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MAY
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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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 B

SMART FOOD WASTE COMPOSTER (SFWC)

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ABSTRACT - The Smart Food Waste Composter (SFWC) was invented to make the composting of food waste more efficient, simple, and timesaving. SFWC was innovated in line with industrial revolution (IR 4.0) technologies, with the application of Smart Sensor to monitor the production of high-quality compost. The compost container, sensor device and heater were the primary components of SFWC. SFWC has the automatic motion sensing which allows the sensor barrel cover to automatically open or close. The sensing range can be adjusted according to the scene (5 -25cm). Speeding up the composting process with compost heater between 40-65°C and reducing the size of food waste particles can make it more intelligent. The SFWC has faucet at the bottom to collect compost fluid/leachate. The fluid can be used as soil conditioner. While the compost can be used in gardens for plants and flowers as fertilizer. One of the key parts of innovation is the sensing device's installation. The temperature, moisture content and pH of compost measured by using sensor device. SFWC is linked to SDG12 because it aims to achieve sustainable waste management throughout its life cycle, limiting waste discharge to the environment to reduce negative effects on human health and the environment.

Keywords: Smart Food Waste Composter (SFWC), compost, sensor, waste, sustainable



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