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2024



International Industrial Revolution 4.0 Exposition

"INNOVATING IDEAS, TRANSPIRING DREAMS"

ABSTRACT BOOK

Strategic Partners:



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Sultan Badlishah

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**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

IRX065	DESIGN AND DEVELOPMENT OF PATIENT MONITORING SYSTEM USED INTERNET OF THINGS TECHNOLOGY	97
IRX066	MONITORING AIR QUALITY AND SMOKE EMISSIONS USED INTERNET OF THINGS TECHNOLOGY AT BUS STOP IN URBAN AREAS USING MQ-135 AND MQ-2 SENSORS	98
IRX069	INTEGRATED PHOTOCOPY SERVICE SYSTEM	99
IRX070	QWIQR : A QR-BASED REGISTRATION SYSTEM	100
IRX071	MEDICAL BRAIN TEASERS	101
IRX073	CMRS – A NOVEL CLUB MANAGEMENT REGISTRATION SYSTEM FOR A VOLLEYBALL CLUB IN UITM KEDAH BRANCH CAMPUS, MALAYSIA	102
IRX076	APIZ'S BARBERSHOP & ACADEMY MANAGEMENT SYSTEM	103
IRX077	RAZORVATION	104
IRX080	PET-POFA COMPOSITE SOLID CEMENT BRICK MICROWAVE ABSORBER	105
IRX081	KENAF COMPOSITE ANTI-RADIATION PARTITION WALL	106
IRX089	A NOVEL HYBRID HOLT'S METHOD INTEGRATED MOVING AVERAGE (HIMA)	107
IRX091	VIRTUAL MALAYSIA TRADITIONAL COSTUMES VIA AR	108
IRX093	SnooGo	109
IRX097	A BUILDING INFORMATION MODELING (BIM)- BASED INSPECTION WORKFLOW FOR OFF SITE INSTALLATION	110
IRX105	AUTOMATIC STAMPING MACHINE USING ARDUINO	111
IRX114	AN INTEGRATED CAREER INTEREST ASSESSMENT SYSTEM FOR COUNSELLORS	112
IRX119	KEBERKESANAN KELOMPOK TERAPI KONGNITIF DAN KELOMPOK TERAPI TINGKAH LAKU DALAM MENANGANI ISU KESIHATAN MENTAL DALAM ORGANISASI	113
IRX125	SMART ADAB	114
IRX127	THE GEOMETRICALLY ELEGANT DESIGNS OF HEVEA BRASILIENSIS-BASED BIOMASS LIGHWEIGHT BRICK WALLS FOR RADIO FREQUENCY RADIATION ABSORPTION	115

CATEGORY D

IRX001	COMPUTATIONAL QUESTION DESIGN IMPROVEMENT IN ELECTRIC CIRCUIT THEORY	117
IRX005	METaverse GAME DESIGN ON DUAL COGNITIVE TASK FOR STROKE REHABILITATION	118
IRX010	PORTABLE DOCUMENT FORMAT (PDF) INTERAKTIF UNTUK MENGAKSES BAHAN PANDUAN DIGITAL BERKAITAN TOPIK PENGURUSAN REKOD DAN ARKIB MILIK UITM	119
IRX012	ANALYSIS OF VICKERS HARDNESS FOR DIFFERENT MATERIALS BY FINITE ELEMENT AND EXPERIMENTAL METHODS	120
IRX015	INTRODUCING ENHANCED ARBITRATION MODEL USING ARTIFICIAL INTELLIGENCE FOR SWIFT AND EQUITABLE RESOLUTION OF SMALL CLAIMS DISPUTES	121
IRX039	MEDCUP PREDICTOR	122
IRX051	H5P IN HIGHER EDUCATION: PROVEN STRATEGIES TO BOOST ENGAGEMENT AND LEARNING OUTCOMES	123
IRX059	logBlog: INNOVATIVE DIGITAL LOGBOOK	124
IRX060	STUDENTS' COMPREHENSIVE ONLINE EXERCISES (SCORE)	125
IRX064	HeLP via CaMaL	126
IRX067	INTELLIGENT SIMULATOR (i-SIMULATOR) MODEL FOR MEASURING THE SUSTAINABILITY OF MALAYSIAN GLUTINOUS RICE	127
IRX074	GOLD ZAKAT ENLIGHTENING APPS	128
IRX075	CLOSED-LOOP PID CONTROL SYSTEM FOR ENHANCED PRECISION POSITIONING OF PIEZOELECTRIC ACTUATORS	129
IRX099	MYDIARY GOLD APPS (MYGOLD)	130
IRX100	ARAI: ADVANCING TRAINING THROUGH AI-ENABLED AR GAMIFICATION-BASED LEARNING FRAMEWORK FOR THE INDUSTRIAL WORKFORCE	131
IRX113	GHOST VISIT	132

CATEGORY C

A NOVEL HYBRID HOLT'S METHOD INTEGRATED MOVING AVERAGE (HIMA)

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ABSTRACT This research tackles the challenge of forecasting future values, which is crucial as inaccurate predictions can lead to poor decision-making. Thus, this study develops a new hybrid forecasting model, the Holt Integrated Moving Average (HIMA), which combines Holt's method and the Moving Average technique from the Box-Jenkins methodology. This model aims to enhance the accuracy of forecasts in time-series data that exhibit trends and levels. The effectiveness of the HIMA model was tested using four time-series datasets: the Consumer Price Index (CPI), air pollution (PM2.5), and tourist arrivals in Malaysia. The findings demonstrate that the HIMA model significantly outperforms other univariate models, achieving forecast accuracies between 95 to 98 percent.

Keywords: Forecast Accuracy, Holt's Method, Holt Integrated Moving Average (HIMA) Model



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