4th International Conference on Mathematical Modeling and Computational Science
[ICMMCS 2025]

10-11 January, 2025
Thailand

Organized by

Society for Intelligent Systems

Association with

National Taipei University of Business, Taiwan; National University of Science and Technology, Iraq; Berlin School of Business and Innovation, Germany; and Université Ibn Tofail, Kénitra, Morocco.

www.icmmcs.in   www.intellisys-society.org

4ᵗʰ International Conference on Mathematical Modeling and Computational Science [ICMMCS 2025]

(Technically co-sponsored by Springer Proceedings)

Offline: 10-11 January, 2025
Online: 05 January, 2025

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ICMMCS – 2025 Conference Agenda

10-11th January [Friday-Saturday] OFFLINE MODE [TST]

[Venue: Aiyara Grand Hotel, Chon Buri, Pattaya City, Thailand
https://www.aiyaragrand.com/

05th January [Sunday] ONLINE MODE [IST]

08:00 AM – 08:15 AM [IST]	Login and Initialization
08.15 AM – 08.30 AM [IST]	Online Photo Session (With Webcam ON) Mandatory
08.30 AM – 12.00 PM [IST]	First Half
12.00 PM – 2.00 PM [IST]	Lunch Hours
02:00 PM – 5:00 PM [IST]	Second Half

[IST]= Indian Standard Time
[TST]= Thailand Standard Time

10 January, 2025 (Friday)

OFFLINE MODE (Thailand)

Sl. No.	Time [TST] (Thailand Standard Time)	Activity	
	9.00 – 9.10	About the Intellisys society and ICMMCS conference	10 mins
	9.10-9.25	Inaugural Performance	15 min
	9.25-9.35	Welcome speech by Prof. Jou-Ming Chang (National Taipei University of Business, Taiwan)	10 mins
	9.35-9.40	Inaugural Address by Prof. D. Akila, Saveetha College of Liberal Arts and Sciences, SIMATS Deemed to be University, India	5 mins
	9.40-9.45	Address by Dr. Souvik Pal, Sister Nivedita University, India	5 Mins
	9.45-10.30	1. Felicitation to Prof. Jou-Ming Chang 2. Felicitation to Prof. Sheng-Lung Peng 3. Felicitation to Prof. Noor Zaman Jhanjhi 4. Felicitation to Assoc. Prof. Sanpawat Kantabutra 4. Award Giving Ceremony	45 mins
	10.30- 10.45	1. First round Photo with Guest and Session Chairs 2. Second round photo with all members	15 Mins
	10.45-11.00	**Tea Break**	**15 mins**

	11.00 - 11.40	Keynote 1: Prof. Sheng-Lung Peng, National Taipei University of Business, Taiwan	40 mins
	11.40 - 12.20	Keynote 2: Prof. Noor Zaman Jhanjhi, Taylor's University, Malaysia	40 mins
	12.20 - 1.00	Keynote 3: Assoc. Prof. Sanpawat Kantabutra, Chiang Mai University, Thailand	40 mins
	1.00 - 2.00	**Lunch**	**60 Mins**
	2.00 - 3.00	Session (Phase 1)	60 mins
	3.00-3.15	**Tea Break**	**15 mins**
	3.15-4.15	Session (Phase 2)	60 mins
	4.15-4.30	Vote of Thanks and Next Conference Announcement (by Prof. D. Balaganesh)	15 Mins

Technical Offline Session

(10th January, 2025; Friday) [02.00 PM – 04.00 PM]

Sl. No.	Paper ID	Final Paper Title	Name of the Paper Presenter	Session Chair
1	68	The role of Internet of Things in Maternal Healthcare	Priyadharsini Subramaniyan	1. Dr. Nopadon Juneam, Kasetsart University, Bangkok, Thailand 2. Dr. Mohit Kumar, Dr B R Ambedkar NIT Jalandhar, India
2	78	AgriNet: Leveraging MobileNetV2 with Explainable AI and Drone Imaging for Efficient Plant Disease Diagnosis	Ravi Shankar Singh	
3	121	A FRAMEWORK FOR INSECT DETECTION AND CLASSIFICATION IN PADDY IMAGES	V.R.ELANGOVAN	
4	122	Insect Detection and Classification Using FVDCNN	R PADMAVATHI	
5	128	Augmented Reality and Teaching: Alternative Pedagogy for Modern Learners	C. RENUGA DEVI	
6	56	On $\alpha\_(\gamma,\gamma')_{op}(\beta,\beta')_{op}(I_{ide},\ J_{ide})$ -Continuous Functions in Ideal Topological Spaces	N.Kalaivani	
7	134	The Role of Big Data Analytics in Forensic Computing: An Empirical analysis of Financial Fraud Detection in Corporate Companies	N Madhumitha	
8	140	Global IoMT Data Analysis Through AI-Driven Governance Framework	D. Padmapriya	

Session-wise Google Meet Link (Online)

(05th January, 2025; Sunday) [8.00 AM – 05.00 PM]

S/No	Session Details	Google Meet
2	Session 1	**ICMMCS 2025 Technical Online Parallel Session I** https://meet.google.com/ifm-hgcz-tgz
3	Session II	**ICMMCS 2025 Technical Online Parallel Session II** https://meet.google.com/rft-ufqy-jov
4	Session III	**ICMMCS 2025 Technical Online Parallel Session III** https://meet.google.com/ghb-ufqz-gts
4	Session IV	**ICMMCS 2025 Technical Online Parallel Session IV** https://meet.google.com/stw-qyib-kuo

05th January [Sunday] ONLINE MODE [IST] **Applicable for all Sessions**	
08:00 AM – 08:15 AM [IST]	Login and Initialization
08.15 AM – 08.30 AM [IST]	Online Photo Session (With Webcam ON) Mandatory
08.30 AM – 12.00 PM [IST]	First Half
12.00 PM – 2.00 PM [IST]	Lunch Hours
02:00 PM – 5:00 PM [IST]	Second Half

ICMMCS 2025 Technical Online Parallel Session I
(05th January, 2025; Sunday) [8.00 AM – 05.00 PM] IST

Sl. No.	Paper ID	Final Paper Title	Name of the Paper Presenter	Session Chair
1	14	Boosting Real-time Intelligence: A Sturdy and Expandable Twitter Streaming Platform	Vignesh D	Dr. Shakila Devi G T Professor & Head Department Of Computational Mathematics, SITMAS Engineering, India

Dr. D. Akila Professor, Department of Computer Applications, Saveetha College of Liberal Arts and Sciences, SIMATS, Chennai, India

Dr. S. Jayalaksshmi Professor Department of Information Technology, Vels Institute of Science Technology and Advanced Studies, India. pravija.lakshmi@gmail.com |
2	43	Integrating Connected Devices and Advanced Machine Learning Models for Optimized Waste Classification and Management	Loganayagi S	
3	35	HAND DETECTION AND FINGER COUNTING USING PYTHON	Vignesh Subbiah	
4	36	HIDING DATA USING EFFICIENT COMBINATION OF RSA CRYPTOGRAPHY, AND COMPRESSION STEGANOGRAPHY TECHNIQUES	Surya Suresh	
5	52	Study of hemodynamics of arterial system using Atangana Baleanu Caputo (ABC) Fractional order two element wind-Kessel model	E Renuga	
6	59	Evaluation of Multiple Phases of the Server in the Simple Queue, Subject to Customer Impatience.	P.Kamala	
7	22	CUBIC ROOTS CORDIAL LABELING OF SUNLET AND FRIENDSHIP GRAPHS	RAMANI BAI D	
8	24	Computing Sombor Indices of special networks	Ramani Balaji	
9	44	Neutrosophic Semi β^F-Connectedness and Neutrosophic Semi β^F-Feebly Connectedness in Neutrosophic Topological Space	K Fayaz Ur Rahman	
10	80	Topic Modelling using Latent Dirichlet Allocation Model for Pandemic Covid-19 Twitters Dataset	K. Palaniammal	
11	74	AI-driven Comparative Study of Gender Norms in select Traditional and Modern Fairy Tales	Bavya S	
12	70	A Study on Modified Fuzzy Graceful Labeling Graphs	Dr.P.K.Hemalatha	
13	46	A THEORETICAL APPROACH ON THE COMPARATIVE STUDY OF SHORTEST PATH PROBLEM	E. Mona Visalakshidevi	
14	45	A Review on Uncertain Metric Spaces and Fixed-Point Theorems	S.Sithsabesan	
15	71	Enhancing Breast Cancer Prediction Accuracy:A Comparative Study of Linear Regression Models with Feature Scaling Techniques	Joshika S	
16	72	A Comprehensive Survey of Scalable Speed Stream Processing (SSS) Frameworks in Distributed Operating Systems: Techniques, Implementations, and Applications	SriSivasubbramanyan B S	

17	123	Implementation of Valine-Leucine Deposition and Disease Stratification using various Machine Learning Techniques	B.Srividhya	
18	127	Bipolar Disorder Detection using Machine Learning Technique	Dr.P.Subhasri	

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LUNCH (12.00 PM – 2.00 PM [IST])

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19	120	IoT and AI Innovations Advancing Sustainability Development Goals (SDGs)	LAVANYA L	
20	124	Deep Learning Based Medicinal Plants Identification Using CNN Architecture	Prabha B	
21	126	Design and Implement an Interactive IoT based Tamil Braille keypad for Visually Impaired School Children	Dr.K.Kavitha	
22	37	Simple LPG Gas Leakage Detection System with Alarm and Lighting Indication for Domestic Household Application and its Mathematical Modelling	R Gowri Shankar Rao	
23	60	$(\ _\mu,\ )$-semicontinuity and $(\ _\mu,)$-semicontinuity	D.Saravanakumar	
24	99	Mental Disorder Classification Using Ensemble Machine Learning	Dheenathayalan K	
25	125	Generative AI for the Detection and Prediction of Alzheimer's	Dr.B.Indrani	
26	129	Fostering Democratic Transparency: A Secure Voting System with Aadhaar Cards on the Ethereum Blockchain Technology	Revathi.S	
27	132	Exploring the Role of Augmented Reality (AR) Advertising on Brand Engagement in Jordanian FMCG Sector	Bikramjit Sarkar	
28	133	The Effect of Cloud assisted personalization Techniques in Electronic Mail Presentation on Client Engagement in World market	Jeyalaksshmi S.	
29	NP_26	Optimizing HMIM Logic Gates Using Hybrid Plasmonic Waveguides to Reduce Ohmic Losses	Wissam Hussien Hadi	
30	NP_30	About Fuzzy Ideal of Unit Regular La-Semi Groups	Alaa F. Hameed	

ICMMCS 2025 Technical Online Parallel Session II
(05th January, 2025; Sunday) [8.00 AM – 05.00 PM] IST

Sl. No.	Paper ID	Final Paper Title	Name of the Paper Presenter	Session Chair
1	26	Evolving Educational Paradigms: Blended Learning as a Tool for Digital Literacy in Philology Teacher Education	Nguyen Thi Tuyet Anh	**Dr. Ton Quang Cuong, VNU University of Education (VNU-ED), Vietnam National University, Hanoi, Vietnam.** **Dr. Souvik Pal Associate Professor, Department of Computer Science and Engineering, Sister Nivedita University, Kolkata, India** **Dr.V.R.Elangovan Assistant Professor, Department of Computer Applications, College of Science and Humanities, SRM Institute of Science and Technology (SRMIST), India**
2	20	Heutagogy Designing Principles for Student Self-Determined Learning with Mobile and Social Media Tools	Nguyen Tung Lam	
3	18	GeoGebra-An Experimental Tool for Factoring Polynomials	Ta Duy Phuong	
4	21	Using Tri Uan Game In Teaching Math In Primary School To Develop Students' Mathematical Competence	Tran Le Thuy	
5	30	Enhancing Mathematical modeling competency in Geometry learning at secondary school by using virtual reality technology	Pham Kim Chung	
6	28	Harnessing LLM of ChatGPT in Teaching Discourse Analysis for English Linguistic Major Students	Ton Quang Cuong	
7	32	AI Integration into Curriculum Design and Development: Theoretical Framework and Application	Tran Thai Long	
8	23	Designing Learning Activities Through Play According To The BOPPPS Model Contents Of Flat Geometric Area For Primary School Students	Luu Thi Thu Huong	
9	130	The green smart refill: integrating Artificial Intelligence (AI) and Education of Things (EoT) in Vietnam National University, Hanoi, Vietnam	Bui Thi Thannh Huong	
10	31	Perception of Chat AI on Writing Skills Among Literature Teacher Students: A Study at Hanoi Pedagogy University 2, Vietnam	Pham Kim Chung	
11	1	Enhancing Virtual Reality Interaction: GazeSense™ - An Innovative Algorithm Transforming Gaze Movement Accuracy and User Engagement	Abinaya M	
12	95	Applications of Factor-Based Authentication and Authorization Systems	Mahfuzul Huda	
13	96	Assessing the Effectiveness of Machine Learning Models in IoT Systems	Mahfuzul Huda	
14	40	Numerical Modeling and Software Tools for Routing in District Heating Networks	Anubhav Goel	
15	118	Automating the Future: The Application of Machine Learning in Manufacturing	Amena Mahmoud	
16	119	IoT Revolution in Education: Transforming Learning through Smart Technology	Amena Mahmoud	

17	108	SDN-based Edge Computing	Fatimah Azeez	
18	12	Data-Driven Pedagogy: Empowering Educational Excellence in Saudi Higher Institutions through the Integration of AI and ML	Abeer Aljohani	
		LUNCH (12.00 PM – 2.00 PM [IST])		
19	10	Accuracy Comparison of Logistic Regression and Decision Tree Prediction Models Using Machine Learning Technique	Sudhanva Bhat	
20	145	Current Security Issues and Vulnerabilities Associated with Mobile Application	Basheer Riskhan	
21	146	Exam Grades Prediction Mechanism (EGpM) Using Machine Learning Algorithms	Basheer Riskhan	
22	147	Facial Recognition and Detection: Overcoming Pose Variations and Enhancing Accuracy with Machine Learning Implementation	Mozaherul Hoque Abul Hasanat	
23	148	Investigating Password Vulnerabilities and Protection Strategies	Khalid Hussain	
24	149	Real-Time Identification for Fake News on social me-dia (Instagram)	Halawati Abd Jalil Safuan	
25	150	The Role and Impact of Ethical Hacking in Modern Society's Economy	Nadiah Arsat	
26	131	Internet things assisted Platform Business Models and Value Creation on cloud platform: Insights from World Startups	C. Sudha	
27	135	L. Vijayakumar, Vijayesvaran Arumugam, Bikramjit Sarkar, D. Balaganesh and K. Rohini	K. Rohini	
28	141	Blockchain-assisted Dynamic Attack Detection Method based Secure Data Management in Industrial 4.0	P. Tamilarasi	
29	143	Fog Computing-based Fault Tolerant Data Management Model (FC-FTDMM) for Smart Healthcare	J. Devagnanam	
30	NP_21	Novel Mathematical Integral Transform for Solving Some LODEs	Haneen Jasim Azooz	

ICMMCS 2025 Technical Online Parallel Session III

(05th January, 2025; Sunday) [8.00 AM – 05.00 PM] IST

Sl. No.	Paper ID	Final Paper Title	Name of the Paper Presenter	Session Chair
1	38	Advancement in Communication Efficiency within Federated Learning	Praveer Dubey	
2	27	Fuzzy-CNN based Framework for Handwritten Signature Verification	Nisha Chaurasia	
3	33	An Ensemble Approaches to Improve Diabetic Retinopathy (DR) Detection and Severity Classification from Retinal Fundus Images	K. KAYATHRI	
4	29	Enhancing Stress Detection: A Comprehensive Approach Using Wearable Sensors and Sentiment Analysis with CNN	Nischay Tushir,Deepali Vora	
5	85	Detection of DDoS Attack in Cloud Computing Environment with Optimized Algorithm and Machine Learning Model	Krish Dulwani	**Dr. D. Balaganesh, Berlin School of Business and Innovation, Germany**
6	13	An Intelligent and Secure Fog Computing-Based System for Predicting and Preventing Yellow Fever Outbreaks	Prabal Verma	
7	83	A Systematic Review Paper for Anomaly Detection in Financial Transactions	JIGYASHA ARORA	
8	79	The Fusion of AI and Cybersecurity: Trends and Insights	Sucheta Panda	**Dr.Srinath Doss, Faculty of Engineering and Technology, Botho University, Botswana**
9	75	Gestational diabetes mellitus prediction using machine learning algorithms	D.Sudha	
10	84	Facial Recognition Technology in Carpooling Industry: A Short Survey	Chandrakala Arya	
11	88	Anomaly Detection in Healthcare: Deploying Hybrid Machine Learning Techniques	R.KALA	
12	82	Unveiling Windows Security: Detecting Security Breaches Using Windows Event Logs	Sreelekshmi S	
13	90	Contemporary Trends and Usage of Augmented Reality Tools for Autistic Children	Saranya Devi R	
14	116	Breast Cancer Diagnosis using Machine Learning and Knowledge Discovery in Data	Mayank Arora	

15	61	Unleashing the Potential: How the Internet of Things Catalyzes Progress Towards the Development Goals	Navya Gubbi Sateeshchandra
16	93	Blockchain for verifying IoT-Based educational Certifications aligned with Sustainable Development Goals	Swati Jeevan
17	155	Early Prediction of Bank Performance Using Machine Learning Algorithm	Karim Shehata
18	17	Enhancing Safety and Accessibility with Integrated KNN and Repeated Median Regression in Wearable IoT Solutions	Harsh Vazirani
LUNCH (12.00 PM – 2.00 PM [IST])			
19	115	Stock Market Prediction Using News Sentiment Analysis	Narendra Kumar
20	112	Vulnerability Assessment and Penetration Testing at the Hypervisor Level	Anamika Agrawal
21	110	Federated Learning Approaches based on Blockchain in Smart Environments	Suyogita Singh
22	151	Forecasting Financial Markets: A Critical Analysis of Machine Learning & Social Sentiment Analysis	Tom K Joseph
23	152	Enhancing Sustainable Farming with Automated Weed Detection: A Hybrid Approach Using Image Processing and Machine Learning	Ajay Sharma
24	153	Enhancing Digital Music Libraries: A Clustering-Based Music Recommendation System	Aditya Prashant Ardak
25	154	Design And Development of Novel Hybrid Cryptography Technique for Enhancing Data Security	Nadiah Arsat
26	139	Artificial intelligence-based Edge supported Experiential Computing in Enhancing Client Performance in Universal Healthcare Sector	B. Mahalakshmi
27	142	Blockchain Technology and its Implications in Data Management System: A Empirical Analysis on Corporate Database Management	Maheswari Mookiaha
28	NP_20	Results From Utilizing the AMD Operator for Meromorphic Univalent Functions in Fourth-Order Differential Subordination and Superordination	Maryam Dheyaa Ridha

ICMMCS 2025 Technical Online Parallel Session IV
(05th January, 2025; Sunday) [6 PM – 9 PM] AST

Sl. No.	Paper ID	Final Paper Title	Name of the Paper Presenter	Session Chair
1	IQ_1	The Effect of Topological Properties on The Rotational Movement of DNA and RNA by Using Genetic Algorithms	Dalael Saad Abdul-Zahra	Dr. Ahmed J. Obaid, Faculty of Computer Science and Mathematics, University of Kufa, Iraq
2	IQ_3	Some Result of Approximate Serre Fibration	Ammar Qasim Naser	
3	IQ_4	A Proposed Item-Based Collaborative Filtering Model for e-Book Recommendation with a Weighted KNN	Abdullah Mohammed Saleh	
4	IQ_6	A Suggested Formula of Exponentiated Weibull Distribution with Application	Diyar J. Mohammed	
5	IQ_10	Mathematical Modeling Approximation Methods Accuracy	Aws Asaad Hamdi	
6	IQ_12	Utilizing the successive approximation approach to solve nonlinear Volterra integral equations	Mundher Younus Jaafar	
7	IQ_14	Effect of External Rotor Capacitance on Improving Voltage Build-up and Frequency of Self-Excited Slip Ring Induction Generator taking iron losses into account	Hayder Hussein Kadhum	
8	IQ_15	A new A_T transform technique for predicting solutions of all types of differential equations	Abeer F. Abaas	
9	IQ_17	A New Z_A- Transform Technique for Solution System Ordinary Differential Equations	Rakzan Shaker Naji	
10	IQ_22	Fibrewise Maximal and Minimal Topological Spaces	A. K. Lafta	
11	IQ_23	A Cramer-Shoup algorithm and 5D hyper-Chaotic System as Pseudo Random Number Generator	Zainab Khalid Ibrahim	

12	IQ_24	Best Co-Positive Approximation in Weighted Space	Mohammed Khalaf	
13	IQ_25	The Hybrid STR-ENN Model: A Study with Application	Maryam Luqman Othman	
14	IQ_27	The Properties of Types of Real Valued Set Functions Over α-σ-algebra	Ibrahim S. Ahmed	
15	IQ_28	Improving adaptive penalized likelihood in Poisson regression model	Dheyaa N. Ahmed	
16	IQ_29	Study of L- Local Function with Respect to Ideal Topology and L-Space	Zinah T. Abdulqader	
17	IQ_34	Modeling Healthy Data with New Alpha Power Inverse Weibull Distribution	AL-Zamely Mohammed oda	
18	NP_31	Study of Soft β-σ-field	Shangul F. Abdulaziz	
19	NP_32	Solving Mathematical Series Using Linear Ordinary Differential Equations	Basheer Abd Al Rida Sadiq	
20	NP_33	Hybrid Deep and Frequency Features to Improve Classification of Cases Diagnosis Diabetic Macular Edema in Fundus Images	Zahraa Jabbar Hussein	

Selected Poster Presentation

(11th January, 2025)

Sl. No.		Title	Name of the Presenter	Session Chair
1	NP_2	Reduction Specific Absorbing Rate on Human Brain for Rectangular Slot Patch Antenna in C Band	Haraa Raheem Hatem	**Mohammed Ayad Alkhafaji College of Technical Engineering National University of Science and Technology Dhi Qar, Iraq**
2	NP_5	An Extension of Marshall Olken Weibull Inverse Weibull Distribution with Application	Hemin A. Mohammed	
3	NP_7	Advanced Portable Radar System using ESP32: A Hardware Perspective	Maad M. Mijwil	
4	NP_8	On Blow-up Solution of the Nonlinear Parabolic Partial Differential Equation	Farah Thaer Al-Khayyat	
5	NP_9	Study of Two-Dimensional Unsteady Natural Convection of a Fluid in a Square Cavity with a Solid Body in the Presences of Thermal Radiation	Alaa A. Hammodat	
6	NP_11	On a certain Class Involving Analytic Univalent Functions Defined by Chebyshiv Polynomials	Adnan Aziz Hussein	
7	NP_13	Determining the Reliability Importance of Complex-Parallel System and Mixed Block Diagrams by using UGF Technique	Abdullah Mohammed Hassan	
8	NP_16	Al-Zughair Integral Transform for Solving Lodes	Zainab Nasir Abdul Razzaq	
9	NP_18	Oscillation And Nonoscillation Criteria of Solution Fourth order Linear Neutral Differential Equations	Doaa Goodi Raheem	
10	NP_19	Albazy Altememe Integral Transform for solving some types of Partial Differential Equations	Tuqa Haider Kareem	