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2024



International Industrial Revolution 4.0 Exposition

"INNOVATING IDEAS, TRANSPIRING DREAMS"

ABSTRACT BOOK

Strategic Partners:



Perpustakaan
Sultan Badlishah

Organized By:

**COLLEGE OF COMPUTING, INFORMATICS AND MATHEMATICS,
UNIVERSITI TEKNOLOGI MARA, KEDAH BRANCH**

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UITM Cawangan Kedah Channel

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IREx 2024

The successful inauguration of IR4.0 Exposition IREx 2019 has witnessed ground breaking initiatives, ideas, and innovations materialised into numerous practical devices today. Treading on the same triumph, the College of Computing, Informatics, and Mathematics, UiTM Kedah is thrilled to announce the continuation of said event, IREx 2024 with the theme: *Innovating Ideas, Transpiring Dreams*.

The IREx 2024 aspires to incorporate even more exciting new technologies including, but not limited to, Information & Communication Technology (ICT), Educational Technology & Innovation (ED), Operational Excellence (OE), Internet of Things (IoT), Process Improvement, Ideas & Design, Multimedia, and Electronics that will chart new milestones in human history. This will serve as an excellent platform for scientists and innovators alike to meet the like-minded individuals and showcase inspiring ideas and notable innovations.

PROGRAM SCHEDULE

International Industrial Revolution 4.0 Exposition (IREx 2024)
21ST May 2024 (Tuesday)
Dewan Perdana, UiTM Kedah Branch

TIME	EVENT
8.00 – 9.00 am	Registration & Booth Set Up
9.00 am – 12.00 pm	Exhibition & Judging Session
12.00 pm – 2.00 pm	Obedient Drone Session & Break
2.00 pm – 5.00 pm	Official Closing & Prize Giving Ceremony
5.00 pm	Program Ends

Official Closing Ceremony

International Industrial Revolution 4.0 Exposition (IREx 2024)

TIME	EVENT
2.00 pm	Arrival of Guests and Participants
2.30 pm	Arrival of VVIP
	National anthem - Negaraku And Wawasan Setia Warga
2.40 pm	UiTM
	Welcoming Speech
3.00 pm	Rector's Welcoming Speech
	Officiating Speech
3.10 pm	Gimmick & Montage presentation
3.30 pm	Prize Giving Ceremony
4.00 pm	Photography
5.00 pm	Program Ends

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CATEGORY C

KENAF COMPOSITE ANTI-RADIATION PARTITION WALL

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ABSTRACT - The removal of unwanted radiation that might harm people or interfere with machinery led to the development of a microwave absorber. Kenaf fibre is employed to build partition walls due to its advantageous qualities. The objectives of this project are to design an anti-radiation partition wall using kenaf fibre, as well as to assess and evaluate the best absorption capabilities. Main material for this project is Palm Oil Fuel Ash (POFA), kenaf fibre, cement, aluminium powder, and water with various ratios in developing the anti-radiation partition walls. 20% and 5% of kenaf fibre as well as 25%, 35% and 45% of POFA were utilised in this project. Using a frequency ranging from 1 to 12 GHz, the Naval Research Laboratory (NRL) Arch free space approach is utilized in order determine the reflectivity performance. Based on the early findings, the utilization of 5% Kenaf and 45% POFA in the anti-microwave radiation partition wall results in the most desirable reflectivity performance. Furthermore, the porosity of the varying ratios of aluminium gives an effect on the reflectivity performance. This research shows the potential of kenaf fibre reinforced as anti-radiation partition walls to provide environmentally friendly solutions.

Keywords: Anti-radiation, Partition wall, POFA, Kenaf.



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