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TEKNOLOGI
MARA

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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

AUTOMATED FERTIGATION SYSTEM V2 (AFS V2)

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ABSTRAK: Konsep sistem pertanian pintar (smart farming) bertujuan untuk mengembangkan penggunaan teknologi dalam aktiviti pertanian bagi menggantikan sistem pertanian tradisional. Hasil dari tinjauan ke beberapa kebun fertigasi cili, didapati sistem pengairan masih lagi menggunakan kaedah konvensional dimana pekebun perlu berada di kebun bagi mengawal sistem tersebut pada masa tertentu. *Automated Fertigation System V2* (AFS v2) dihasilkan bagi meningkatkan kualiti hasil tanaman, pengurangan masa mengurus sistem tanaman serta dapat meningkatkan keuntungan. Ia direka supaya pekebun dapat mengurus masa pemberian air / baja AB, membatalkan masa titisan jika hujan dan mengurus kaedah bancuhan baja dengan lebih baik lagi hanya dengan menggunakan telefon bimbit sahaja. AFS v2 dihasilkan dengan kos yang lebih murah berbanding dengan produk yang dijual dipasaran. Sasaran pengguna utama adalah untuk pekebun fertigasi yang baru hendak berjinak dengan system fertigasi IoT yang murah tetapi menepati kehendak penanaman. Sistem ini terdiri daripada alat elektronik dan alat mekanikal seperti Arduino, Sensor, Water solenoid valve, Module, Stop Cork, dan lain-lain lagi. Sistem dikawal dengan menggunakan telefon bimbit yang telah diprogramkan dengan aplikasi Blynk IoT.. Pihak kami juga telah menjalankan kursus asas fertigasi IoT kepada pekebun muda Bersama Jabatan Pertanian Negeri Kedah. Sebagai kesimpulannya, AFS v2 telah dibangunkan sesuai dengan objektifnya untuk melahirkan pekebun fertigasi yang dapat meningkatkan hasil selari dengan Dasar Agromakanan Negara 2021-2030.

Kata Kunci: Pertanian tradisional, Konvensional, Fertigasi, IoT



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