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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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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

SAFETY PRECAUTIONS APPLIED TO A BRICK CUTTING MACHINE: ARDUINO SYSTEM, SECURITY SENSOR AND INTERNET OF THINGS (IoT)

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ABSTRACT - The utilization of security sensors, Arduino system, and Internet of Things (IoT) technology can greatly improve the security and safety of a brick cutting machine. The installation was executed with precision and methodically. Implementing security sensors, Arduino system, and IoT system requires not only installing the components but also enhancing the existing structure of the machine. The upgrading process involved the installation of infrared security sensors and Arduino system to detect movements and assure user safety. Upon detecting motion, the brick cutting machine was automatically deactivated. This project aims to improve the effectiveness of brick cutting machines by integrating infrared motion sensors and IoT technologies into existing machine, allowing users to use them with enhanced safety. The upgrading process comprises five stages: Analysis, Design, Development, Implementation, and Evaluation (ADDIE). The safety brick-cutting machine was designed and developed by researchers using the ADDIE idea. The findings summarize the project in its entirety, detailing its outcomes and successes to assess if it has achieved its objectives as planned and expected for future projects. Thus, weaknesses, strengths, improvement recommendations, and innovations in design should be identified clearly and precisely. All parties deal with this machine must comprehend the correct and appropriate concepts and approaches to be successfully utilized.

Keywords: Safety, Arduino system, Security sensor, Internet of things, Brick cutting machine



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