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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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IRX068	PRO CROSS-MATH CHALLENGE	4
IRX082	MULTIPURPOSE SOAP	5
IRX083	PUFFER FISH BOAT	6
IRX092	MY GAMES ACADEMIA	7
IRX095	'ROBOCRAB' PEMBERSIH SAMPAH	8
IRX096	TG-ELMH V2 (TITI GAJAH-ENTER LAMP MERAH HIJAU VERSION 2)	9
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CATEGORY B

PEMBANGUNAN DRON AIR UNTUK SISA DI SUNGAI ATAU LAUT

Nabilah Bt Md Yusuf¹, Ts. Dr. Abdul Malik bin Mohd Ali²

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ABSTRAK - Pencemaran air yang disebabkan oleh pengumpulan sisa di sungai dan laut menimbulkan ancaman besar kepada ekosistem akuatik dan kesihatan manusia. Untuk memerangi isu ini, bidang baru dron air telah mendapat perhatian yang besar sebagai penyelesaian yang menjanjikan untuk pengurusan sisa yang cekap dalam persekitaran akuatik. Abstrak ini memberikan gambaran keseluruhan konsep dron air dan potensi aplikasinya dalam menangani pencemaran sisa di sungai dan laut. Drone air telah muncul sebagai penyelesaian terobosan untuk pengurusan sisa yang cekap di sungai dan laut, merevolusikan pembersihan alam sekitar. Kenderaan tanpa pemandu ini dilengkapi dengan sensor canggih. Selain itu, dron air dilengkapi dengan penerima yang membolehkan pemantauan kualiti air masa nyata. Reka bentuk dron air bertujuan untuk mengumpul air buangan yang tidak boleh diakses dengan kaedah lain. Dalam keadaan itu, dron jenis ini diperlukan untuk menyelesaikan tugas pengumpulan sisa dalam persekitaran yang begitu mencabar. Walaupun cabaran wujud, seperti hayat bateri yang terhad dan pertimbangan kawal selia, kemajuan berterusan dalam teknologi dan peraturan memberikan prospek yang menjanjikan untuk masa depan dron air dalam pengurusan sisa. Secara keseluruhan, dron air memegang janji besar dalam memelihara ekosistem akuatik dan mengurangkan kesan pencemaran alam sekitar terhadap sisa.

Kata Kunci: pencemaran air, dron air, kualiti persekitaran air, sisa buangan



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