. Dr. Muhamad Zaini bin Yunus, Mr. Mohd Akmal bin Rohiat (Café C&C Manager), Principal researchers, and CoE assistant engineer.



PROFESSOR DR. NAFARIZAL BIN NAYAN APPRECIATION CEREMONY



Appreciation ceremony for Professor Dr. Nafarizal bin Nayan, Former Director of the Institute for Integrated Engineering. Thank you Prof. Dr. Nafarizal bin Nayan for all the hard work and commitment to the Institute for Integrated Engineering from 1st April 2019 until 24th October 2022. We wish you good luck on your future endeavor and may Allah protect you wherever you go.



OCCUPATIONAL SAFETY AND HEALTH INTERNAL AUDIT 2022

The Institute for Integrated Engineering (I²E), UTHM has completed the 2022 Occupational Safety and Health Internal Audit Session organized by OSHE, UTHM. This internal audit session was led by Assoc. Prof. Ts. Dr. Muhamad Zaini bin Yunos, Dr. Rumaizah binti Ruslan and Mr. Mohd Redzuan bin Mohd Nor. This internal audit aims to identify the readiness of the Institute of Integrated Engineering (I²E) as a Center of Responsibility that cultivates safe work practices, provides a safe workplace for staff and students, meets safety standards and guidelines that have been set by DOSH Malaysia. Congratulations and well done to all the Centers of Excellence (CoE), Head of CoE, CoE Principal Researcher (PR), CoE Assistant Engineers, JKKP Members and ERT I²E, who worked tirelessly to prepare for 2022 internal audit session.



BENCH MARKING VISIT TO MINT-SRC

Microelectronic and Nanotechnology-Shamsuddin Research Center (MiNT-SRC) was visited by Frontier Research Material Unit, UTM led by Prof. Dr. Mohd Hafiz Dzarfan for laboratory management benchmarking.





Credits

Editor

Ms. Maizatulazrina binti Yaakob
Mr. Mohd Azwadi bin Omar
Ms. Nur Hamizza Sofea binti A. Karim

Illustrator

Ms. Maizatulazrina binti Yaakob
Mr. Mohd Azwadi bin Omar
Ms. Nur Hamizza Sofea binti A. Karim