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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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CATEGORY B

TURMERIC HERBAL SLEEP PATCH: A PROMISING INTERVENTION FOR OBSTRUCTIVE SLEEP APNEA IN BOARDING SCHOOL STUDENTS *TUPAC*

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ABSTRACT - Obstructive sleep apnea (OSA) is a condition characterized by recurrent airway obstruction during sleep, commonly affecting adults but also prevalent among boarding school students. The unique environment of boarding schools, marked by irregular sleep schedules and heightened stress, can exacerbate sleep disturbances. OSA leads to fragmented sleep, impacting mood, daytime alertness, and cognitive function, ultimately affecting academic performance. One potential intervention is a transdermal herbal sleep patch, leveraging turmeric's anti-inflammatory and antioxidant properties. Although not traditionally associated with sleep disorders, turmeric may indirectly alleviate symptoms, particularly if inflammation contributes to sleep disturbances. A release test evaluated the turmeric patch's efficacy, revealing maximum release within an hour, contradicting initial expectations. However, existing sleep patches also have an hourly range, suggesting feasibility. This study aims to address the unique challenges of OSA in boarding school students and assess the effectiveness and acceptability of herbal sleep patches as a non-invasive intervention. Future research will focus on extending the patch's release duration to enhance its efficacy further.

Keywords: sleep patch, turmeric, obstructive sleep apnea



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