BULLETIN





Institute for Integrated Engineering





Words from Director

As the director of Institute for Integrated Engineering, I am proud to work with dedicated research teams from the Centre of Excellences (CoE's).

They have been working very hard to ensure that UTHM is contributing back to the community.

https://iie.uthm.edu/my

AIM AND 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



Prof. Ts. Hr. Mohd Khairul bin Ahmad

Hivector





Prof. Ts. Dr. Mohd Khairul bin Ahmad

HEAD OF IG



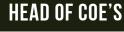
HEAD OF WATE

Assoc. Prof. Dr. **Mohd Zainizan** bin Sahdan



HEAD OF OASIS

Ts. Dr. Mohd Fahmy bin Abdullah







HEAD OF AMMC

Assoc. Prof. Dr. Anika Zafiah Mohd Rus

HEAD OF MPRC

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

HEAD OF RECESS

Prof. Ir. Ts. Dr. Adnan bin Zainorabidin

HEAD OF MINT-SRC

Assoc. Prof. Dr. Marlia Binti Morsin

HEAD OF EMCENTER Assoc. Prof. Dr.

Fauziahanim **Binti Che Seman**

ADMINISTRATIVE STAFF

SENIOR ASSISTANT REGISTRAR

> Mrs. Nur Faezah Binti **Mohamad Nor**

RESEARCH OFFICER

Ms. Maizatulazrina **Binti Yaakob**

SENIOR **ADMINISTRATIVE** ASSISTANT

Mrs. Jalilah Binti Mohd Bajuri



OPERATION



ASSISTANT Mrs. Nomi Binti

Abdul Latiff



OPERATION ASSISTANT

Mrs. Norhidayah binti hanzah





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Institute for Integrated Engineering



RESEARCH GRANTS



Congratulations to Prof. Ts. Dr. Zaidi Bin Embong, Principal Researcher (PR) for Research Center for Soft Soil (RECESS) who have received the Industry Grant for the Year 2023 through a project entitled "Eco-friendly corrosion inhibitors for preventing electro migration effect in multilayer substrate for microelectronics devices" with a value of RM145,000.00 from Fundamental Research Grants Scheme (FRGS) 2023.

May this project successful and Prof. Ts. Dr. Zaidi Bin Embong continues to excel in his niche area and being a role model to other researcher, especially researchers at the Institute for Integrated Engineering.

Congratulations to Assoc. Prof. Dr. Nur Shavlinda Binti Mohd Zin, Principal Researcher (PR) for Micropollutant Research Centre (MPRC) who have received the Industry Grant for the Year 2023 through a project entitled "An insight of ammoniacal nitrogen degradation via aerated coagulation process for matured leachate safe disposal" a value of RM93,200.00 with from Fundamental Research Grants Scheme (FRGS) 2023. May this project successful and Assoc. Prof. Dr. Nur Shaylinda Binti Mohd Zin continues to excel in her niche area.



Assoc. Prof. Dr. Nur Shaylinda Binti Mohd Zin

RM 93.200.00

An Insight of ammoniacal nitrogen degradation via aerated coagulation process for matured leachate safe disposal

FUNDAMENTAL RESEARCH GRANTS SCHEME(FRGS) 2023



Congratulations!

Assoc. Prof. Dr. Marlia Binti Morsin

RM170,000.00

Investigation on the potential of encapsulated calcium alginate-gelatin anisotropic gold nanoparticles as a new dengue vector control against Aedes Aegypti

FUNDAMENTAL RESEARCH GRANTS SCHEME (FRGS) 2023



Congratulations to Assoc. Prof. Dr. Marlia Binti Morsin, Head of The Center for Microelectronics and Nanotechnology Shamsuddin Research Centre (MiNT-SRC) who have received the Industry Grant for the Year 2023 through a project "Investigation entitled on the potential of encapsulated calcium alginate-gelatin anisotropic gold nanoparticles as a new dengue control vector against Aedes with Aegypti" а value of RM170,000.00 from Fundamental Research Grants Scheme (FRGS) 2023

IUTHM

Congratulations to Prof. Ir. Dr. Erwan Bin Sulaiman, Principal Researcher (PR) for Applied Electromagnetic Research Center (EMCenter) who have received the Industry Grant for the Year 2023 through a project entitled "Investigation of compact modular rotor permanent magnet flux switching machine by employing finite element analysis for future hybrid electric vehicles" with a value of RM112,452.00 from Fundamental Research Grants Scheme (FRGS) 2023.

Congratulations!

Prof. Ir. Dr. Erwan bin Sulaiman

RM 112,452.00

Investigation of compact modular rotor permanent magnet flux switching machine by employing finite element analysis for future hybrid electric vehicles

FUNDAMENTAL RESEARCH GRANTS SCHEME(FRGS) 2023







Congratulations to Assoc. Prof. Dr. Mohd Zainizan Bin Sahdan, Head of Water Technology Engineering Integrated Group (WATE) who have received the Industry Grant for the Year 2023 through a project entitled "Deep learning approach for solar energy prediction and potential analysis on solar farm" with a value of RM20,000.00 from Gading Kencana Sdn Bhd for year 2023.



LEADERSHIP APPOINTMENT

Congratulations to Prof. Ir. Dr. Md Saidin Bin Wahab, Principal Researcher (PR) for Advanced Manufacturing and Materials Centre (AMMC) who have been re-appointed as Chief Digital Officer/ Deputy Vice Chancellor (Digital and Infrastructure) effective on 1st Sept 2023 until 30th June 2025.





Congratulations to Prof. Dr. Mohd Amri Bin Lajis, Principal Researcher (PR) for Advanced Manufacturing and Materials Centre (AMMC) who have been appointed as Consultant for Tangkak Sustainability Program in collaboration of GRASS Malaysia for Tangkak Council.

Congratulations to Ts. Dr. Nur Kamilah Binti Yusuf, Principal Researcher (PR) for Advanced Manufacturing and Materials Centre (AMMC) who have been appointed as Chief Consultant for Professional Programme of Asia Aviation Aeronautical Training Academy's.





LEADERSHIP APPOINTMENT



Congratulations to Ts. Dr. Nor Azizi Bin Yusoff, Principal Researcher (PR) for Research Center for Soft Soil (RECESS) who have been appointed as Vice President/Director of International Press-in Association from The International Press-In Association (IPA), Japan for fiscal year 2023.

Hopefully Ts. Dr. Nor Azizi bin Yusoff continues to strive for excellent and being a role model for other researchers, especially researchers at the Institute for Integrated Engineering.



UTHM EXPERT

<text>

Professor Dr. Mohd Amri bin Lajis is a professor at Advanced Manufacturing and Materials Center (AMMC).

He developed his interest in Sustainable machining of manufacturing processes, including traditional and advanced machining techniques.

His current study focuses on waste recovery and recycling technologies. He has created a number of novel methods for recovering waste aluminium chips using hot press forging, hot extrusion, cold pressing, and powder metallurgy. In addition, his most recent study focuses on sustainability-related topics such as the creation of sustainable products that are integrated with design for manufacturing & assembly (DFMA) and circular economy (CE). Since 2000, he has secured research funds totaling more than RM 1 million in his capacity as project leader.

Click link below to read full articles on Prof. Dr. Amri bin Lajis : https://news.uthm.edu.my/.../uthm-expert-prof-dr-mohd.../





Congratulations to Assoc. Prof. Dr. Samsul Haimi Bin Dahlan and Assoc. Prof. Dr. Xavier Ngu Toh Ik, Principal Researcher (PR) for Applied Electromagnetic Research Center (EMCenter) for being awarded with The Best EMC & RF Testing Service Provider for year 2023 through spin-off company RF EMC Center Malaysia Sdn Bhd.



Congratulations to Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Binti Radin Mohamed, Micropollutant Head of Research Centre (MPRC) for being awarded with Publication Figures Award during Bitara Kirana ceremony on 22nd August 2023 at Dewan Sultan Ibrahim, UTHM.

BITARA KIRANA

SELASA

IGERAH

SYARAKAT

OGOS 22 DEWAN SULTAN

Institut Kejuruteraan Integrasi

PEMINDAHAN

Congratulations to Ts. Muhammad Shukri Bin Ahmad, Principal Researcher (PR) for Water **Technology Engineering Integrated** Group (WATE) for being awarded Community with Service and Knowledge Transfer Award during Bitara Kirana ceremony on 22nd August 2023 at Dewan Sultan Ibrahim,UTHM.

PROF MADYA TS. CHM. DR. RADIN MAYA SAPHIRA RADIN MOHAMED

, mar Mikro (MPRC)

Ketua Pusat, merlangan Pencem

BITARA KIRANA

SELASA

ogos 22

OKOH

Institut Kejuruteraan Integrasi

FERAH

JERBITAN

DEWAN SULTAN



Congratulations to Mr. Mokhtar Bin A. Hamid, Senior Assistant Engineer for Advanced Manufacturing and Materials Centre (AMMC) for being awarded with Excellent Service Awards during Bitara Kirana ceremony on 22nd August 2023 at Dewan Sultan Ibrahim, UTHM.

TS. MUHAMMAD SHUKRI BIN

AHMAD relidik Utama (PR), ntegrasi Water Teo

Hopefully Mr. Mokhtar bin A. Hamid continues to strive for excellent and being a role model for other staff, especially staff at the Institute for Integrated Engineering.





ENCIK MOKHTAR BIN A HAMID Penolong Jurutera Kanan, Pusat Pembuatan dan Bahan Termaju (AMMC) *Ikhlas dari:* Institut Kejuruteraan Integrasi Congratulations to Mr. Mokhtar Bin A. Hamid, Senior Assistant Engineer for Advanced Manufacturing and Materials (AMMC) Centre for being awarded with Loyalty Award during Bitara Kirana ceremony on 22nd August 2023 at Dewan Sultan Ibrahim, UTHM.

Congratulations to Assoc. Prof. Fauziahanim Dr. Binti Che Seman, Head of Applied Electromagnetic Research Center (EMCenter) for being awarded with Loyalty Award during Bitara Kirana ceremony on 22nd August 2023 at Dewan Sultan Ibrahim, UTHM.

Hopefully Assoc. Prof. Dr. Fauziahanim binti Che Seman continues to strive for excellent and being a role model for other staff, especially staff at the Institute for Integrated Engineering.







Congratulations to Ts. Dr. Nor Azizi Bin Yusoff, Principal Researcher (PR) for Research Center for Soft (RECESS) for Soil being with Loyalty awarded Award during Bitara Kirana ceremony on 22nd August 2023 Dewan Sultan at Ibrahim, UTHM.

Madam Congratulations to Bajuri, Jalilah Binti Mohd Administrative Senior Assistant (Finance & Leave), Integrated Institute for Engineering (I2E) for being awarded with Loyalty Award during Bitara Kirana ceremony August 22nd 2023 on at Dewan Sultan Ibrahim, UTHM.





2023 INTERNATIONAL **WEBINAR**

Virtually via Teams

All are invited

in 24 July 2023 (Monday)

Speaker 1 :10.00- 10.40 am Speaker 2 :10.40- 11.20 am

Topics:

Speaker 1: Application of biochar in sustainable cement based composites.

Speaker 2: Effect of Microbial **Bioaugmentation on** stabilization/ solidification method.

Meeting ID : 467 770 573 378 Passcode : QRKqeB : https://bit.ly/3NMJmSC Link



OUTHM

MCCOPOLLUTANT RESEARCH CENT

Dongguan University of Technology



Dr. NOR AMANI FILZAH BT MOHD KAMIL Universiti Tun Hussein Onn Malaysia

INTERNATIONAL WEBINAR INTERNATIONAL WEBINAR INTERN

WEBINAR & WORKSHOP

International Webinar UTHM DGUT organized by MPRC, UTHM

Dr. Nor Amani Filzah Binti Mohd Kamil were chose to be one of the speaker alongside Dr. Liang Chen to deliver the topic about effect of microbial bioaugmentation on stabilization/solidification method.

The discussion centered on two critical issues. The first topic addressed the use of biochar in sustainable cement-based composites, with an emphasis on its ability to sequester carbon while preserving hydrated cement.

Furthermore, the second topic explored the impact of microbial bioaugmentation on the stabilization/solidification process, with the goal of increasing the degradation rate of organic pollutants in sludge and lowering landfill overflow through scheduled waste recycling.





WEBINAR

WEBINAR & WORKSHOP

PUBLIC HEALTH AND WATER QUALITY IN MALAYSIA CONTEXT

ORGANIZED BY:

SPEAKER 1



IR. DR. HAJI MOHMAD ASARI BIN DAUD Chief Executive Officer Syarikat Air Perlis (SAP)

UNDERSTANDING MALAYSIAN WATER INDUSTRY STATISTICS - 5W1H

SPEAKER 2



ASC, PROF, TS. ChM, DR, RADIN MAYA SAPHIRA BINTI RADIN MOHAMED Head of Micropollutant Research Centre Universiti Tun Hussein Onn Malaysia (UTHM)

NAVIGATING WATER QUALITY ISSUES AND MONITORING IN MALAYSIA

MODERATOR



NUR SYAQINAH BINTI SAFARUDDIN Student of Master (Intelligent Systems) Data Science Research Lab, School of Computing Universiti Utara Malaysia (UUM)

25 JULY 2023 TUESDAY 14:30 – 17:00 MYT

✓ EVERYONE IS INVITED ✓ PBU/SIRA AND CERTIFICATE PROVIDED





Collaboration between Universiti Utara Malaysia (UUM), Universiti Tun Hussien Onn Malaysia (UTHM), Universiti Pendidikan Sultan Idris (UPSI) and Syarikat Air Perlis (SAP) were successfully organized webinar on "Public Health and Water Quality in Malaysia Context". This webinar was held on 25th July 2023 and honorable Ir. Dr. Haji Mohmad Asari Bin Daud (COE of SAP) and Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Binti Radin Mohamed was invited as speakers.

In this webinar, Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Binti Radin Mohamed delivered a topic aon "Navigating Water Quality Issues and Monitoring in Malaysia"





WEBINAR & WORKSHOP

This pre-workshop was chaired by Prof. Ts. Dr. Mohd Khairul bin Ahmad, Director of the Institute for Integrated Engineering. This pre-workshop also invited honorable Prof. Ts. Dr. Rabiah binti Ahmad, Deputy Vice-Chancellor (Research and Innovation) to convey the keys agenda and future research direction that should be achieved by all Centers of Excellence (CoE).

The workshop was joined by the Head of the Soft Soil Research Center (RECESS), Prof. Ir. Ts. Dr. Adnan Zainorabidin, followed by Assoc. Prof. Dr. Anika Zafiah Binti Mohd Rus, Head of Advanced Manufacturing and Materials Center (AMMC), Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed, Head of Micropollutant Center of Excellence (MPRC), Assoc. Prof. Dr. Marlia binti Head of Microelectronics Morsin, and Nanotechnology Shamsuddin Research Center (MiNT-SRC), Assoc. Prof. Dr. Fauziahanim binti Che Seman, Head of Applied Electromagnetic Research Center (EMCenter), CoE principal researchers (PR), and administrative staff.

Hopefully this pre-workshop will open up space, opportunities and follow-up actions by all IIE staffs to achieve the targeted KPIs and then become experts in their respective fields.





EVENTS AND ACTIVITIES



CSR "ENVIRONMENTAL SUSTAINABILITY PROGRAM FOR SEGAMAT DISTRICT YEAR 2023 ORGANIZED BY THE INSTITUTE FOR INTEGRATED ENGINEERING (I²E), UNIVERSITI TUN HUSSEIN ONN MALAYSIA (UTHM).

The Institute for Integrated Engineering (I²E), Universiti Tun Hussein Onn Malaysia (UTHM) has successfully organized a community service program (CSR) in collaboration with the Segamat District Office for Education, North Johor Forestry Department and Eco-shop Malaysia. This CSR program was led by Dr. Siti Nor Hidayah Binti Arifin (RECESS Postdoctoral).

This CSR was joined by 30 UTHM staffs from different department (IIE, FTK, FKEE, PPB, ICC and RMC) and 100 participants among students from 25 secondary schools around Segamat district. The CSR program was started with the innovative recycling activity using plastic waste for 'Eco-Brick' formation and this activity led by Ts. Dr. Roslinda binti Ali.



RESEARCH DISCUSSION AND LAB VISIT BETWEEN MINT-SRC WITH FACULTY OF ENGINEERING TECHNOLOGY (FTK)

This research discussion and lab visit from FTK to MiNT-SRC was led by Dr. Muhammad Rusydi Bin Muhammad Razif, followed by Dr. Norain Binti Sahari, Dr. Azuwien Aida Binti Bohari, Nurul Hasyimah Binti Mohd Mustapha & Anisah Binti Abd Wahab. MiNT-SRC was represents by Assoc. Prof. Dr. Marlia Binti Morsin (Head of MiNT-SRC), Assoc. Prof. Ir. Dr. Soon Chin Fhong & Assoc. Prof. Ts. Dr. Nur Hanis Hayati Binti Hairom.



INDUSTRIAL VISIT TO SPIN EIGHT NANO TECHNOLOGIES, IPOH, PERAK.

An industrial visit to Spin Eight Nano Technologies, Ipoh on 3rd August 2023 was led by honorable Prof. Ts. Dr. Rabiah Ahmad (Deputy Vice Chancellor Research and Innovation) followed by Prof. Ts. Dr. Aida Mustapha (ICRC Director) and fellow researchers from MiNT-SRC, Assoc. Prof. Dr. Marlia Morsin, Assoc. Prof. Ir. Dr. Soon Chin Fhong and Ts Dr. Nurfarina Zainal. The main focus for this industrial visit is to discuss on research collaboration between UTHM and Spin Eight Nano Technologies, InvestPerak, Southern Philippines Development Authority, Perak Human Capital Development Center and IMR Group of Companies.



SDN BHD

EVENTS AND ACTIVITIES

CONE PENETRATION TESTING (CPTU) WORKSHOP IN GEOTECHNICS PRACTICE BY GEOMILL SDN. BHD.

The head of Research Center for Soft Soils, Prof. Ir. Dr. Adnan bin Zainorabidin followed by other principal researcher of recess were successfully attending Cone Penetration Testing (CPTu) workshop In Geotechnics Practice' which was held at Geomill Sdn. Bhd. This workshop was supervised by Mr. Ross Quaite William, Prof. Dr. Paulus Rahadjo and Ir. Liew Shaw Shong.

staffs and hopefully this knowledge brings benefit to the university. Thus, recess staff become an expert in term of geotechnics practice.

May this workshop enhance skills among RECESS

SITE VISIT TO THE SE-MOF PROJECT SITE IN MUKIM AYER HITAM, MUAR.

GDS

A project monitoring site visit for SE-MOF project was carry out by Mr. Jeffery bin Yon (Head of Supply Chain, Services and Tenders Section of Ministry of Finance Malaysia) to the Ayer Hitam, Muar followed by Mr. Mohd Fauzi bin Tubi (Head of Ayer Hitam Subdistrict), Mr. Noordin bin Tamjis (Chairman of Muar PKM), Village Heads, Seri Sempadan Environmental Club.

The project on Community Living Laboratory for Mukim Ayer Hitam, Muar, Johor was led by Ts. Dr. Nor Azizi bin Yusoff had received RM RM150,000.00 from Ministry of Finance Social Enterprise Project (SE-MOF).

UTM representative to monitor this project progress was Assoc. Prof. Ts. Dr. Suraya Hani Binti Adnan (Deputy Director of Research Management Center, RMC UTHM), RMC officers, and grant members.



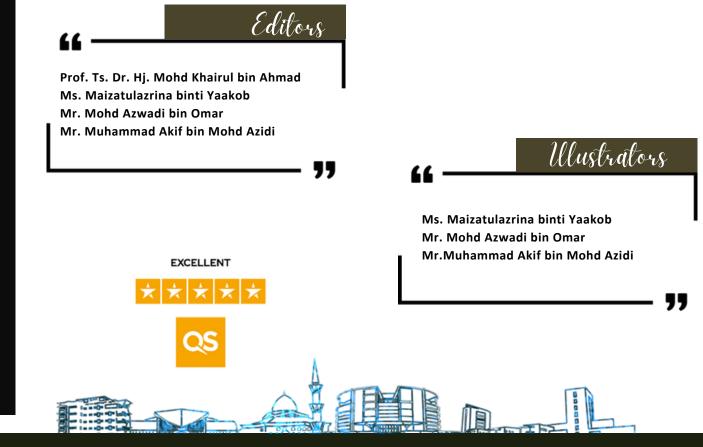
PROF. TS. DR. RABIAH BINTI AHMAD (DEPUTY VICE CHANCELLOR RESEARCH AND INNOVATION, UTHM) WORK VISIT TO MUAR LIVING

The Institute for Integrated Engineering through Muar Living Lab received work visit by Prof. Ts. Dr. Rabiah binti Ahmad (Deputy Vice Chancellor Research and Innovation, UTHM), followed by Prof. Dr. Aida Mustapha (Director of ICRC, UTHM), and Assoc. Prof Ts. Dr. Faridah Kormin (Deputy Director of ICRC, UTHM).

Ts. Dr. Nor Azizi bin Yusoff (Chairman of Muar Living Lab) led this work visit by introducing Muar living lab expertise in term of building cracking technology, periuk kera nursery, composite material production from rice straw, lobster breeding project and durian farm of Bukit Mor.



Credits



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