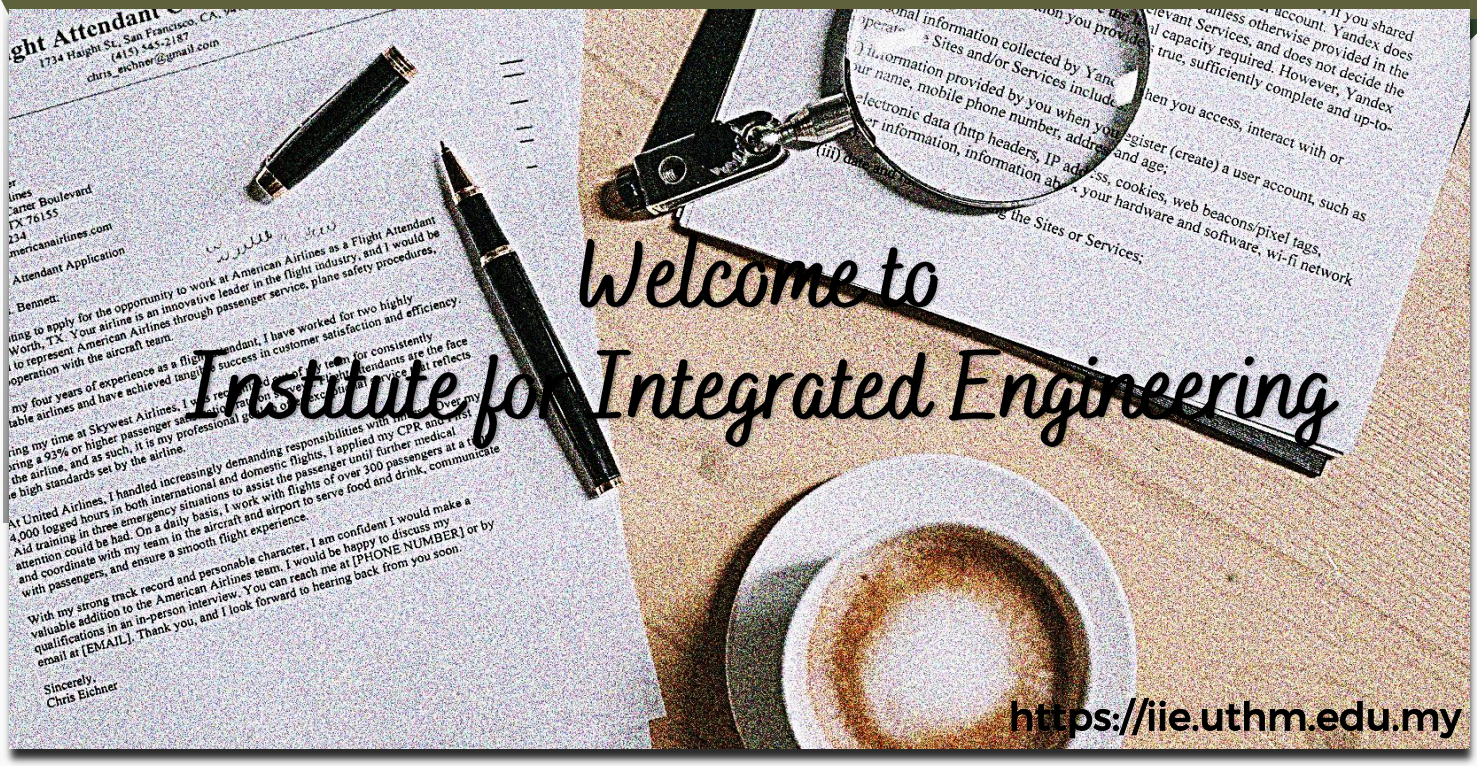
BULLETIN



JAN-MARCH 2023 EDITION

Research & Activities Highlight

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.

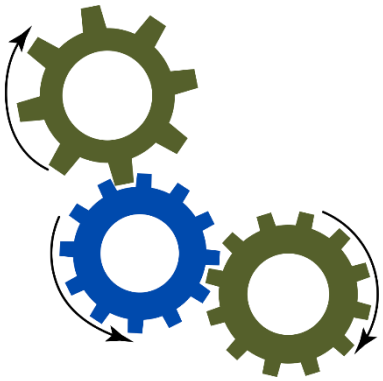
Prof. Ts. Dr. Mohd Khairul bin Ahmad

AIM & 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



Director

Prof. Ts. Dr. Mohd Khairul bin Ahmad

Head of OIG

HEAD OF WATE

Assoc. Prof. Dr. Mohd Zainizan bin Sahdan

HEAD OF OASIS

Ts. Dr. Mohd Fahmy bin Abdullah

Head of CoE's

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 EMC

Assoc. Prof. Dr. Fauziahanim Binti Che Seman

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RESEARCH OFFICER

Ms. Maizatulazrina Binti Yaakob

SENIOR ADMINISTRATIVE ASSISTANT

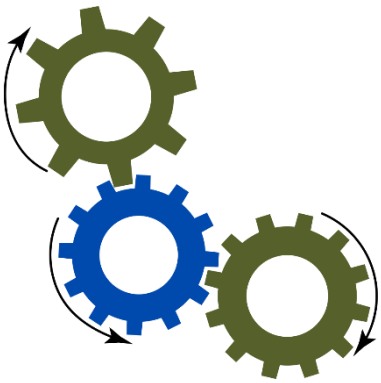
Mrs. Jalilah Binti Mohd Bajuri

ADMINISTRATIVE ASSISTANT

Mr. Mohamad Fadhil Bin Ja'afar

OPERATION ASSISTANT

Mrs. Nomi Binti Abdul Latiff



INSTITUTE FOR INTEGRATED ENGINEERING

UTHM
Universiti Tun Hussein Onn Malaysia

Selamat Tahun Baru 2023

Selamat Tahun Baru, Sahabatku. Jangan lupakan masa dan kesilapan lalu, belajarlah darinya, dan keluarlah dengan kuat demi impian dan masa depanmu. Harapan terbaikku senantiasa bersamamu.

Ikhlas daripada:

INSTITUTE FOR INTEGRATED ENGINEERING

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UTHM
Universiti Tun Hussein Onn Malaysia

LEADING TOWARDS SUSTAINABLE FUTURE

At the Institute for Integrated Engineering, we took seriously in securing a sustainable future. There are five (5) Centre of Excellence (CoE) in the Institute ensuring in solving most of today's sustainable engineering issues.

PROFESSOR TS. DR. MOHD KHAIRUL BIN AHMAD
Director of Institute for Integrated Engineering

Global Technopreneur University 2030

RECESS MALAYSIA | EM CENTER | MINT-SRC | AMMC | MPRC | UTHM

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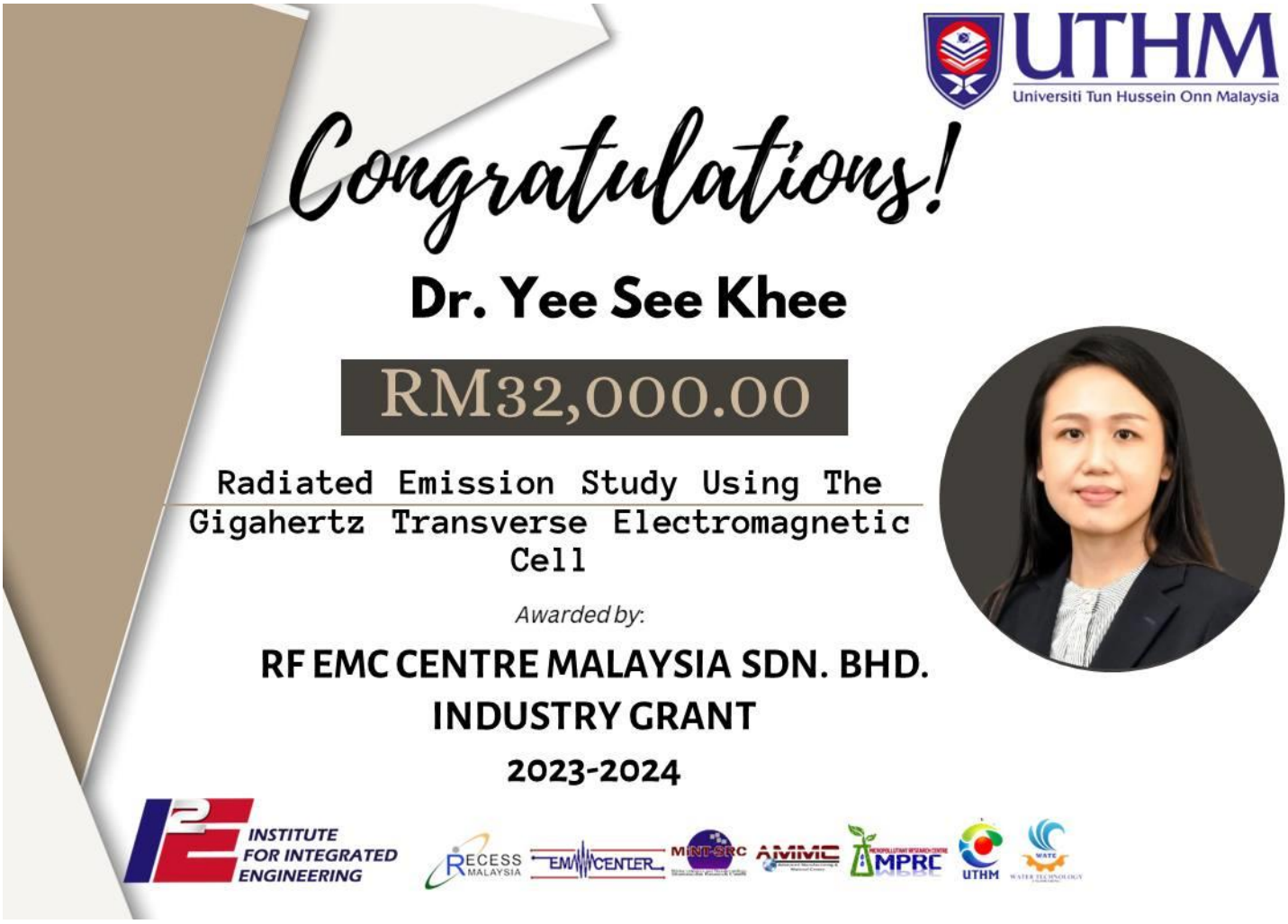
THE OPENING CEREMONY OF THE LOW CARBON COMMUNITY SEMINAR

- The Opening Ceremony of the Low Carbon Community Seminar was held at Dewan Jubli Intan Sultan Ibrahim, Muar, Johor.
- Datuk Ts. Dr. Haji Aminuddin Hassim, Secretary General of the Ministry of Science, Technology and Innovation was officially launch the Low Carbon Community Seminar.
- The program was organized by the Muar District Office which involved the presence of Prof. Ir. Ts. Dr. Ruzairi Abdul Rahim, UTHM Vice-Chancellor and Honorary Dato' Haji Mustaffa Kamal Dato' Haji Shamsudin, Muar District Officer.
- Besides that, UTHM representative present were Prof. Dr. Yusri Yusof, Prof. Ts. Dr. Kamarulzaki Mustafa, Prof. Ts. Dr. Norzila Othman, Prof. Ts. Dr. Mohd Khairul bin Ahmad, Ts. Dr. Nor Azizi bin Yusoff, researchers, and administrative staff who were directly or indirectly involved throughout the ceremony.

RESEARCH GRANTS



Congratulations to Dr. Yee See Khee, Principal Researcher (PR) for Applied Electromagnetic Research Center (EMCenter) who have received the Industry grant for the Year 2023-2024 through a project entitled “Radiated Emission Study Using The Gigahertz Transverse Electromagnetic Cell" with a value of RM32,000.00 from RF EMC Center Malaysia Sdn. Bhd.

May this project successful and Dr. Yee See Khee continues to excel in her niche area and being a role model to other researcher, especially researchers at the Institute for Integrated Engineering.

Congratulations to Assoc. Prof. Ir. Dr Soon Chin Fhong, Principal Researcher (PR) of Shamsuddin-Microelectronics and Nanotechnology Research Centre (MiNT-SRC) who have received the Industry Matching Grant for the Year 2023 through a project entitled "The Development of Internet of Things (IoT) Water Quality Sensors for Microalgae Culture" with a value of RM25,000.00. May this project successful and Assoc. Prof. Ir. Dr. Soon Chin Fhong continues to excel in her niche area and being a role model to other researcher, especially researchers at the Institute for Integrated Engineering.

Congratulations to the Principal Researcher of Soft Soil Research Center (RECESS), Assoc. Prof. Ts. Dr. Norshuhaila Binti Mohamed Sunar who has received an Industry Grant from the Green Innovation And Energy Sdn. Bhd (GIAE) for the year 2023 through a project titled "Development of Integrated Industrial Microalgae Propagation Cultivation In Pond Systems Associated With Internet-Of-Things Pyranometer" with a value of RM 50,000.00.

Congratulations to Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed, Head of Micropollutant Research Center (MPRC) who have received the Industry grant for the Year 2023-2024 through a project entitled “Future Generation of Mottainai Culture Exposure form Japan Industrial Eco Town to Empower Plastic Waste Recycling Management in Developing Countries" with a value of USD10,79.94 from Toshiba International Foundation (TIFO). May this project successful and Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed continues to excel in her niche area.

Congratulations to the Principal Researcher of Advanced Manufaturing and MaterialS Center (AMMC), Dr. Shazarel bin Shamsudin who has received Research Enhanced-Structured Internship Program (RE-SIP) matching Grant from the Teknoware Asia Sdn. Bhd for the year 2023 through a project titled “Study on Design Limitation of High Pressure Laminate (HLP) Interior Panel for Railway Applications" with a value of RM 20,000.00.

LEADERSHIP APPOINTMENT

Congratulations to Dr. Nurmiza Binti Othman, Affliate Researcher (AR) for Electromagnetic Research Center (EMCenter) who have been appointed as Head of Department (Leadership, Community Service, Public Speaking and Skills), Centre for General and Co-curricular Studies (PPUK) effective 1 March 2023.

Congratulations Prof. Ts. Dr. Mohd Khairul Bin Ahmad, the Director of Institute for Integrated Engineering for being appointed as Visiting Professor in the Nanotechnology Research Centre, College of Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur Campus.

Hopefully Prof. Ts. Dr. Mohd Khairul Bin Ahmad continues to strive for excellent and being a role model for other researchers, especially researchers at the Institute for Integrated Engineering.

LEADERSHIP APPOINTMENT

Congratulations to Professor Ir. Ts. Dr. Adnan bin Zainorabidin for being appointed as Head of Research Center for Research Center for Soft Soil (RECESS) effective 1 March 2023. Hopefully Prof. Ir. Ts. Dr. Adnan Zainorabidin continues to strive for excellent and bring RECESS to highest level as focal point for soft soil study.

Congratulations Ts. Dr. Nor Azizi bin Yusoff, Principal Researcher (PR) for Soft Soil Research Center (RECESS) for being appointed as Chairman of Muar District Living Laboratory Program in conjunction with Muar Perkasa Initiative 2030.

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.

LEADERSHIP APPOINTMENT

Congratulations to Assoc. Professor Ts. Dr. Asmarashid bin Ponniran Affliate Researcher (AR) of Applied Electromagnetic Research Center (EMCenter) for being appointed as Dean of Faculty for Faculty of Electrical and Electronic Engineering (FKEE) effective 1 Jan 2023. Hopefully Asspc. Prof. Ir. Ts. Dr. Asmarashid bin Ponniran continues to strive for excellent and bring FKEE to highest level.

Congratulations Prof. Ts. Dr. Aeslina Binti Abdul Kadir, Principal Researcher (PR) for Micropollutant Research Center (MPRC) for being reappointed as Director for Sustainable Campus Office (SCO) effective on 1st March 2023 until 28th Feb 2025.

Hopefully Prof. Ts. Dr. Aeslina continues to strive for excellent and being a role model for other researchers, especially researchers at the Institute for Integrated Engineering.

UTHM EXPERT

Professor Dr. Zawati Harun is a Professor at the Faculty of Mechanical Engineering, Universiti Tun Hussein Onn Malaysia (UTHM), Johor, Malaysia. Currently, she is a Principal Researcher at Advanced Manufacturing & Materials Center (AMMC) under the Centre of Excellence (COE) at the Institute for Integrated Engineering.

Her research interests focus on advanced materials mainly in the separation process. She has conducted many developments on polymer and ceramic membranes during her engagement in the LRGS project with UTM and her appointment as an affiliated researcher at HiCOE Advanced Membrane Technology Research Centre (AMTEC), UTM. Her passion and strong interest in materials advancement also inspired her to carry out more research in green synthesis of additive particles such as zeolite, zinc oxide, titanium oxide, etc.

She started to develop her carrier as a researcher when she was appointed as principal Researcher at AMMC, UTHM in 2013. During this appointment, she took the challenge to develop her research career and succeeded in securing several big grants such as LRGS, TRGS, FRGS, MDR, and other grants with good linkages with other university partners. This achievement had driven her to be actively engaged in writing and publication activities as well as postgraduate student supervision. In 2016, she had been awarded the Best Supervisor Award 2016 and also won the Award for Master Supervision. Her determination and passion for writing papers had driven her to publish in many high-impact and Scopus journals.

She also managed to win several national and international awards from Malaysia Technology Expo (MTE), The International Invention, Innovation, and Technology Exhibition (ITEX), International Conference and Exposition on Inventions by Institutions of Higher Learning (PECIPTA), Seoul International Invention Fair (SIIF) and Bio Innovative Solutions (BIS).

Click link below for full article: https://news.uthm.edu.my/.../uthm-expert-professor-dr.../

STAFF PROMOTION

Congratulations to Assoc. Professor Ts. Dr. Noraini Binti Marsi, Principal Researcher (PR) of Advanced Manufacturing and Materials Center (AMMC) for being promoted to Associate Professor Grade DS54. Hopefully Assoc. Prof. Ts. Dr. Noraini Marsi continues to strive for excellent and being a role model for other researchers, especially researchers at the Institute for Integrated Engineering.

STAFF COMPENTENCY

Congratulations to Professor Ir. Dr. Erwan bin Sulaiman, Principal Researcher (PR) of Applied Electromagnetic Research Center (EMCenter) on his graduation as Professional Imam Executive Diploma in conjunction with UTHM Executive Programme Convocation Ceremony 2022. Hopefully Prof. Ir. Dr. Erwan bin Sulaiman continues to strive for excellent and being a role model for other researchers, especially researchers at the Institute for Integrated Engineering.

Congratulations Assoc. Prof. Ts. Dr. Adel Ali Saeed Abduh Algheethi, Principal Researcher (PR) for Micropollutant Research Center (MPRC) for being certified as Chartered Engineer for niche area water, waste, environmental management and protection.

Hopefully Assoc. Prof. Ts. Dr. Adel continues to strive for excellent and being a role model for other researchers, especially researchers at the Institute for Integrated Engineering.

AWARD & RECOGNITION

Congratulations to Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed, Head of Micropollutant Research Center (MPRC) for being awarded with Outstanding Woman Researcher in Environmental Engineering by 8th Venus International Women Award (VIWA) 2023. Hopefully Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira continues to strive for excellent and being a role model for other researchers, especially researchers at the Institute for Integrated Engineering.

Congratulations Assoc. Prof. Dr. Marlia Binti Morsin, Principal Researcher (PR) for Microelectronic and Nanotechnology – Shamsuddin Research Center (MiNT-SRC) and her team for winning Silver Award in Malaysia Technology Expo (MTE) 2023 with project entitled “Gold Nanobipyramids as Sensing Materials, Larvides and Anti-Fungal”.

Hopefully Assoc. Prof. Dr. Marlia continues to strive for excellent in her niche area for research and innovation.

APPRECIATION

Appreciation and gratitude to Professor Dr. Mohd Shahir Shamsir bin Omar for his contribution and service as Deputy Vice Chancellor (Research & Innovation) with UTHM from 15 Jan 2020 until 14 Jan 2023. We wish you good luck for future endeavor and may Allah protect and blessed Prof. Dr. Mohd Shahir Shamsir bin Omar in everything that he work out.

Appreciation and gratitude to Ts. Dr. Nor Azizi bin Yusoff for his contribution and service as Head of Research Center for Research Center of Soft Soils (RECESS) from 1st March 2021 until 28th February 2023.

Thank you Ts. Dr. Nor Azizi bin Yusoff for all the hard work and guidance throughout the service to lead RECESS . We wish you good luck and success in your niche area ahead.

APPRECIATION

Appreciation and gratitude to Assoc. Prof. Ir. Dr. Soon Chin Fhong for her contribution and service as Head of Research Center for Microelectronic and Nanotechnology – Shamsuddin Research Center (MiNT-SRC) from 1st April 2021 until 31st March 2023.

Thank you Assoc. Prof. Ir. Dr. Soon Chin Fhong for all the hard work and guidance throughout the service to lead MiNT-SRC. We wish you good luck and success in your niche area ahead.

Appreciation and gratitude to Assoc. Prof. Dr. Samsul Haimi bin Dahlan for his contribution and service as Head of Research Center for Research Center of Applied Electromagnetic (EMCenter) from 1st April 2021 until 31st March 2023.

Thank you Assoc. Prof. Dr. Samsul Haimi bin Dahlan for all the hard work and guidance throughout the service to lead EMCenter. We wish you good luck and success in your niche area ahead.

PAPER PUBLICATION

Materials Today Advances 17 (2023) 100341

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Materials Today Advances

journal homepage: www.journals.elsevier.com/materials-today-advances/

Use, exposure and omics characterisation of potential hazard in nanomaterials

Nyuk Ling Ma [a, b, 1], Nan Zhang [c, g], Wilson Thau Lym Yong [d], Suzana Misbah [b], Fatimah Hashim [b], Chin Fhong Soon [e, 1], Gim Pao Lim [e], Wanxi Peng [a, **], Christian Sonne [a, f, *]

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[f] Aarhus University, Department of Bioscience, Arctic Research Centre (ARC), Frederiksborgvej 399, PO Box 358, DK-4000, Roskilde, Denmark
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Environmental exposome
Nanomaterials

ABSTRACT

Nanomaterials offer the potential for positive technological impact in a variety of industries. The major breakthrough is in neurological therapeutic applications as their physical and chemical properties allow them to penetrate the blood-brain barrier (BBB). However, questions concerning its safety have arisen as a result of its permeability and the broad application of nanomaterials especially the engineered nanomaterial (ENMs). Due to the large spectrum of ENM properties, pinpointing individual features that caused toxicity is difficult. It is therefore urgent to capitalise on these new developments in ENM safety evaluation. Indeed, novel risk assessment and risk management techniques for humans and the environment across the whole life-cycle of nanomaterial products have emerged in recent years, including systems biology approaches and high-throughput screening platforms. Moreover, the new toxicology technology should practically reduce the number of animal samples required for testing and allow both *in vitro* and *in vivo* cell studies. Unlike traditional cytotoxicity, which limits the analysis effect to a single experiment, hazardous risk assessment by integrated omics technologies using high-throughput technologies provides robustness of systemic functional analysis towards ENM, allowing the discovery of biomarkers and functional pathways affecting ENM safety application.

Congratulations Assoc. Prof. Ir. Dr. Soon Chin Fhong and team for successfully published Q1 journal entitled "Use, exposure and omics characterization of potential hazard in nanomaterials".

This journal may be accessed through this link as follow:

https://www.sciencedirect.com/.../pii/S2590049823000012

mathematics

MDPI

Article

Incorporating Fuzziness in the Traditional Runge–Kutta Cash–Karp Method and Its Applications to Solve Autonomous and Non-Autonomous Fuzzy Differential Equations

Nurain Zulaikha Husin [1], Muhammad Zaini Ahmad [1,*] and Mohd Kamalrulzaman Md Akhir [1,2,3]

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2 Oasis Integrated Group, Institute for Integrated Engineering, Universiti Tun Hussein Onn Malaysia, Parit Raja, Batu Pahat 86400, Johor, Malaysia
3 ANNA Systems LLC, Moscow Region, Dubna, 9 Maya Street, Building 7B, Building 2 Office 10.141707, Moscow, Dolgoprudnenskoe Highway, 3, Fiztekhpark, Moscow 141980, Russia
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Abstract: The study of the fuzzy differential equation is a topic that researchers are interested in these days. By modelling, this fuzzy differential equation can be used to resolve issues in the real world. However, finding an analytical solution to this fuzzy differential equation is challenging. Thus, this study aims to present the fuzziness in the traditional Runge–Kutta Cash–Karp of the fourth-order method to solve the first-order fuzzy differential equation. Later, this method is referred to as the fuzzy Runge–Kutta Cash–Karp of the fourth-order method. There are two types of fuzzy differential equations to be solved: autonomous and non-autonomous fuzzy differential equations. This fuzzy differential equation is divided into the (i) and (ii)–differentiability on the basis of the characterization theorem. The convergence analysis of the fuzzy Runge–Kutta Cash–Karp of the fourth-order method is also presented. By implementing the fuzzy Runge–Kutta Cash–Karp of the fourth-order method, the approximate solution is compared with the analytical and numerical solutions obtained from the fuzzy Runge–Kutta of the fourth-order method. The results demonstrated that the approximate solutions of the proposed method are accurate with an analytical solution, when compared with the solutions of the fuzzy Runge–Kutta of the fourth-order method.

Keywords: fuzzy number; Runge–Kutta Cash–Karp; fuzzy differential equations

MSC: 34K28; 03E72; 34L99

check for updates

Citation: Husin, N.Z.; Ahmad, M.Z.; Md Akhir, M.K. Incorporating Fuzziness in the Traditional Runge–Kutta Cash–Karp Method and Its Applications to Solve Autonomous and Non-Autonomous Fuzzy Differential Equations. *Mathematics* **2022**, *10*, 4659. https://doi.org/10.3390/math10244659

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1. Introduction

Physical models of real-world phenomena typically have considerable uncertainty and ambiguity, which can be attributed to a variety of causes. For the purpose of examining these issues, Zadeh introduced the fuzzy set theory in 1965 [1]. There are many disciplines in fuzzy sets, such as fuzzy topology, fuzzy arithmetic, fuzzy algebraic structures, fuzzy differential calculus, fuzzy geometry, fuzzy relational calculus, fuzzy databases, and fuzzy decision-making [2].

Many researchers attempted to apply the fuzzy set theory in the context of decision-making. A method of *X* fuzzy mathematics, also known as the analytical hierarchy process (AHP), was developed by Wang and Khadidos [3] and was applied in the basketball scoring strategy. The results showed that the proposed method is conceivable and credible in the scoring and analysis of basketball strategies. In [4], the authors used the fuzzy mathematics evaluation method to measure basketball players' skill levels. The suggested approach can be used to assess basketball skill development and instruction, and it also serves as a general framework for enhancing players' basketball skills. In 2021, a study was conducted on the usage of the eye movement method with the help of fractional order fuzzy differential

Congratulations Affiliate Researcher (AR) from Oasis Integrated Group (OIG) for successful published ISI WOS IF Q1 journal entitled "Incorporating Fuzziness in the Traditional Runge–Kutta Cash–Karp Method and Its Applications to Solve Autonomous and Non-Autonomous Fuzzy Differential Equations".

This journal can be accessed through this link as follow:

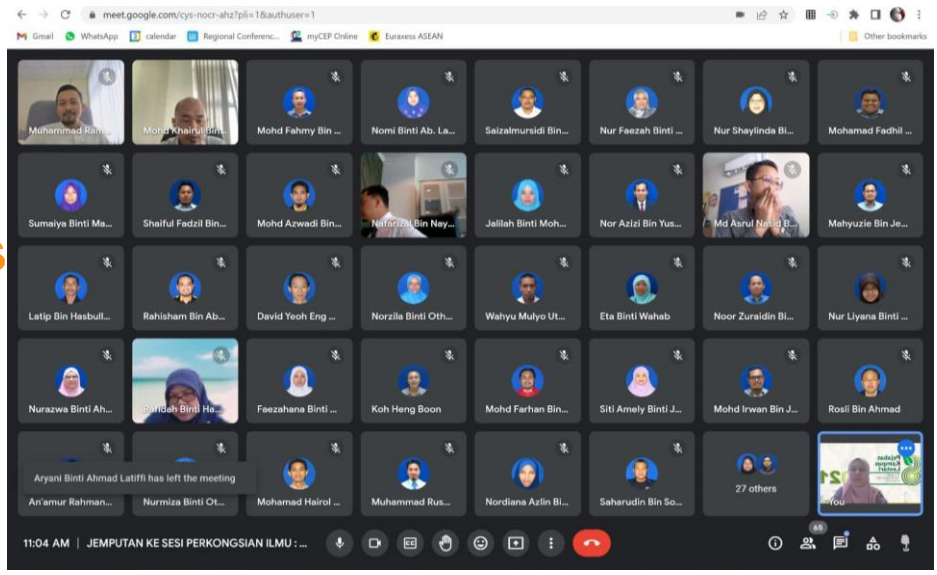
https://www.mdpi.com/2227-7390/10/24/4659

WEBINAR & WORKSHOP

Institute for Integrated Engineering (I^2E), UTHM was successfully organized knowledge sharing session with The Top Research Scientists Malaysia, Prof. Ts. Dr. Aeslina Binti Abdul Kadir and Assoc. Prof. Dr. Muhammad Ramlee bin Kamarudin. Both of them was nominated as TRSM by Akademi Sains Malaysia (ASM) for year 2020 respectively.

The Top Research Scientists Malaysia (TRSM) is an ASM initiative in line with its focus on fostering a culture of excellence in Science, Technology, Innovation and Economy (STIE). The initiative aims to identify and recognize the local leading research scientists in Malaysia. The output of this initiative is to establish and showcase the Top Research Scientists Malaysia profile that would act as a central point of reference on the leading Malaysian research scientists and their research background.

TRSM TOP RESEARCH SCIENTISTS MALAYSIA
an Academy of Sciences Malaysia initiative



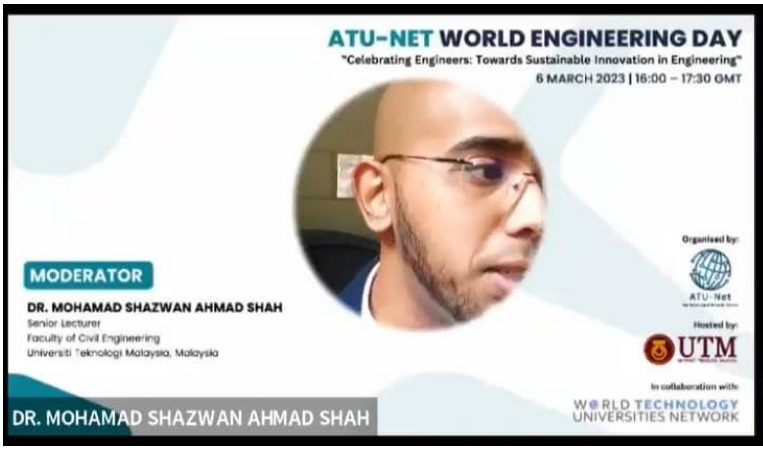
WEBINAR & WORKSHOP

Figure. SMORTEC images in three selected locations: Parit Kelantan (left), Parit Lajis (middle) and AHU Tambahan (right)

ATUNET & ATU-Net WORLD ENGINEERING DAY 2023 (ATU-Net WED 2023)

Congratulations Ts. Dr. Nor Azizi bin Yusoff for being given an opportunity to be one of the speakers for this webinar. In this webinar, Ts. Dr. Nor Azizi bin Yusoff was inspired to share on Muar Living Lab activities and initiatives to the world. Thank you to ATUNET & the webinar committee for recognizing our efforts to represent Research Centre for Soft Soil (RECESS), Institute for Integrated engineering (I^2E), Universiti Tun Hussein Onn Malaysia.

This ATU-Net World Engineering Day 2023 was hosted by Universiti Teknologi Malaysia (UTM) with the theme "Celebrating Engineers: Towards Sustainable Innovation in Engineering". ATU-Net WED 2023 is designed in conjunction with the World Engineering Day for Sustainable Development which is celebrated every 4th March beginning in 2020, proclaimed by UNESCO at its 40th General Conference in 2019. As an international alliance which focuses on Engineering and Technology, ATU-Net takes pride in recognising and honouring the valuable contribution of all excellent engineers of ATU-Net member institutions and beyond in advocating sustainable innovation in engineering for our next generation.



WEBINAR & WORKSHOP

First activity of American Society of Microbiology (ASM) in a collaboration with Micropollutant Research Centre (MPRC) and Occupational Safety, and Health Office (OSHE), UTHM has been conducted successfully for seminar on Microbiology Laboratory Practices and Safety Rules Workshop.

This workshop was lead by Dr. Efaq Ali Noman Mohammed (The Young Ambassador of ASM for Malaysia 2023-2024). The featured speakers for this workshop were Prof. Ts. Dr. Norshuhaila Binti Mohamed Sunar, Principal Researcher for Research Center for Soft Soil (RECESS) and Dr. Siti Fatimah Zaharah Mohd Fuzi, Head of Biosafety Department of OSHE.

Also present during this workshop session is Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Binti Radin Mohamed, Head of CoE MPRC, researchers, and students.

INDUSTRY COLLABORATION

Work Visit to ST Microelectronics Sdn. Bhd. at Tanjung Agas Industrial Estate Muar, Johor. was lead by Prof. Ir. Ts. Dr. Ruzairi Abdul Rahim, Vice-Chancellor of UTHM.

The work visit was organized by the Industry, Community Relations Office (ICRC) and the main objective for this visit is to enhance UTHM's collaboration with industry in term of research collaboration, student internship, industry postgraduate program and build strong connection with industry which in line with UTHM's aspiration to become a Global Technopreneur University in 2030 (GTU 2030).

Also present during the visit were the Deans of the Faculty, I^2E Adjunct Professor, I^2E Director, RMC Deputy Director, Director of PBP, ICRC representatives, researchers and UTHM officer.

Hoping for the best and future collaboration with ST Microelectronics Sn. Bhd.

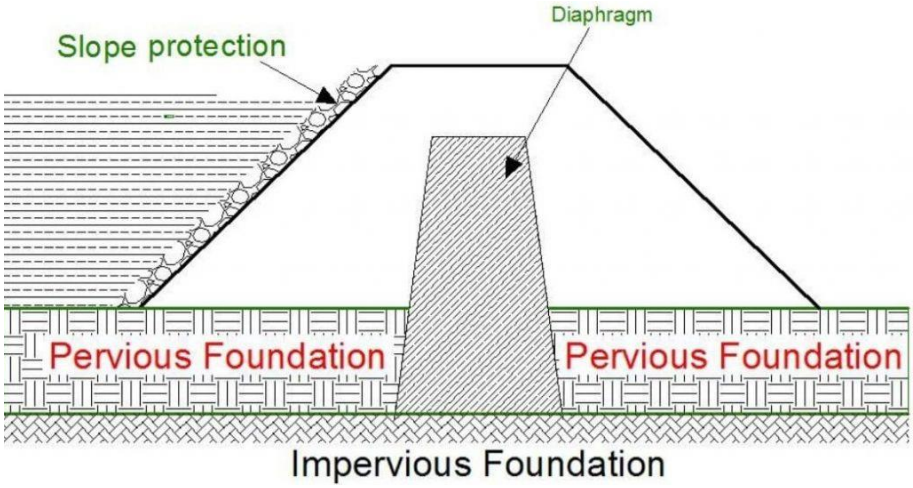
MOU UTHM - NATIONGATE

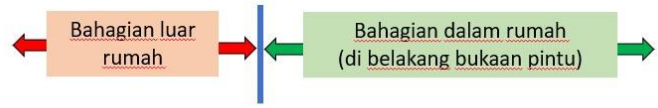
Memorandum of Understanding (MoU) Signing Ceremony between Universiti Tun Hussein Onn Malaysia (UTHM) and NationGate Solutions Sdn. Bhd was successfully held at Banquet Hall, Level 5, Tunku Tun Aminah Library (PTTA).

The ceremony was officiated by the Vice-Chancellor of Universiti Tun Hussein Onn Malaysia, Professor Dr. Ruzairi bin Abdul Rahim and Mr. Tan Chin Kong, Vice President of Nationgate Solutions Sdn. Bhd (NSSB).

Also present as UTHM representative were Prof. Ts. Dr. Mohd Khairul bin Ahmad, Director of the Institute of Integration Engineering (I^2E), Prof. Dr. Nafarizal bin Nayan, Director of Research Management Centre (RMC), Prof. Ts. Dr. Norzila Othman, Director of the Centre for Innovation and Commercialization (ICC), Deans of the faculties, Head of Research Centre (COE), Researchers, Senior University Officer and UTHM staff.

NEWS & SOCIAL MEDIA





INOVASI 'EMPANGAN AIR' MAMPU MILIK UTHM

Water Dam Innovation created by Ts. Dr. Nor Azizi Yusoff was able to save the homes from flooding thus shortening the duration of the 'stagnant flood.'

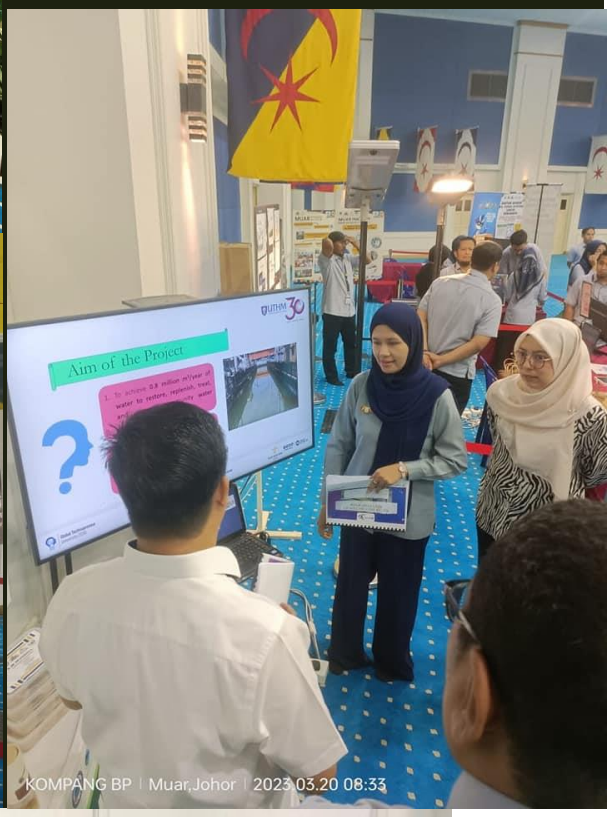
As one of the flood victims, Ts. Dr. Nor Azizi bin Yusoff took advantage of the disaster leave he obtained by creating a new and affordable innovation to reduce the risk of damage to property in the home.

This water dam innovation used readily available household items such as aquarium pumps, garbage plastic bags, rubber hoses, rubber mats, water, used paper, plastic filters and weights with cost less than RM200.00.

The water dam innovation can be put into practice by flood victims at this point as an effort to shorten the duration of the stagnant flood. Thus, minimizing the damage to their property.

EXHIBITION BOOTH

Congratulations to Head of Micropollutant Research Center (MPRC), Assoc. Prof. Ts. ChM. Radin Maya Saphira Radin Mohamed and Dr. Noor Maisara Jais for their contributions as participant for Bentayan River Initiatives and Restoration exhibition booth at Maljis Perbandaran Muar in conjunction with the President's mandate in 2023.



ROADSHOW

Institute for Integrated Engineering

EVENTS & ACTIVITIES

MEETING SESSION BETWEEN DVCRI AND I²E MANAGEMENT

A meeting session with Honorable Professor Ts. Dr. Rabiah bt Ahmad, UTHM's new Deputy Vice-Chancellor (Research and Innovation) was held at the Conference Room, Research Centre, Block F6, UTHM.

The session was led by the Director of I²E, Professor Ts. Dr. Mohd Khairul bin Ahmad, followed by the Heads of the Centre of Excellence (COE), Principal Researchers (PR), I²E officers, assistant engineers and administrative staff

MEETING SESSION BETWEEN MPRC, FKAAB & KURE KOSEN

Micropollutant Research Center (MPRC) and Faculty of Civil Engineering & Build Environment (FKAAB) was having a meeting with Assoc. Prof. Dr. Daisuke Tanikawa from Kure KOSEN, Japan on the summer internship program, MOU draft and Sakura Science Program.

This meeting was lead by Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed and Assoc. Prof. Ts. Dr. Rafidah Hamdan, followed by other lecturer of FKAAB.

CENTRE OF EXCELLENCE (COE) 2022 KEY PERFORMANCE PRESENTATION SESSION WITH VICE-CHANCELLOR

This meeting was chair by Professor Ir. Ts. Dr. Ruzairi bin Abdul Rahim and held at Level 5, PTTA. Also present during the session were Prof. Ts. Dr. Mohd Khairul bin Ahmad, Director of I²E, Assoc. Prof. Dr. Samsul Haimi bin Dahlan, Head of EMCenter, Assoc. Prof. Ir. Dr. Soon Chin Fhong, Head of MiNT-SRC, Assoc. Prof. Dr. Anika Zafiah binti Mohd Rus, Head of AMMC, Assoc. Prof. Ts. ChM. Dr. Radin Maya Saphira Radin Mohamed, Head of MPRC and Ts. Dr. Nor Azizi bin Yusoff, Head of RECESS.

EVENTS & ACTIVITIES

BRIEFING ON PADDY STRAW COLLECTION TECHNOLOGY FROM WASTE MATERIALS TO CONSUMER GOODS (COMPOSITE)

Sharing of experience and technology in the paddy industry and the introduction of straw roll project by the Pasir Panjang Farmers Organization, Sekinchan, Selangor in the focus on projects from Waste Materials to useful materials in collaboration with Muar District Office and UTHM.

INSTITUTE FOR INTEGRATED ENGINEERING (I^2E) MANAGEMENT MEETING SESSION 1/2023

Management meeting for Institute for Integrated Engineering (I^2E) session 1/2023 was held at MiNT-SRC Meeting Room. This meeting was chair by Prof. Ts. Dr. Mohd Khairul bin Ahmad, Director of I^2E.

Also present during the meeting were Head of CoE and Head of IG, administrative staff and also laboratory staff.

PROJECT ECORIDE@CAMPUS

Congratulations and well done to OASIS Integrated Group (OIG), UTHM lead by Ts. Dr. Mohd Fahmy bin Abdullah and their strategic partner, Perisind Samudra Sdn. Bhd. for their successfully finalize Integrated Project Ecoride@Campus - Phase 5.

This project will acquired electric vehicles (i.e: electric cars, electric motorcycles) for the purpose of Research & Development (R&D). Thus providing services to UTHM staff and students.

EVENTS & ACTIVITIES

WATER QUALITY STUDIES AND KNOWLEDGE TRANSFER

Micropollutant Research Center (MPRC) was represent by Dr. Nor Amani Filzah Binti Mohd Kamil was invited to present water quality studies from Hutan Simpan Soga, Batu Pahat to the Director of the Johor State Forestry Department.

Besides that, they also discuss on the future potential cooperation of knowledge transfer and R&D programs between UTHM and the Johor Forestry Department.

CLEAN WATER SUPPLY IN TUARAN AFTER 85 YEARS.

Congratulations to Water Technology Engineering Integrated Group (WATE) lead by Assoc. Prof. Dr. Mohd Zainizan bin Sahdan and his team for successfully installed clean water supply in four (4) areas of Tuaran, Sabah. This area do not have an accessed to clean & treated water supply for 85 years.

This containerized ultrafiltration system is a product that has obtained IP through Universiti Tun Hussein Onn Malaysia, UTHM. This system is able to supply clean water to 800-1000 residents especially in rural areas.

PEAT FIRE WARNING SYSTEM IN AYER HITAM RESERVE FOREST

Congratulations to Ts. Dr. Nor Azizi bin Yusoff and his team for successfully invented peat fire detector system and installed it in Mukim Ayer Hitam, Muar to solve problem related to peat fire.

Besides that, paddy straw will be burned at Sungai Balang field after harvesting season and cause air pollution. Thus, to mitigate this issue, materials from paddy straw was converted into other reusable material such as composite .

Credits

Editors

Prof. Ts. Dr. Mohd Khairul bin Ahmad
Ms. Maizatulazrina binti Yaakob
Mr. Mohd Azwadi bin Omar

Illustrators

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EXCELLENT

Institute for Integrated Engineering