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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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VIANETIC: AN AFFORDABLE NON-INTRUSIVE TRAFFIC-INDUCED ALTERNATIVE ENERGY SOLUTION

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ABSTRACT - VIANETIC, is designed as an affordable non-intrusive traffic-induced alternative energy solution, easily deployable at public or privately owned roads with frequent daily low-speed traffics, such as in or around the school. VIANETIC is conceived as a sustainable method to reduce high cost associated with tremendous energy consumption and depleting natural energy source, in line with Malaysian Government participation in United Nations (UN) Climate Change Conference (COP26) in 2021 and commitment towards the 17 Sustainable Development Goals (SDGs) outlined by UN, notably SDG7 (Affordable and Clean Energy), SDG9 (Industry, Innovation and Infrastructure) and SDG11 (Sustainable Cities and Communities). VIANETIC consists of economical energy harvesting system compactly housed within road bump using electromagnetic induction principle, generated when magnet inside the road bump moved with respect to the direction of solenoid. Since VIANETIC capitalizes on the movement of existing traffic, no additional fuels is required. The energy generated is directly proportional to the weight of the vehicle, magnetic field strength and number of solenoid rings. Energy is stored in rechargeable battery with live time monitoring to indicates energy amount generated and battery level. This invention hold great commercialization potential as an alternative clean energy and carbon footprint offset solution, in Malaysia and globally.

Keywords: Alternative Energy Source, Electromagnetic Induction, Road Hump, Carbon Footprint Offset



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