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UNIVERSITI
TEKNOLOGI
MARA

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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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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

SEMAI (SMART ELECTRONIC MONITORING & AGRICULTURAL INVENTION)

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ABSTRACT- SEMAI (SMART ELECTRONIC MONITORING & AGRICULTURAL INVENTION) is pioneering a revolution in Malaysian agriculture, aiming to combat poverty by harnessing technology. It addresses the limitations of Agriculture 2.0, such as inefficient resource management and inadequate access to technology, by propelling the industry towards Agriculture 3.0. This next phase envisions full automation and heightened productivity through optimal resource management, addressing the challenges faced by farmers while advancing Sustainable Development Goals (SDGs) 1 (No Poverty) and 2 (Zero Hunger). SEMAI integrates sensor networks, drones, and satellite imagery to collect real-time data on vital agricultural parameters, enabling advanced analysis to provide actionable insights and recommendations for farmers. Machine learning algorithms aid in predictive modeling for disease detection, facilitating timely interventions to minimize crop losses and enhance productivity. With an emphasis on user-friendly interfaces and accessibility, SEMAI ensures that farmers of all technological proficiencies can benefit from its tools and services. Through comprehensive training programs and ongoing support, SEMAI fosters the adoption of modern agricultural practices and innovation within farming communities. By revolutionizing agriculture, SEMAI holds the potential to significantly contribute to food security and economic stability in Malaysia.

Keywords: SEMAI, Agriculture revolution, Poverty alleviation, Sustainable Development Goals, Technology integration



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