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ARTIFICIAL INTELLIGENCE SOCIETY MALAYSIA (ARTIS)

NCIC-SS

NATIONAL CONFERENCE ON INTELLIGENCE COMPUTING AND STATISTICAL SCIENCES

2025

DATA TO DECISIONS: EMPOWERING GREEN ARTIFICIAL INTELLIGENCE AND STATISTICAL SCIENCES THROUGH RESEARCH AND INNOVATIONS

06 AUGUST 2025 | 8.00 AM - 5.00 PM |
AL-FARABI SEMINAR ROOM,
INSTITUTE FOR MATHEMATICAL RESEARCH (INSPEM),
UNIVERSITI PUTRA MALAYSIA (UPM)

PROGRAMME BOOK

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MESSAGE FROM THE DIRECTOR OF INSPEM

Assalamualaikum W.B.T. and Greetings

It is with great pleasure that we welcome you to the National Conference on Intelligence Computing and Statistical Sciences 2025 (NCIC-SS2025), organised by the Institute for Mathematical Research (INSPEM), Universiti Putra Malaysia(UPM).

The theme of NCIC-SS2025 this year's, "Data to Decisions: Empowering Green Artificial Intelligence and Statistical Sciences Through Research and Innovations," reflects a growing awareness of the need for sustainable, efficient, and responsible data solutions. As technology continues to evolve, so too must our commitment to ensuring that innovation supports not just performance and accuracy, but also the well-being of our environment and society.

NCIC-SS2025 provides a platform for researchers, academics, students, and professionals to share knowledge, present recent findings, and foster collaboration. We hope this conference will inspire meaningful discussions, spark new ideas, and strengthen networks among participants.

We would like to thank all contributors, including keynote speakers, paper presenters, reviewers, sponsors, and participants, for making this event possible.

We wish you a productive and enriching experience at NCIC-SS2025.

Thank you and best wishes.

PROF. IR. DR. ADUWATI SALI
Director
Institute for Mathematical Research (INSPEM)
Universiti Putra Malaysia

MESSAGE FROM THE CHAIRMAN OF NCIC-SS2025

Assalamualaikum W.B.T. and Greetings

It is with great pleasure that I welcome you to the National Conference on Intelligence Computing & Statistical Sciences 2025 (NCIC-SS2025). This year, we gather under the theme "Data to Decisions: Empowering Green Artificial Intelligence and Statistical Sciences Through Research and Innovations", which reflects our shared vision for a future where data-driven solutions are not only intelligent, but also sustainable and ethically responsible.

The convergence of Artificial Intelligence and Statistical Sciences has opened new frontiers across industries and academia. However, in the face of growing environmental concerns, we are now called to think beyond innovation alone. The emergence of Green AI encourages us to design technologies that are mindful of energy consumption, computational cost, and long-term ecological impact — without compromising on performance or utility.

Through this conference, we aim to cultivate a platform where ideas can flourish, where interdisciplinary collaboration is encouraged, and where real-world challenges are addressed through the combined power of data science, AI, and statistical reasoning. We hope NCIC-SS2025 will inspire participants to push boundaries, explore sustainable solutions, and contribute meaningful research for a better tomorrow.

I extend my sincere gratitude to our speakers, presenters, reviewers, organising team, and all participants for making this event possible.

May NCIC-SS2025 be a fruitful experience filled with insightful discussions, meaningful connections, and inspiring discoveries.

Thank you, and welcome once again.

DR. AZREE SHAHREL AHMAD NAZRI
Chairman
NCIC-SS2025

ORGANISING COMMITTEE

Patron	:	Dato' Prof. Ir. Dr. Ahmad Farhan Mohd Sadullah (Vice-Chancellor)
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Scientific	:	Prof. Dr. Habshah Midi Assoc. Prof. Dr. Nor Asilah Wati Abdul Hamid Dr. Azree Shahrel Ahmad Nazri
Master of Ceremony	:	Dr. Nur Amirah Ahmad

INTRODUCTION

We are pleased to welcome you to the **National Conference on Intelligence Computing & Statistical Sciences 2025 (NCIC-SS2025)**, proudly organised by the **Institute for Mathematical Research (INSPEM), Universiti Putra Malaysia (UPM)**.

This year's theme, "Data to Decisions: Empowering Green Artificial Intelligence and Statistical Sciences Through Research and Innovations," emphasizes the importance of developing intelligent, data-driven technologies that are also sustainable, responsible, and forward-looking. In an age where digital transformation is shaping every sector, there is a growing need to align innovation with environmental consciousness and ethical design.

NCIC-SS2025 serves as a dynamic platform for researchers, academicians, practitioners, and students to share insights, present cutting-edge research, and explore practical applications of intelligent computing and statistical methodologies. Through keynote speeches, technical sessions, and networking opportunities, this conference encourages knowledge exchange and fosters collaboration across disciplines.

We hope this event will inspire innovative thinking, strengthen professional networks, and contribute to the growth of impactful research that benefits both industry and society.

Thank you for being part of NCIC-SS2025, and we wish you a productive and enriching conference experience.

MASTER PROGRAMME

Time	Programme	Venue
08:00 - 09:00	Registration and Arrival of Guests	Foyer @ INSPEM
09:00 - 10:45	Parallel Session 1A Parallel Session 1B	Al-Farabi Seminar Room Radin Umar Meeting Room
10:45 - 11:05	Refreshments	Foyer @ INSPEM
11:05 - 11:25	**Opening Ceremony** National Anthem and Putra Gemilang Doa Recitation **Welcoming Address by YBrs. Dr. Azree Shahrel Ahmad Nazri** Chairman of NCIC-SS2025 **Officiating Address by YBhg. Prof. Ir. Dr. Aduwati Sali** Director of INSPEM, UPM	Al-Farabi Seminar Room
11:25 - 11:35	Photography Session	Al-Farabi Seminar Room
11:35 - 12:20	Keynote Address 1 **Dr.Azree Shahrel Ahmad Nazri** *Head of Laboratory of Interdisciplinary Computing and Statistical Laboratory* *President of Artificial Intelligence Society Malaysia (ARTIS)* **TOWARDS ARTIFICIAL GENERAL INTELLIGENCE: QUANTUM-ENHANCED LARGE LANGUAGE MODELS FOR ABSTRACT REASONING THROUGH HYBRID VARIATIONAL QUANTUM CIRCUIT AND PROJECTED ENTANGLED PAIR STATES** Chairperson: Dr. Muhammad Zamir Bin Mohyedin	Al-Farabi Seminar Room
12:20 - 14:00	Lunch	Foyer @ INSPEM
14:00 - 15:00	Parallel Session 2A Parallel Session 2B	Al-Farabi Seminar Room Radin Umar Meeting Room
15:00 - 15:30	Keynote Address 2 **Prof. Dr. Habshah Midi** *INSPEM Consultant Fellow* *President of Malaysian Institute of Statistics (ISMy)* **ENHANCING REGRESSION DIAGNOSTICS: OUTLIER DETECTION WITH NU-SUPPORT VECTOR REGRESSION** Chairperson: Assoc. Prof. Dr. Jayanthi Arasan	Al-Farabi Seminar Room
15:30 - 16:45	Parallel Session 3A Parallel Session 3B	Al-Farabi Seminar Room Radin Umar Meeting Room
16:45	Refreshments and End of Conference	Foyer @ INSPEM

PARALLEL SESSIONS SCHEDULE

PARALLEL SESSION 1
09:00 - 10:45

Time	Parallel Session 1A Al-Farabi Seminar Room **Chairperson :** *Dr. Syarifah Bahiyah Rahayu*	Parallel Session 1B Radin Umar Meeting Room **Chairperson :** *Ts. Dr. Nor Ain Azeany Mohd Nasir*
09:00 - 09:15	**A COMPARATIVE ANALYSIS OF MACHINE LEARNING MODELS FOR CARDIOVASCULAR DISEASE PREDICTION** Nurfariza Akmar Abdul Mutalilb Hazlina Selamat Shafishuhaza Sahlan Nurulaqilla Khamis	**IRPCA-SIMPLS:A ROBUST SIMPLS REGRESSION METHOD FOR HIGH-DIMENSIONAL DATA WITH HIGH LEVERAGE POINTS** Jaaz Suhaiza Jaafar Habshah Midi Muhammad Aslam Mohd Safari Hani Syahida Zulkafli
09:15 - 09:30	**AN EFFICIENT VARIANT OF RMIL METHOD WITH SUFFICIENT DESCENT AND GLOBAL CONVERGENCE UNDER STRONG WOLFE LINE SEARCH FOR SOLVING IMAGE RESTORATION PROBLEM** Muhammad Aqiil Iqmal Ishak Siti Mahani Marjugi	**RAINFALL FORECASTING IN MALAYSIA USING SARIMA MODEL** Noratikah Abu Suhaila Bahrom Nur Haizum Abd Rahman
09:30 - 09:45	**INTEGRATED HYBRID ALGORITHMS FOR MULTIPLE IMPUTATION AND CLASS IMBALANCE IN MEDICAL DATASETS: A COMPREHENSIVE REVIEW** Wan Zuki Azman Wan Muhamad Chow Yong Huan Tan Li Mei Xiao Jian Tan Farah Adibah Adnan	**STRUCTURAL EQUATION MODELLING OF SELF-ESTEEM, MOTIVES OF PARTICIPATING IN PHYSICAL ACTIVITY AND DURATION OF PHYSICAL ACTIVITY AMONG ADOLESCENTS IN KOTA BHARU, KELANTAN** Nurzulaikha Abdullah Yee Cheng Kueh Garry Kuan Nyi Nyi Naing
09:45 - 10:00	**A SURVEY ON DYNAMIC MODULAR AI SYSTEMS FOR KNOWLEDGE EMERGENCE: ARCHITECTURES, PARADIGMS, AND CHALLENGES** Li Luo Keng Yap Ng Wei Chong Choo	**EXPONENTIATED WEIBULL (EXW) MODEL WITH COVARIATE, RIGHT AND INTERVAL CENSORED DATA** Voon Sze Kai Jayanthi Arasan
10:00 - 10:15	**DRONE NAVIGATION BENCHMARKING ENVIRONMENT FOR REINFORCEMENT LEARNING AGENTS** Anas Aburaya Hazlina Selamat Mohd Taufiq Muslim Mohamed Abdelghafar	**RSM-BASED OPTIMIZATION OF HEAT TRANSFER IN MHD TERNARY HYBRID NANOFLUID FLOW OVER A SHRINKING SURFACE** Mohd Syazwan Mohd Anuar Nor Ain Azeany Mohd Nasir Nur Syahirah Wahid Norihan Md Ariffin
10:15 - 10:30	**EVALUATION OF PERSONAL RADIATION EXPOSURE FROM WIRELESS SIGNALS IN INDOOR AND OUTDOOR ENVIRONMENTS** Pan Ruijie Aduwati Sali Lu Li Chhavi Bhatt Muhammad Zamir Mohyedin Sangin Qahtan	**MODELLING URBAN TRAFFIC FLOW PREDICTIONS WITH IMPACTS OF IMPORTANT LOCATIONS IN TRANSPORTATION NETWORK** Nur Ain Nazurah Azlan Ruzanna Binti Mat Jusoh Noratikah Abu Nor Azliana Akmal Jamaludin
10:30 - 10:45	**AUTOMATED SOFT SHELL CRAB MOLTING DETECTION USING DEEP LEARNING-BASED IMAGE PROCESSING** Leela D.V. Perapagaran Syarifah Bahiyah Rahayu Mohd Sidek Fadhil Mohd Yunus Iqbal Shamsudheen	**REDUCING INAPPROPRIATE PRESCRIBING IN OLDER DIABETIC PATIENTS** Nur 'Irdina Hani Mohd Syarizad Ruzanna Mat Jusoh Nurulhuda A. Manaf Nur Aishah Che Roos

PARALLEL SESSION 2
14:00 - 15:00

Time	Parallel Session 2A Al-Farabi Seminar Room **Chairperson :** *Dr. Nor Azuana Ramli*	Parallel Session 2B Radin Umar Meeting Room **Chairperson :** *Dr. Nurulhuda A. Manaf*
14:00 - 14:15	**DEEP LEARNING-BASED FUSION OF MULTISPECTRAL AND SAR IMAGES FOR CLOUD AND SHADOW REMOVAL: A COMPARATIVE STUDY WITH CONVENTIONAL METHODS** Syaifulnizam Abd Manaf Norwati Mustapha Nor Azura Husin Raihani Mohamed Siti Nur Aliaa Roslan	**MODELING AND FORECASTING CRUDE OIL PRICE VOLATILITY USING GARCH FAMILY MODELS** Nur Haizum Abd Rahman Noratikah Abu Maria Elena Nor Nur Arina Bazilah Kamisan
14:15 - 14:30	**YOLOV7X AND YOLOV8X: EFFICIENCY ON RAINFALL INTENSITY DETECTION** Thulasitasan Nadarajah Marsyita Hanafi	**EVALUATING STATISTICAL AND MACHINE LEARNING MODELS FOR RIVER FLOW FORECASTING IN TERENGGANU: A CASE STUDY USING FACEBOOK PROPHET, XGBOOST AND RANDOM FOREST** Noraini Ibrahim Norhaiza Ahmad Nur Amalina Mat Jan Zanariah Zainudin Nurul Syafidah Jamil
14:30 - 14:45	**ENHANCING E-INVOICE AUTOMATION WITH A LARGE LANGUAGE MODEL (LLM) INTEGRATION THROUGH WHATSAPP** Faris Haikal Fairul Rizal Nor Azuana Ramli Rozihan Izmi Zainur Rashid	**SECURING THE ROAD AHEAD: MACHINE LEARNING BASED INTRUSION DETECTION SYSTEM FOR AUTOMOTIVE CONTROLLER AREA NETWORK** Nur Atieka Rafiekah Razak Wan Nur Syahidah Wan Yusoff Sharifah Nurul Asyikin Syed Abdullah
14:45 - 15:00	**A GEOMETRIC AND ALGEBRAIC FRAMEWORK FOR QUASI-ORTHOGONAL QUANTUM ERROR CORRECTION** Valentine Nyirahafashimana Nurisya Mohd Shah Umair Abdul Halim Sharifah Kartini Said Husain	**PREDICTIVE ANALYTICS FOR REDUCING PERISHABLE INVENTORY WASTE IN FOOD SUPPLY CHAINS** Nor Fyadzillah Mohd Taha

PARALLEL SESSION 3
15:30 - 17:00

Time	Parallel Session 3A Al-Farabi Seminar Room **Chairperson :** *Dr. Nor Azliana Akmal Jamaludin*	Parallel Session 3B Radin Umar Meeting Room **Chairperson :** *Prof. Dr. Mohd Rashid Ab Hamid*
15:30 - 15:45	**AN EXAMINATION OF AI-DRIVEN SQL INJECTION (SQLI) ATTACK IDENTIFICATION** Nwabudike Augustine Abu Bakar .B.Md Sultan Mohd Hafeez Bin Osman Khaironi Yatim Sharif	**MULTIVARIATE ANALYSIS USING MAXIMUM LIKELIHOOD AND PARTIAL LEAST SQUARES TECHNIQUE IN MODEL ESTIMATION: ROBUSTNESS OF PARAMETER ESTIMATES** Mohd Rashid Ab Hamid
15:45 - 16:00	**MOISTIFY: A MODULAR AI-INTEGRATED IOT BASED SOIL MOISTURE MONITORING AND DECISION SUPPORT SYSTEM** Devasena P. Anandhan Nor Azliana Akmal Jamaludin Ruzanna Jusoh	**SMART SPC IN EXCEL: REAL-TIME QUALITY MONITORING FOR SMARTER MANUFACTURING** Aqila Sofea Abd Manaf Dedek Andrian Sahimel Azwal Sulaiman
16:00 - 16:15	**SMARTEX-AI: AI-POWERED REMOTE MONITORING & CONTROL SYSTEM FOR SMART LATEX HARVESTING** Surender Singh Tara Singh, Nor Azliana Akmal Jamaludin, Ruzanna Binti Mat Jusoh	**A FULLY INTEGRATED PIPELINE FROM TRAINING TO REAL-TIME VISUALIZATION FOR INDUSTRIAL DEFECT DETECTION** Teo Yu Xuan
16:15 - 16:30	**GREEN INTELLIGENCE UNLEASHED: CROSS-INDUSTRY SPECTROSCOPY PLATFORMS FOR SUSTAINABLE DATA-DRIVEN DECISIONS** Abdur Rehman Laili	**SPECTRAL DATA AND AI REVOLUTIONIZE AGRICULTURAL DECISION-MAKING** Aisyah Syafinaz
16:30 - 16:45	**FPGA ACCELERATED NEUROMORPHIC COMPUTING FOR REAL TIME SIGNAL PROCESSING IN OPTICAL FIBRE BIOSENSOR DEVICES: A SYSTEM ARCHITECTURE** Wan Adriana Batrisya Wan Mohd Rostam	**DEVELOPMENT OF AN AUTONOMOUS MOBILE ROBOT PLATFORM TO BOOST THE OIL PALM INDUSTRY AND SUPPORT MULTI-SECTOR DEPLOYMENT** Massarah Mat Sharif

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