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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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IRX082	MULTIPURPOSE SOAP	5
IRX083	PUFFER FISH BOAT	6
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IRX095	'ROBOCRAB' PEMBERSIH SAMPAH	8
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CATEGORY B

AEROCHARGE-DRIVE (EXTRACTING WASTE ENERGY TO USEFUL ENERGY)

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ABSTRACT - AeroCharge-Drive (ARCE) is a device that converts waste energy to a useful source of electricity. With fossil fuels proven to be harmful to the environment, the community is transitioning to a cleaner and more sustainable energy source such as solar and wind. This innovation includes a wind generator that spins while the vehicle is in motion and a solar panel that operates during daylight, both producing clean and renewable electricity. The waste energy generated from wind and sunlight will be harnessed, converted, and stored in ARCE's efficient long-term cycle bank battery to serve as a new power source for vehicles. The stored electricity will then be used to operate various components of the vehicle such as lights, wipers, radio, and windows, serving as an alternative to car batteries. The ARCE bank battery also powers air coolers during hot temperatures, on top of charging the ARCE power bank to become a portable power source. The ARCE power bank includes a torch-light feature essential during emergencies. Additionally, it also functions as a car jumper, helping to restart a car's engine by connecting to the car battery terminals. The innovation is a lifesaver when being stranded with a dead battery. In conclusion, ARCE is at the forefront of the Fourth Industrial Revolution, propelling the utilization of renewable energy waste to unprecedented heights. The innovation aligns seamlessly with the Sustainable Development Goal (SDG 7) which aims to attain universal access to electricity and boost renewable energy worldwide. With each mile driven, ARCE paves the way toward a greener and more sustainable future.

Keyword: wind energy, electricity, sustainable energy source, greener future.



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