Conference Program

2026 15th International Conference on Software and Computer Applications (ICSCA 2026)

2026 the 5th International Conference on Computer Technologies

February 3-5, 2026 | Langkawi, Malaysia

Co-organized by

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WELCOME MESSAGE

On behalf of the organizing committee, it is our profound honor to welcome all of you to 2026 15th International Conference on Software and Computer Applications (ICSCA 2026) and 2026 the 5th International Conference on Computer Technologies held in Langkawi, Malaysia during February 3-5, 2026. This year, we are privileged to host this esteemed event co-sponsored by Universiti Malaysia Pahang, Malaysia; and FH JOANNEUM University of Applied Sciences, Austria, reflecting a strong international collaboration that underpins our conference.

ICSCA and ICCTech have always been a platform where the brightest minds in software and computer applications converge to share insights, breakthroughs, and innovations that shape the future of our field. This year, we continue this tradition with an impressive lineup of three Keynote Speakers and three Invited Speakers, each a distinguished leader in their respective areas, ready to share their expertise and inspire us all.

With eight offline sessions and six online sessions, ICSCA 2026 and ICCTech 2026 offer a diverse and comprehensive program, designed to cater to a wide array of interests and specialties within the realms of software and computer applications. Our sessions are meticulously planned to foster learning, discussion, and the exchange of ideas, providing both in-person and virtual attendees with an enriching experience.

As we embark on this three-day journey of learning and discovery, I encourage each of you to engage fully with the sessions, speakers, and your fellow attendees. The connections made here, the knowledge shared, and the collaborations formed are the lifeblood of our conference and the driving force behind the advancement of our field.

Once again, welcome to ICSCA 2026 and ICCTech 2026. Your presence here, whether physically or virtually, signifies your commitment to excellence and innovation in software and computer applications. Let us make the most of this opportunity to learn, to share, and to inspire.

ICSCA 2026 & ICCTech 2026

Conference Chair
Kamal Zuhairi Zamli

Vitaliy Mezhuyev

ORGANIZING COMMITTEE

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Yong Yue, Xi'an Jiaotong-Liverpool University, China

CONFERENCE VENUE

Bayview Hotel Langkawi

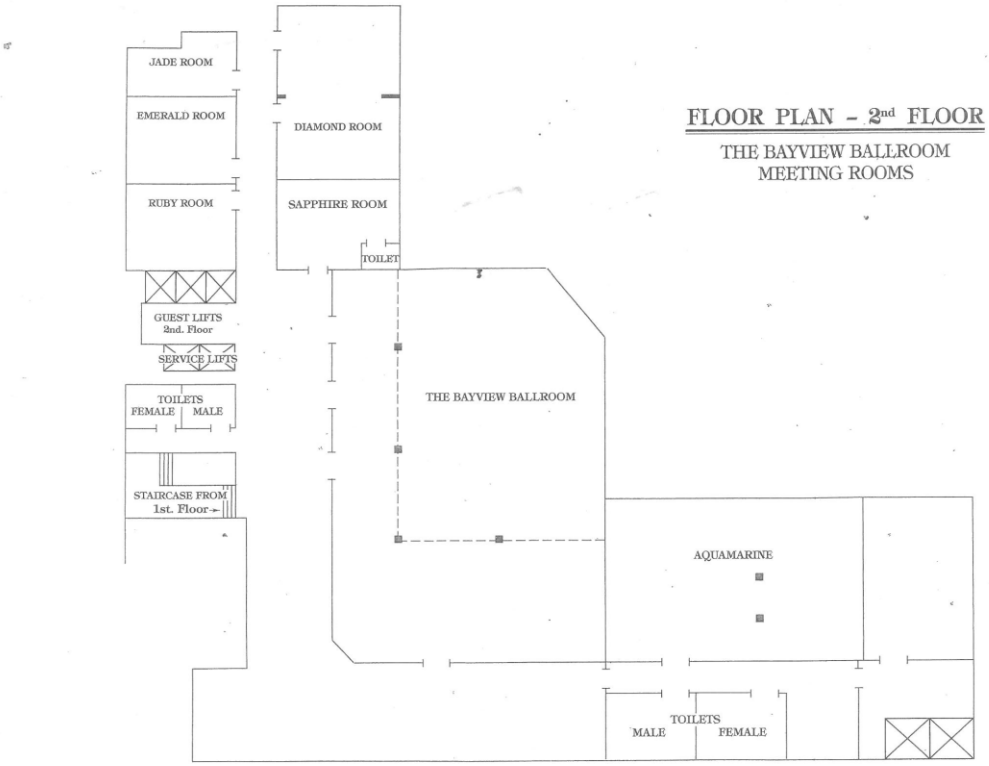
Address: Jalan Pandak Mayah 1, Pusat Bandar Kuah, 07000 Langkawi, Kedah, Malaysia
Tel: +6049661818

TRAFFIC INFORMATION

➤ **From Langkawi International Airport**

By Taxi: Around 20-25 minutes with about RM30-RM40

By Airport Limo: Around 20-25 minutes with about RM40-RM60



GUIDELINES

Oral Presentation

1. Please prepare your PowerPoint in advance and bring it with you. The conference committee will provide a standardized background template, but its use is not mandatory.
2. The duration of the presentation slot is 15 minutes. Please target your lecture for a duration of about 10-12 minutes for the presentation plus about 3-5 minutes for questions from the audience.
3. Your punctual arrival and active involvement in each session will be highly appreciated.

   - Get your presentation PPT or PDF files prepared and backed up.
4. Laptops, projector & screen, laser sticks will be provided by the conference organizer.
5. The Best Presentation will be announced at the end of the session.

Online Presentation

1. ZOOM Download Link

https://zoom.us/download (Oversea)

https://zoom.com.cn/download (Author in China)

2. Meeting Rooms

ZOOM Meeting

Zoom A: 894 6912 4465

Zoom B: 827 5683 7636

Zoom C: 893 9623 0561

Password: 020305

3. Test Your Presentation

Date: **Feb. 03, 2026**

Prior to the formal meeting, online presenters shall join the test room to ensure everything is on the right track. Please check your test Zoom Meeting ID on this program.

4. Oral Presentation

Timing: a maximum of 15 minutes in total, including 2-3 minutes for Q&A. Please make sure your presentation is well timed.

Please join the meeting room 10 minutes in advance.

Stay online during Keynote & Invited speeches and your own sessions.

English Only during the conference.

Rename your screen name before entering the room

Example:

Authors: Paper ID-Name TC0001-San Zhang

Listener: Listener Number-Name Listener- San Zhang

Committee Member: Position-Name Committee- San Zhang

Please ensure that you always take your belongings with you when leaving a room.

AGENDA OVERVIEW

All times in this schedule are listed in Malaysia Standard Time (MYT).

Feb. 03, 2026 | Tuesday		
Time	**Activity**	**Venue**
10:00-17:00	**Onsite Sign-in & Conference Materials Collection**	**Lobby of Bayview Hotel Langkawi**
14:00–17:00	**Online Sign-in & Equipment Testing** CS4033, CS638, CS758, CS799-A, CS805, CS818, CS820 CS3009, CS760, CS764, CS769, CS771, CS782, CS748 CS1005, CS4023, CS637, CS752, CS780, CS790, CS798 CS4029, CS776, CS616, CS777-A, CS756, CS765, CS830	**Zoom A** **894 6912 4465** **Password: 020305**
14:00–17:00	Online Sign-in & Equipment Testing Invited Speaker: Mohd Zulfaezal Che Azemin, Anand Nayyar, Jianxia Cao, Nirmalya Thakur, Jixin Ma, Hamed Sarbazhosseini, Abhimanyu Mukerji, M.L.Ravi Chandra, Burra Venkata Durga, Tirumala Rao Chimpiri CS2006, CS4035, CS514-A, CS773, CS775, CS778, CS793, CS622, CS803, CS811, CS821, CS824, CS750, CS779, CS4045	**Zoom B** **827 5683 7636** **Password: 020305**

Feb. 04, 2026 | Wednesday		
Time	**Activity**	**Venue**
08:30-09:30	**Sign-in & Conference Materials Collection**	**Lobby of Bayview Hotel Langkawi**
Opening Ceremony **Host: Vitaliy Mezhuyev, FH JOANNEUM University of Applied Sciences, Austria**		
09:00-09:05	**Opening Ceremony**	
09:00-09:05	**Welcome Message** **Kamal Zuhairi Zamli,** Universiti Malaysia Pahang, Malaysia	**2F Diamond Room**
Keynote Speech		
09:05-09:45	**Keynote Speech** **Siti Hafizah Binti Ab Hamid,** Universiti Malaya Kuala Lumpur, Malaysia **Title:** Towards Software Quality Engineering on Agentic Affective Computing	**2F Diamond Room**

09:45-10:25	**Keynote Speech** **Huda Haji Ibrahim,** Universiti Utara Malaysia, Malaysia **Title:** Digital Sustainability: Software Engineering as a Driver of Change	**2F Diamond Room**
10:25-10:45	**Group Photo & Coffee Break**	
10:45-11:25	**Keynote Speech** **Paolo Terenziani,** University of Eastern Piedmont, Italy **Title:** Personalized Training of Professional Competencies with AI: Project and Final Results	**2F Diamond Room**
11:25-12:05	**Tutorial - Applied Research Use-case Overview** **Vitaliy Mezhuyev,** FH JOANNEUM University of Applied Sciences, Austria **Title:** Selected Use Cases from the Smart Production Lab at FH JOANNEUM University of Applied Sciences, Austria	**2F Diamond Room**
12:05-14:00	**Lunch**	**1F Flamingo Coffee House**
14:00-15:45	**Technical Session 1 - Software Testing and Optimization Techniques** **CS631, CS800, CS783, CS635, CS762, CS815, CS763**	**2F Emerald Room**
14:00-15:30	**Technical Session 2 - Deep Learning and Image Processing Apps** **CS4034, CS4040, CS766, CS795, CS801, CS759**	**2F Ruby Room**
14:00-15:45	**Technical Session 3 - AI-Driven Systems and Intelligent Frameworks** **Invited Speech –Dayang Norhayati Abang Jawawi** **CS3020, CS4043, CS625, CS743, CS812**	**2F Diamond Room**
15:45-16:15	**Coffee Break**	
16:15-17:45	**Technical Session 4 - HCI and User Experience Research** **CS768, CS807, CS813, CS816, CS518, CS4032**	**2F Emerald Room**
16:15-17:45	**Technical Session 5 - LLM and Data Intelligence Applications** **CS2007, CS774, CS791, CS832, CS628, CS788**	**2F Ruby Room**
16:15-18:00	**Technical Session 6 - Educational Tech and Engineering Apps** **CS515, CS747, CS749, CS784, CS827, CS819, CS3021**	**2F Diamond Room**

18:30	Banquet	1F Flamingo Coffee House

Feb. 05, 2026 | Thursday		
Time	**Activity**	**Venue**
09:30-11:45	Online Session 1 - Medical AI and Clinician-Centered Health Tech Invited Speaker - Mohd Zulfaezal Che Azemin, CS1005, CS4023, CS637, CS752, CS780, CS790, CS798	Zoom A 894 6912 4465 Password: 020305
	Online Session 2 - SE Quality, Governance and AI Ethics CS4029, CS776, CS616, CS777-A, CS756, CS765, CS830, CS520-A, CS514-A	Zoom B 827 5683 7636 Password: 020305
11:45-13:00	Break	
13:00-15:15	Online Session 3 - IoT, 6G and Digital Twin Systems Invited Speaker - Anand Nayyar CS4033, CS638, CS758, CS799-A, CS805, CS818, CS820	Zoom A 894 6912 4465 Password: 020305
	Online Session 4 - EdTech, LLM and Learning Engagement Invited Speaker - Jianxia Cao CS3009, CS760, CS764, CS769, CS771, CS782, CS748	Zoom B 827 5683 7636 Password: 020305
15:15-15:30	Break	
15:30-17:45	Online Session 5 - Business Analytics and Social Media Insights Invited Speaker - Nirmalya Thakur CS2006, CS4035, CS773, CS775, CS778, CS793, CS4045	Zoom A 894 6912 4465 Password: 020305
15:30-18:00	Online Session 6 - ML Across Domains and Time Series Analysis Invited Speaker - Jixin Ma CS622, CS803, CS811, CS821, CS824, CS750, CS779, CS828	Zoom B 827 5683 7636 Password: 020305
15:30-18:00	Online Session 7 Invited Speaker - Hamed Sarbazhosseini, Abhimanyu Mukerji, M.L.Ravi Chandra, Burra Venkata Durga Kumar, Tirumala Rao Chimpiri	Zoom C 893 9623 0561 Password: 020305

KEYNOTE SPEAKER

09:05-09: 45 | Diamond Room

Siti Hafizah Binti Ab Hamid

Professor at Universiti Malaya Kuala Lumpur, Malaysia

Biography: Prof. Dr. Siti Hafizah is an expert researcher in software engineering whose work bridges software reliability, cloud computing, and intelligent software applications. Her research focuses on optimizing mobile and cloud-based systems, especially in virtual machine migration, cloud resource management, and energy-aware mobile application design. Through multi-million ringgit grants from local, international, and private organizations, she has made significant contributions to trust models, link prediction in social networks, and the integration of IoT frameworks for critical applications such as digital health and emotion-aware computing. An active member of the IEEE Society and Malaysia Software Testing Board, she has been appointed by the Department of Standards Malaysia as a Technical Committee member for the Malaysian Standard on Software and System Engineering. She is also Associate Editor for few reputable journals, and a reviewer for several Q1 ISI WoS journals. She also serves as an external assessor for academic programs at public and private universities in Malaysia. She contributes to academic development as a Program Quality Assessor Expert, Lead Auditor, Lead UM Strategic Plan (Transformative Learning), and developer of the stackable credential-based Master of Advanced Studies program.

Speech Title: Towards Software Quality Engineering on Agentic Affective Computing

Abstract: Agentic Affective Computing (AAC) integrates the autonomy of agentic computing with the emotional intelligence of affective systems to create environments that autonomously adjust to user needs. While conventional digital interfaces, such as library search engines, often fail to recognize user distress—leading to frustration and disengagement-AAC aims to create an emotionally intelligent environment that supports mental well-being. To achieve this, the framework relies on reliable multimodal emotion detection, fusing inputs such as text sentiment, facial expressions, voice tone, and physiological data to accurately interpret human emotional states. Central to this approach is the emphasis on software quality, specifically adaptivity, reliability, and empathy, which enables systems not only to detect stress but to respond with meaningful support. Through case studies involving slang data-driven anxiety prediction and digital companions, this work demonstrates how AAC systems can facilitate emotional recovery and build human resilience. The research concludes by addressing essential ethical considerations, including data privacy, cultural sensitivity regarding emotional expression, and the necessity of ensuring psychological safety in the deployment of emotion-aware technologies.

KEYNOTE SPEAKER

09:45-10:25 | Diamond Room

Huda Haji Ibrahim

Professor at Universiti Utara Malaysia, Malaysia

Biography: Professor Huda is a distinguished scholar and visionary leader in the field of Information and Communication Technology (ICT), with over three decades of impactful contributions to teaching, research, and academic governance. Born and received primary and secondary education in Malaysia, she embarked on her higher education journey in the United States, earning a bachelor's degree in mathematics from the University of Arkansas at Little Rock in 1988. She later completed her Master of Science in Computer System Management at Creighton University, Omaha, Nebraska, in 1995-an experience that laid a robust foundation in computing and systems thinking. Her academic trajectory continued with a Doctor of Philosophy in Science and System Management from Universiti Kebangsaan Malaysia (UKM), conferred in 2006. Currently, Professor Huda serves at the School of Computing, Universiti Utara Malaysia (UUM), a leading institution in ICT and digital transformation studies. She previously held pivotal leadership roles, including Dean of the School of Computing (2011-2022) and Assistant Vice Chancellor of the UUM College of Arts and Sciences (2017-2022).

Her research portfolio spans Smart Cities, Geoinformatics, Information Technology Transfer, e-Government, and Social Informatics. She has published extensively in high impact journals and conferences, contributing to both theoretical advancement and applied innovation. Her ongoing engagements in research collaboration, postgraduate supervision, and advisory capacities reflect a deep commitment to fostering digital innovation for societal benefit. Beyond academia, Professor Huda plays an active role in national and institutional initiatives, including state and international level projects/programs aligned with the Sustainability Agenda. She was appointed as a Visiting Professor at University of Karabuk, Turkiye (2022-2023) and (2025-2026) and was invited as a keynote's speaker for international conferences in Indonesia, Sri Lanka (2023-2025).

Speech Title: Digital Sustainability: Software Engineering as a Driver of Change

Abstract: As digital technologies continue to shape every aspect of modern life, the sustainability of software systems has become a critical concern. Software engineering is not only about building efficient applications-it is increasingly about designing solutions that minimize environmental impact, optimize energy consumption, and support sustainable practices across industries. Examples such as energy-aware coding, sustainable IT infrastructure, and the role of software in enabling green innovation to illustrate how interdisciplinary collaboration can amplify impact. The focus is on embedding digital sustainability into both technical and non-technical domains, ensuring that the future of software engineering contributes to a greener, more resilient world. This means that sustainability principles should not only guide the way software is designed, coded, and deployed, but also influence organizational strategies, policies, and user practices. On the technical side, this involves approaches such as energy-efficient algorithms, optimized data storage, cloud resource management, and lifecycle-aware software design that reduce environmental impact. On the non-technical side, it encompasses governance frameworks, ethical decision-making, education, and cross-disciplinary collaboration that ensure digital systems are aligned with broader sustainability goals. By integrating sustainability into both dimensions, software engineering becomes a holistic driver of change—where technical innovation and organizational culture work together to create digital ecosystems that are environmentally responsible, socially equitable, and economically viable.

KEYNOTE SPEAKER

10:45-11:25 | Diamond Room

Paolo Terenziani

Professor at University of Eastern Piedmont, Italy

Biography: Since 2000, Paolo Terenziani is *Full Professor* at the Institute of Computer Science of DISIT, University of Eastern Piedmont, Alessandria, Italy. The research activity of Paolo Terenziani has begun in 1987 and it concerns mainly the fields of Artificial Intelligence (knowledge representation, temporal reasoning, conformance analysis, process mining), Temporal Databases (query and data semantics, temporal indeterminacy, periodic data) and of Medical Informatics (clinical guidelines, decision support systems). Regarding these topics Paolo Terenziani has published about 200 papers in peer-reviewed international journals, books, conference proceedings and workshops (in particular, he achieved 15 publications on the *IEEE Transactions of Knowledge and Data Engineering*). As early as in 1998, for his research activity, he won the "Artificial Intelligence Prize" from Italian Association for Artificial Intelligence. He has won "distinguished\best" paper awards in several international conferences, including AMIA 2012, Chicago, USA, November 2012 (more than 1000 submissions). He is currently the responsible of the Integrated Laboratory of Artificial Intelligence and Medical Informatics of the Alessandria Hospital and the University of Eastern Piedmont, Alessandria, Italy.

Speech Title: Personalized Training of Professional Competencies with AI: Project and Final Results

Abstract: Artificial Intelligence has the potential to innovate education in many areas, including medicine. Since 1996 we work on the GLARE (Guideline Acquisition, Representation and Execution) decision support system, within a long-term project for the design of advanced AI supports for the management of Computer-Interpretable Clinical Guidelines (CIGs). In the two-year project "Personalized Training of Professional Competences with AI", we have investigated the adoption of AI and CIG systems for medical education. We have addressed different tasks related to the adoption of medical knowledge for medical education, including knowledge acquisition, representation and reasoning. Our approach supports three facilities: the navigation of CIGs, their simulated application to virtual patients, and the verification of learners, through an evaluation of the conformance between learners' recommendations and CIG's ones. Our approach is domain-independent, and we use the melanoma and the dyslipidemia guidelines as concrete examples. In the last six months of the project we run an experimental evaluation. We presented a course for a cohort of 50 medical students, distinguishing between a class adopting the developed AI-based tools and a control class. The learning results of the two classes have been compared.

The talk will survey the main scientific results of the project, and discuss the results of the experimental evaluation.

TUTORIAL

11:25-12:05 | Diamond Room

Vitaliy Mezhuyev

Professor at FH JOANNEUM University of Applied Sciences, Austria

Biography: Vitaliy Mezhuyev received a specialist degree in informatics from Berdyansk State Pedagogical University (BSPU), Ukraine, in 1997. In 2002, he received a PhD in Educational Technology from Kyiv National Pedagogical University and, in 2012, an ScD (habilitation) in Information Technology from Odesa National Technical University, Ukraine. From 2004 until 2014, he was the Head of the Department of Informatics and Software Engineering at BSPU, Ukraine. From 2014 until 2019 he was a Professor at the Faculty of Computer Systems and Software Engineering at the University Malaysia Pahang, Head of the Software Engineering Research Group. Now he is a Professor at the Institute of Industrial Management in FH JOANNEUM University of Applied Sciences, Austria. During his career, Vitaliy Mezhuyev participated in multiple international scientific and industrial projects, devoted to the formal modeling, design, and development of advanced software systems as a network-centric real-time operating system; IDEs for the automation of development of parallel real-time applications; tools for specification, verification and validation of software products; visual environment for metamaterials modeling and others. His current research interests include formal methods, metamodeling, safety modeling and verification of software systems, IoT, and the design of cyber-physical systems.

Speech Title: Selected Use Cases from the Smart Production Lab at FH JOANNEUM University of Applied Sciences, Austria

Abstract: The Smart Production Lab of FH JOANNEUM University of Applied Sciences, Austria, serves as an interdisciplinary research and experimentation environment for digital and intelligent manufacturing. This talk presents selected use cases that demonstrate how advanced digital technologies can be successfully applied in real industrial contexts, even under typical constraints such as limited data availability, legacy equipment, and complex physical processes.

The talk introduces key research directions of the lab, including Industrial Internet of Things (IIoT) architectures, digital shop floor management, active and semi-supervised learning, physics-informed machine learning, and Bayesian optimization. Practical examples cover defect detection in steel production under data scarcity, quality prediction in additive manufacturing, and the development of expert systems to support decision-making on the shop floor. Particular emphasis is placed on data-efficient machine learning, model interpretability, and the integration of domain knowledge into data-driven models.

By showcasing these use cases, the talk highlights how smart production laboratories can bridge the gap between academic research and industrial implementation, providing scalable, explainable, and cost-effective solutions for modern manufacturing systems.

TECHNICAL SESSION

T01: Software Testing and Optimization Techniques

Chair: Sarah Samson Juan, Universiti Malaysia Sarawak, Malaysia & Daiji Kobayashi, Chitose Institute of Science and Technology, Japan

14:00-15:45 | Feb. 4, 2026 | Emerald Room

TAIK DETAILS	
Time	**Presentation**
14:00 - 14:15 **CS631**	Paper Title: Optimizing Test Case Sequencing for Regression Testing Using the Hybrid Metaheuristic Algorithm Author(s): Kamal Z. Zamli, Vitality Mezhuyev Presenter: Kamal Z. Zamli, Universiti Malaysia Pahang, Malaysia
14:15 - 14:30 **CS800**	Paper Title: An AI-Empowered Framework for Hybrid Learning Author(s): Teoh Sian Hoon, Joseph Boon Zik Hong, Nurshamshida Md Shamsudin, Rudi Hartono Presenter: Teoh Sian Hoon, Universiti Teknologi MARA, Malaysia
14:30 - 14:45 **CS783**	Paper Title: Adopting the Sewing Training–Based Optimization Algorithm for Uniform T-Way Test Suite Generation Author(s): Murad, Muhammad Hasan Salih Al-Walidi, Ahmad Ashraf, Abdul Halim, Rozmie Razif, Othman, Mohd Zamri, Zahir Ahmad, Muhammad Aiman, Mohd Asyraf, Kentaro, Go Presenter: Murad, Muhammad Hasan Salih Al-Walidi, University Malaysia Perlis, Malaysia
14:45 - 15:00 **CS635**	Paper Title: A Comparative Study of Four Metaheuristic Algorithms for Test Case Prioritization Problem Author(s): Khisaluddin Shaik, Nabilah Filzah Mohd-Radzuan, Kamal Z. Zamli, Viltaly Mezhuyev Presenter: Kamal Z. Zamli, Universiti Malaysia Pahang, Malaysia
15:00 - 15:15 **CS762**	Paper Title: A Lightweight Transformer and Ensemble Pooling Approach for Software Requirement Noise Classification Author(s): Maheen Mashrur Hoque, Arman Hossain Dipu, Ahsan Habib, Ajwad Abrar Presenter: Ajwad Abrar, Islamic University of Technology, Bangladesh

15:15 - 15:30 **CS815**	Paper Title: Comparing Statistical Mediation Techniques for Modeling Emotional Effects of Hybrid Learning Author(s): Teoh Sian Hoon, Joseph Boon Zik Hong, Nurshamshida Md Shamsudin, Parmjit Singh, Rudi Hartono, Koo Ah Choo Presenter: Teoh Sian Hoon, Universiti Teknologi MARA, Malaysia
15:30 - 15:45 **CS763**	Paper Title: An Online Testing Tool Based on Sand Cat Swarm Optimization for Uniform T-Way Test Suite Generation Author(s): Muhammad Aiman, Mohd Asyraf, Mohd Zamri, Zahir Ahmad, Rozmie Razif, Othman, Ahmad Ashraf, Abdul Halim, Murad, Muhammad Hasan Salih Al-Walidi, Kentaro, Go Presenter: Muhammad Aiman Mohd Asyraf, University Malaysia Perlis, Malaysia

TECHNICAL SESSION

T02: Software Testing and Optimization Techniques

Chair: MM Mahbubul Syeed, Independent University, Bangladesh

14:00-15:30 | Feb. 4, 2026 | Ruby Room

TAIK DETAILS	
Time	**Presentation**
14:00 - 14:15 **CS4034**	Paper Title: CNN Hyperparameter Optimization for COVID-19 Classification Using Adaptive Learning Rates Author(s): Meteab Moqbel, Zuraidi Saad, Mohd Ikmal Fitri Maruzuki, Noor Diyana Osman, Dayang Suhaida Awang Damit, Muhammad Khusairi Osman, Zainal Hisham Che Soh, Noor Hasyima Mat Zain Presenter: Zuraidi Saad, Universiti Teknologi MARA, Malaysia
14:15 - 14:30 **CS4040**	Paper Title: A Novel Grape Grading System with Multimodal Feature Fusion Using Bidirectional Cross-Attention Author(s): Muhammad Faris Bin Kamarudzaman, Panitan Muangkanmmuen, Prawit Buayai, Xiaoyang Mao Presenter: Muhammad Faris Bin Kamarudzaman, University of Yamanashi, Japan
14:30 - 14:45 **CS766**	Paper Title: Optimization of SAR Image Resolution for Large-Scale TIFF Files Using Generative Adversarial Networks and Residual Attention Author(s): Hein Khant Aung, Than Htet Aung, Kyaw Zaw Ye, Sai Myo Htet, Swan Htet Kyaw Presenter: Hein Khant Aung, Yangon Technological University, Myanmar
14:45 - 15:00 **CS795**	Paper Title: Towards Automated Assessment of Mandibular Third Molar Eruption Levels: A Segmentation-Based Deep Learning Approach Author(s): Sifat Ishmam Parisa, Sohidul Haque Sahid, MM Mahbubul Syeed, Razib Hayat Khan, Kaniz Fatema, Safiqul Islam, Mohammad Faisal Uddin Presenter: Kaniz Fatema, Independent University, Bangladesh
15:00 - 15:15 **CS801**	Paper Title: Performance Analysis of YOLO Variants for Speed Bump Detection in Daylight Driving Scenarios Author(s): Muhammad Syahmi Mohd Shamshul, Noraishikin Zulkarnaim, Mohd Hairi Mohd Zaman, Sarah 'Atifah Saruchi, Nurbaiti Wahid, Hairi Zamzuri, Zulhaidi Mohd Jawi Presenter: Muhammad Syahmi Mohd Shamshul, Universiti Kebangsaan Malaysia, Malaysia

15:15 - 15:30 **CS759**	Paper Title: Evaluating the Impact of a Mobile Behavior-Tracking Application in Malaysian Educational Institutions: A Mixed-Methods Study Author(s): Ashardi Abas, Mohd Mokhzani Ibrahim, Abu Bakar Ibrahim Presenter: Ashardi bin abas, Universiti Pendidikan Sultan Idris, Malaysia

TECHNICAL SESSIONS

T03: AI-Driven Systems and Intelligent Frameworks

Chair: Vitaliy Mezhuyev, FH Joanneum University of Applied Sciences, Austria

14:00-15:45 | Feb. 4, 2026 | Diamond Room

Invited Speaker

Dayang Norhayati Abang Jawawi | 14:00-14:30
Universiti Teknologi Malaysia, Malaysia

Speech Title: Ontology-Driven Competency Modeling in Software Engineering Education

Abstract: Software Engineering Education (SEE) is the structured teaching and learning for preparing graduates of principles, methods, and tools to design, develop, and maintain high-quality software systems. Beyond technical proficiency, contemporary software engineers are expected to demonstrate well-defined competencies that integrate knowledge, skills, and professional practices across diverse domains. This challenge is further amplified in fast-evolving areas such as embedded software systems in autonomous vehicles and healthcare monitoring applications, where correctness, timing constraints, and system reliability are paramount.

In response to the rapid transformation of the industry, educational institutions must adopt adaptive frameworks to ensure constructive alignment between curriculum structure, learning delivery, and assessment practices. This talk presents a competency-driven approach to SEE focusing on how ontology-based competency modelling is employed to systematically represent, structure, and align learning outcomes, course content, and assessment strategies within software engineering curricula.

Through a course case study, the talk demonstrates how ontology-driven approaches significantly support curriculum transparency, competency traceability, and evidence-based course improvement. This work integrates principles of competency-based education with ontology modeling to provide a structured and sustainable pathway for maintaining the relevance of SEE and effectively narrowing the gap between academic preparation and current industry expectations

TAIK DETAILS

Time	Presentation
14:30 - 14:45 CS3020	Paper Title: SEAVIP: Social Enhancement Application for Visually Impaired People with User-Centered UI/UX and Mobile-Optimized Face Recognition Author(s): Jing Jie Tan, Joi San Tan, Ashvaany Egambaram, Ban-Hoe Kwan, Danny Wee-Kiat Ng, Yan-Chai Hum

	Presenter: Jing Jie Tan, Universiti Tunku Abdul Rahman, Malaysia
14:45 - 15:00 **CS4043**	Paper Title: An AI-Driven Framework for Intelligent Incident Resolution in DevOps Author(s): Vedang Kane, Aryan Sirsavkar, Neerad Ahire Presenter: Vedang Kane, Savitribai Phule Pune University, India
15:00 - 15:15 **CS625**	Paper Title: A Proactive, Interoperable, and Multi-Agent Virtual Assistant System Author(s): Sarthak Pramod Karandikar, Kabeer Ahmed Mohamed Sayeed Merchant, Abhijeet Limbraj Suryawanshi Presenter: Abhijeet Limbraj Suryawanshi, Pune Vidyarthi Griha's College of Engineering and Technology, India
15:15 - 15:30 **CS743**	Paper Title: Design and Development of RiceScan: A Real-Time Web-Based Rice Disease Detection System Using a Design for Six Sigma (DFSS) Approach Driven by Voice of the Customer (VoC) and Machine Learning Author(s): Samson G. Melitante, Elaine B. Bolambot, Jevic B. Reyes Presenter: Samson G. Melitante, National University Las Pinas, Philippines
15:30 - 15:45 **CS812**	Paper Title: Tri Fusion-Logs: A Multi-View Anomaly Detection Framework for Permission Abuse in User Operation Logs Author(s): Guotai Zhu, Li Yang, Jinlei Liu, Junnan Gu, Li Ma, Dong Sun, Wei Zhou, Weimin Li Presenter: Li Yang, Shanghai University, China

TECHNICAL SESSION

T04: HCI and User Experience Research

Chair: Dayang N. A. Jawawi, Universiti Teknologi Malaysia, Malaysia

16:15-17:45 | Feb. 4, 2026 | Emerald Room

TAIK DETAILS	
Time	**Presentation**
16:15 - 16:30 **CS768**	Paper Title: Exploring User Experience Components for the HSE Metaverse Evaluation Framework Author(s): Al-amin Abdulhamid, Khairul Shafee Kalid, Savita K Sugathan, Shamsu Abdullahi, Muhammad Sabo Yahaya, Sarah Aisyah Isnani Presenter: Al-amin Abdulhamid, Universiti Teknologi PETRONAS, Malaysia
16:30 - 16:45 **CS807**	Paper Title: Effect of External Human-Machine Interface Presentation Timing on Driver Situation Awareness and Decision Making Author(s): Yuga Kato, Naomi Kuwata, Daiji Kobayashi Presenter: Yuga Kato, Chitose Institute of Science and Technology, Japan
16:45 - 17:00 **CS813**	Paper Title: Effects of External Human-Machine Interface Presence on the Situation Awareness of Drivers in Traffic Involving an Autonomous Bus Author(s): Naomi Kuwata, Yuga Kato, Daiji Kobayashi Presenter: Naomi Kuwata, Chitose Institute of Science and Technology, Japan
17:00 - 17:15 **CS816**	Paper Title: Enhancing Usability Through Anisotropic Haptic Textures in Button-Based and Touchscreen Interfaces Author(s): Daiji Kobayashi, Tomoka Aoki Presenter: Daiji Kobayashi, Chitose Institute of Science and Technology, Japan
17:15 - 17:30 **CS518**	Paper Title: Discrete-Time Quantum Walk Search on the Dihedral Cayley Graph Author(s): Yong Qing Tiong, Kai Lin Ong, Ian K.T. Tan, Wei Lin Teoh Presenter: Tiong Yong Qing, Heriot-Watt University Malaysia, Malaysia
17:30 - 17:45 **CS4032**	Paper Title: Integrating Gold Standard Psychometric Instruments with Machine Learning for Personalized Specialization Prediction for University Students Author(s): Vinu Sherimon, Abraham Varghese, Ranjini S. Nair, Manisha Gupta, Noora Yahya Al Hoqani, Moein Hossein Torkzadeh Presenter: Vinu Sherimon, University of Technology and Applied Sciences, Sultanate of Oman

TECHNICAL SESSION

T05: LLM and Data Intelligence Applications

Chair: Teoh Sian Hoon, Universiti Teknologi MARA, Malaysia

16:15-17:45 | Feb. 4, 2026 | Ruby Room

TAIK DETAILS	
Time	**Presentation**
16:15 - 16:30 **CS2007**	Paper Title: Analyzing Jailbreak Vulnerabilities of GPT-5: A Systematic Evaluation with Test Sets Author(s): Haozhe Wang, Yuchen Li, Wenzhuo Feng Presenter: Haozhe Wang, The University of Queensland, Australia
16:30 - 16:45 **CS774**	Paper Title: Addressing Data Scarcity in Bangla Fake News Detection: An LLM-Based Dataset Augmentation Approach Author(s): Ahmed Alfey Sani, Kazi Akib Zaoad, Shefayat E Shams Adib, Md Abdul Muqtadir, Ajwad Abrar Presenter: Ajwad Abrar, Islamic University of Technology, Bangladesh
16:45 - 17:00 **CS791**	Paper Title: From Brainwaves to Language and Vision: A Comprehensive Study on EEG and fMRI-Based Neural Decoding Author(s): Parnika Bhaskar Madapura, Pranav Rao Pernankil, Rishi Rao, Rachit Raam Guruprasad, Gokul Krishnan, Pooja Agarwal Presenter: Parnika Bhaskar Madapura, PES University, India
17:00 - 17:15 **CS832**	Paper Title: TimeGAN-VAE Data Generation for a Malaysian Aviation Supply Chain Stress Index Author(s): Bao Lin Tan, Sarah Samson Juan Presenter: Sarah Samson Juan, Universiti Malaysia Sarawak, Malaysia
17:15 - 17:30 **CS628**	Paper Title: A Systematic Literature Review of Quantum Deep Learning in the NISQ Era Author(s): Ban Q. Tran, Duong M. Chu, Hai T.D. Pham, Susan Mengel Presenter: Hai T.D. Pham, FPT University, Vietnam

17:30 - 17:45 **CS788**	Paper Title: From Reflective Narratives to Clinical Insight: Applying Large Language Models (LLMs) to Kolb-Based Counselling Experience Reflections for Assessing Counselling Students' Clinical Learning Author(s): Hapsah Md Yusof, Ashardi Abas, Nurul Hasyimah Mat Rani, Muhammad Bazlan Mustafa Presenter: Hapsah Md Yusof, Universiti Pendidikan Sultan Idris, Malaysia

TECHNICAL SESSION

T06: Educational Tech and Engineering Apps

Chair: Kamal Z. Zamli, Universiti Malaysia Pahang, Malaysia

16:15-18:00 | Feb. 4, 2026 | Diamond Room

TAIK DETAILS	
Time	**Presentation**
16:15 - 16:30 CS515	Paper Title: A Systematic Literature Review on Enterprise Resource Planning (ERP) in the Digital Age Author(s): Xuan Le Hai Vu, Duc Hoang Nguyen, Son Anh Le, Ban Quy Tran Presenter: Xuan Le Hai Vu, FPT University, Vietnam
16:30 - 16:45 CS747	Paper Title: Reinforcement Learning–Enhanced Robust Least Squares With Multiple Forgetting Factors for Vehicle Mass Estimation in Adaptive Cruise Control Author(s): Kai Wen Tian, Wai Tong Chor, Kam Meng Goh, Chee Pin Tan, Bakibillah A.S.M. Presenter: Chor Wai Tong, Tunku Abdul Rahman University of Management and Technology, Malaysia
16:45 - 17:00 CS749	Paper Title: An ML Model for Predicting Surface Roughness and Chip Formation in Lathe Machines Using Bayesian Optimization Author(s): Vitaliy Mezhuyev, Daniel Hiden, Manfred Mücke, Martin Tschandl Presenter: Vitaliy Mezhuyev, FH Joanneum University of Applied Sciences, Austria
17:00 - 17:15 CS784	Paper Title: The CARLWIN Framework: A Learner-Centered Pedagogical Methodology for Human-AI Collaboration in Software Engineering Capstone Projects Author(s): Carlwin V. Dayagdag Presenter: Carlwin V. Dayagdag, Romblon State University, Philippines
17:15 - 17:30 CS827	Paper Title: Temporal Planning for Route Optimization and Disruption Management in Heterogeneous Railway Systems Author(s): Pollob Chandra Ray, Sabah Binte Noor, MM Mahbubul Syeed, Fazlul Hasan Siddiqui Presenter: MM Mahbubul Syeed, Independent University, Bangladesh
17:30 - 17:45 CS819	Paper Title: A Gamification-Based Framework to Address Free-Riding in Software Engineering Student Projects Author(s): Nurfauza Jali, Cheah Wai Shiang, Suriati Khartini Jali, Syahrul Nizam

	Junaini, Tan Ping Ping Presenter: Nurfauza Jali, Universiti Malaysia Sarawak, Malaysia
17:45 - 18:00 **CS3021**	Paper Title: Securing Urban Futures: A Novel Framework for Implementing Quantum Cryptography and Post-Quantum Cryptography Across Smart City Infrastructure Layers Author(s): Burra Venkata Durga Kumar, Mohammed N. M. Ali Presenter: Ong Ann Yee, Xiamen University Malaysia, Malaysia

ONLINE SESSION

ON01: Medical AI and Clinician-Centered Health Tech

Chair: Anand Nayyar, Duy Tan University, Da Nang, Viet Nam

09:30-11:45 | Feb. 5, 2026 | Zoom A 894 6912 4465 Password: 020305

Invited Speaker

Mohd Zulfaezal Che Azemin | 09:30-10:00
International Islamic University Malaysia, Malaysia

Speech Title: Clinician-Led Health Tech That Sticks: Workflow Wins, Human-Centred Testing, and Clinically Validated AI

Abstract: Healthcare technology only creates value when it behaves like a good colleague: it fits the way clinicians already work, reduces effort rather than adding it, and produces results that are both actionable and defensible. This talk presents a clinician-centric pathway for turning bedside observations into scalable tools-from simple workflow enablers to high-precision analytics-illustrated through applied case studies spanning ophthalmology, audiology, and neuro/vision data analysis. First, we show how 'workflow accelerators" can remove invisible administrative burden: a point-of-care digital questionnaire for ocular-surface disease auto-scores and posts results directly into the electronic record, cutting staff data-entry from ~6 minutes to <30 seconds and improving completion by 28%. Second, we highlight patient-friendly redesign as a performance strategy, not just a comfort feature: a calibrated natural-sound protocol for sensory-gating assessment in autistic children reduces otoacoustic-emission testing from ~15 minutes to ~90 seconds per ear, with waterfall sound emerging as the most effective and tolerable stimulus. Third, we connect clinical relevance to technical rigor in retinal imaging: preserving native 2048×2048 fundus resolution and using vessel segmentation improves fractal-dimension discrimination across diabetic retinopathy, glaucoma, and macular degeneration, yielding glaucoma AUC 0.70 versus 0.66 at lower resolution; usability testing rates the interface 'excellent'(median SUS 82). Across examples, we distill a practical design framework-context-driven problem selection, locally grounded solutions, integration with familiar platforms, avoiding reinvention, and prioritising external validation-so attendees can replicate the same approach in their own clinical environments.

TAIK DETAILS

Time	Presentation
10:00 - 10:15 CS1005	Paper Title: Optuna-Optimised AdaFA-Based Lightweight-Explainable Federated Learning Model for Arrhythmia Detection Author(s): Abdullah Al-Mamun Bulbul, Moid Sandhu, Md Abdul Awal, Mohammad Ali Moni

	Presenter: Abdullah Al-Mamun Bulbul, The University of Queensland, Australia
10:15 - 10:30 **CS4023**	Paper Title: BWC-Net: Batch-Wise Contrastive Pre-Training With Linear Attention for Medical Image Classification Author(s): Xuan Zhao, Le Xu Presenter: Xuan Zhao, Beijing Jiaotong University, China
10:30 - 10:45 **CS637**	Paper Title: An Efficient Machine Learning Pipeline for Predicting Heart Disease Risk Author(s): Tran Bao Phan, Nguyen Huynh Nha Le, Sang Thi Thanh Nguyen Presenter: Tran Bao Phan, International University - VNU HCMC, Vietnam
10:45 - 11:00 **CS752**	Paper Title: Electrocardiosignal Analysis for Assessing the Body′ s Physiological Response to Emotional Influence Author(s): Vasiliy Maratovich Zhigachev, Oleg Nikolaevich Bodin, Mikhail Vyacheslavovich Edemskiy, Dmitry Alexeevich Novikov Presenter: Vasiliy Maratovich Zhigachev, Penza State Technological University, Russia
11:00 - 11:15 **CS780**	Paper Title: Multimodal Emotion Recognition via Ensemble and Learned Fusion Strategies Author(s): Wee Ling Hue, Ho Chuk Fong, Goh Ching Pang Presenter: Ho Chuk Fong, Tunku Abdul Rahman University of Management and Technology, Malaysia
11:15 - 11:30 **CS790**	Paper Title: Predicting CAD Severity Using ECG Signals and Blood Test Biomarkers: A Multimodal Approach to Risk Stratification Author(s): Shreya Soni, Sarah Alex, Rahul Venkatesh Reddy, Pavan R, Prema Ramasamy Presenter: Shreya Soni, PES University, India
11:30 - 11:45 **CS798**	Paper Title: Source-Level Dynamic Functional Connectivity for EEG-Based Stress Detection Author(s): Saliha Ejaz, Soyiba Jawed Presenter: Saliha Ejaz, National University of Sciences and Technology (NUST), Pakistan

ONLINE SESSION

ON02: SE Quality, Governance and AI Ethics

Chair: Masita Jalil, Universiti Malaysia Terengganu, Malaysia.

09:30-11:45 | Feb. 5, 2026 | Zoom B 827 5683 7636 Password: 020305

TAIK DETAILS	
Time	**Presentation**
09:30 - 09:45 CS4029	Paper Title: Seven Rules for Developing High-Quality Software in Agile Projects Author(s): David Kuhlen, Andreas Speck Presenter: David Kuhlen, Technische Hochschule Lübeck, Germany
09:45 - 10:00 CS776	Paper Title: Unified Agile Governance Framework (UAGF): Bridging Agile Practice Gaps in Distributed Software Teams Author(s): Sarker Mahatab Masud, Toushif Hossain, Monosij Kanti Sarker, Abu Bakar Mohammad Abdullah, Farzana Sadia, Asif Mahmood Presenter: Sarker Mahatab Masud, Independent University, Bangladesh
10:00 - 10:15 CS616	Paper Title: E2E-CIFlow: An Automated End-to-End Testing Process Author(s): Evelym V. M. dos Santos, Lanier M. dos Santos, Marcos R. G. Bahiense Junior, Erick Costa Bezerra Presenter: Lanier M. dos Santos, Sidia RandD Institute, Brazil
10:15 - 10:30 CS777-A	Paper Title: The Adaptive Accelerated Quality Maturity Framework (AAQMF): A Maturity Model for Improving Requirements, Testing, and Software Quality in Emerging Software Economies Author(s): Sarker Mahatab Masud Presenter: Sarker Mahatab Masud, Independent University, Bangladesh
10:30 - 10:45 CS756	Paper Title: Refinement-Typed JML for Static Verification of Java Programs Author(s): Tomohiro Suzuki, Shinya Nishizaki Presenter: Shinya Nishizaki, Institute of Science Tokyo, Japan
10:45 - 11:00 CS765	Paper Title: A Lightweight Quality Assurance Framework for Adopting CMMI PPQA in SMEs Author(s): Mashrur Ahmed Khan, Tanvir Ibne Hossain, Md. Hasan Masud, Imtiaz Ahmmed, Asif Mahmood, Farzana Sadia Presenter: Tanvir Ibne Hossain, Independent University, Bangladesh

11:00 - 11:15 **CS830**	Paper Title: Software Architecture and the Economics of Production: A Strategic Perspective Author(s): Sarker Mahatab Masud, Toushif Hossain, Monosij Kanti Sarker, Abu Bakar Mohammad Abdullah, Nujhat Nahar, Asif Mahmood Presenter: Sarker Mahatab Masud, Independent University, Bangladesh
11:15 - 11:30 **CS520-A**	Paper Title: Applying Heuristic Evaluation to Assess Usability of an Online Open Journal Management System Author(s): Nasrah Hassan Basri, Roslinda Murad, NOOR MAIZATULSHIMA MUHAMMAD SABRI, SAIFUDDIN HJ. MOHTARAM, AMIR AARIEFF AMIR HUSSIN, Muhamad Syafiq Mohd Yasin, Presenter: Nasrah Hassan Basri, Universiti Poly-Tech Malaysia, Malaysia
11:30 – 11:45 **CS514-A**	Paper Title: Voice Robot Adoption in Hospitality: Evidence from Hotels in China Author(s): Xiaodong Zhu, Yao Lu, Debora Bottiga Presenter: Xiaodong Zhu, Politecnico di Milano, Italy

ONLINE SESSION

ON03: IoT, 6G and Digital Twin Systems

Chair: Joan Ferranco, Romblon State University, Philippines

13:00-15:15 | Feb. 5, 2026 | Zoom A 894 6912 4465 Password: 020305

Invited Speaker

Anand Nayyar | 13:00-13:30
Duy Tan University, Da Nang, Viet Nam

Speech Title: Mobile Communication Network: Evolution, Key Issues, Technologies and Real-Time Use Cases

Abstract: 6G mobile communication networks are expected to transcend the 5G paradigm by converging communications, sensing, positioning, and compute into a unified, AI-native fabric. This keynote synthesizes the evolution from LTE and 5G NR toward 6G, highlighting the architectural inflection points that enable sub-ms latency, ultra-high reliability, and Tbps-class peak rates through extreme spectrum utilization (mmWave/THz), reconfigurable intelligent surfaces, and cell-free massive MIMO. We examine key issues that will define deployability: energy-per-bit minimization under densification, hardware impairments at THz, waveform and numerology design for highly dispersive channels, tight time synchronization for distributed radio, and security/privacy for autonomous, data-driven RAN control. The talk surveys enabling technologies including semantic- and goal-oriented communications, joint communication and sensing (JCAS), integrated access and backhaul, edge intelligence with federated learning, and digital-twin-assisted optimization for closed-loop orchestration. Real-time use cases are grounded in measurable KPIs and end-to-end constraints: cooperative autonomous mobility with V2X+radar fusion, immersive XR with foveated streaming and edge rendering, industrial cyber-physical control with deterministic jitter budgets, and mission-critical public safety with resilient sidelink and multi-connectivity. Attendees will leave with a system-level view of 6G design trade-offs and a practical roadmap from prototypes to scalable deployments.

TAIK DETAILS

Time	Presentation
13:30 - 13:45 CS4033	Paper Title: gem5: An Advanced Simulation Platform for Flexible Computer Architecture Modeling and Performance Analysis Author(s): Ahmed Sarwar Mohammed Presenter: Ahmed Sarwar Mohammed, Judson University, USA

13:45 - 14:00 **CS638**	Paper Title: Situated Grammar Learning via the FOCUS Framework: Integrating AR, AI, and Gamification Author(s): A. Rahman Presenter: A. Rahman, Warsaw University of Technology, Poland
14:00 - 14:15 **CS758**	Paper Title: Research on the Application Status and Optimization Strategies of Intelligent Ear Tags in Monitoring Pig Body Temperature in Small and Medium-Sized Pig Farms Author(s): Hong Xie, Changning Ji Presenter: Hong Xie, Chongqing Three Gorges Vocational College, China
14:15 - 14:30 **CS799-A**	Paper Title: Towards a Modeling Approach for IoT-Based Digital Twin Systems Author(s): Abdelkrim Boulcina, Faiza Belala, Fateh Latreche Presenter: Abdelkrim Boulcina, University of Constantine 2-Abdelhamid Mehri, Algeria
14:30 - 14:45 **CS805**	Paper Title: Towards Solving the Noisy Neighbor Problem in Containerized Cloud Applications Author(s): Juri Liebig, Sergei Gorlatch, Denny Zerbe Presenter: Juri Liebig, University of Münster, Germany
14:45 - 15:00 **CS818**	Paper Title: An Experimental Study of Spring Boot-Based Monolithic and Microservice Systems Author(s): Yanxi Li Presenter: Yanxi Li, Newcastle University, UK
15:00 - 15:15 **CS820**	Paper Title: Federated Learning for Secure and Decentralized Customer Segmentation in Distributed Retail Systems Author(s): Oras Baker, Kasthuri Subaramaniam, Sellappan Palaniappan, Zatul Alwani Shaffiei, Amir Syafiq Syamin Syah Amir Hamzah, Abdul Samad Shibghatullah Presenter: Zatul Alwani Shaffiei, Universiti Teknologi Malaysia, Malaysia

ONLINE SESSION

ON04: EdTech, LLM and Learning Engagement

Chair: Li Fang, Nanyang Technological University, Singapore

13:00-15:15 | Feb. 5, 2026 | Zoom B 827 5683 7636 Password: 020305

Invited Speaker

Jianxia Cao | 13:00-13:30
Wuhan University of Technology, China

Speech Title: Strategic Online Social Information Avoidance and Learning Engagement Among College Students

Abstract: Social media is woven into college students' academic and social lives, supporting communication and information sharing, but it also introduces interruptions that fragment attention during study. Rather than disconnecting entirely, many students deliberately manage their exposure to online social information (e.g., postponing replies, muting notifications, or limiting app use). Grounded in conservation of resources theory and the notion of attention scarcity, this study examines how strategic online social information avoidance relates to learning engagement. Survey data were collected from 478 undergraduates. We measured two facets of strategic avoidance—delayed response and controlled use—together with behavioral and cognitive engagement. Results showed a strong positive association between strategic avoidance and learning engagement ($r = .72$, $p < .001$). Group comparisons indicated higher engagement among students reporting higher levels of strategic avoidance. Regression analyses further suggested that both delayed response and controlled use were significant predictors of engagement ($R^2 = .58$), with controlled use showing a slightly stronger relationship. These findings suggest that strategic management of social media interruptions may help students conserve attentional resources and sustain learning engagement in technology-rich learning contexts.

TAIK DETAILS

Time	Presentation
13:30 - 13:45 CS3009	Paper Title: SimuFit: A Gamified E-Learning Web Application for Physical Education Using Pose Detection Author(s): Jenoel Kline D. Recena, Katrina Francesca Soo, Dylan Louis S. Tayag, Mary Jane C. Samonte, Marc Conrad C. Reyes Presenter: Marc Conrad C. Reyes, Mapua University, Philippines
13:45 - 14:00 CS760	Paper Title: Leveraging Large Language Models for Automated Consistency Checking in Model-Driven Engineering

	Author(s): Aqdas Hassan, Farooque Azam, Muhammad Waseem Anwar, Saliha Ejaz Presenter: Aqdas Hassan, National University of Sciences and Technology (NUST), Pakistan
14:00 - 14:15 **CS764**	Paper Title: Retrieval-Augmented Generation for Age-Appropriate Interactive Children's Storytelling with Moral Integration Author(s): Maitri Shekhda, Natasha Santosh Abraham, Neha Nair, Pooja Agarwal Presenter: Natasha Santosh Abraham, PES University, India
14:15 - 14:30 **CS769**	Paper Title: Hybrid Encoder Architecture with LLM Post Processing for Speech Recognition Using EMG Author(s): Nandana C. A., Natasha Santosh Abraham, Neha Polamreddy, Noel Lobo, Sudeepa Roy Dey Presenter: Nandana C. A., PES University, India
14:30 - 14:45 **CS771**	Paper Title: Evaluating Logistic Regression Versus Neural Network Architectures for Sentiment Analysis Author(s): Chuk Fong Presenter: Ho Chuk Fong, Tunku Abdul Rahman University of Management and Technology, Malaysia
14:45 - 15:00 **CS782**	Paper Title: Advanced Research Assistance Generation and Multimodal Data Analysis Using LLM and LangChain Author(s): Sreecharan Palepu, Charu Kathuria, Shilpa S, Piyush Sahoo Presenter: Palepu Sreecharan, PES University, India; Piyush Sahoo, PES University, India
15:00 - 15:15 **CS748**	Paper Title: License Plate Authentication Using Raspberry Pi and YOLOv10 Author(s): Julian Orbigo Lim, Martin Lopez Quing, Noel Bautista Linsangan Presenter: Martin Lopez Quing, Mapua University, Philippines

ONLINE SESSION

ON05: Business Analytics and Social Media Insights

Chair: Raheem Mafas, Asia Pacific University of Technology & Innovation, Malaysia

15:30-17:45 | Feb. 5, 2026 | Zoom A 894 6912 4465 Password: 020305

Invited Speaker

Nirmalya Thakur | 15:30 - 16:00
South Dakota Mines, USA

Speech Title: Social Media as an Epidemiological Sensor

Abstract: Virus outbreaks leave detectable population-level footprints in social media, enabling epidemiological sensing beyond traditional reporting timelines. This work presents the Community Sentiment and Engagement Index (CSEI), developed to capture nuanced variations in public sentiment and engagement on social media, particularly during virus outbreaks. Developed with diverse sentiment indicators, CSEI integrates features such as engagement, daily post count, compound sentiment, fine-grained sentiments (fear, surprise, joy, sadness, anger, disgust, and neutral), readability, offensiveness, and domain diversity. Each component is systematically weighted using a multi-step Principal Component Analysis (PCA)-based framework, prioritizing features according to their contributions to variance across temporal sentiment shifts. This approach dynamically adjusts component importance, enabling CSEI to precisely capture high-sensitivity shifts in public sentiment. CSEI's development showed statistically significant correlations with its constituent features, underscoring internal consistency and sensitivity to specific sentiment dimensions. CSEI's responsiveness was validated using a dataset of 4,510,178 Reddit posts about COVID-19. The analysis focused on 15 major events, including the WHO's declaration of COVID-19 as a pandemic, the first reported cases of COVID-19 across different countries, national lockdowns, vaccine developments, and crucial public health measures. Cumulative changes in CSEI revealed prominent peaks and valleys aligned with these events, indicating significant patterns in public sentiment across different phases of the pandemic. Pearson correlation analysis further confirmed a statistically significant relationship between CSEI daily fluctuations and these events, highlighting CSEI's capacity to infer and interpret the shifts in public sentiment and engagement in response to major events related to virus outbreaks.

TAIK DETAILS

Time	Presentation
16:00 - 16:15 **CS2006**	Paper Title: Modeling Salary and Job Attractiveness from LinkedIn Descriptions With NLP Author(s): Chengting Jiang, Fan Wang, Chenfeng Diao, Zhihao Cheng

	Presenter: Zhihao Cheng, Zhejiang University, China
16:15 - 16:30 **CS4035**	Paper Title: Predicting SME Business Viability in Tagbilaran City Using Machine Learning with Popularity, Competition, and Volatility Factors Author(s): Justin Alec Miot Antonio, Marco Jovance Cajes Auza Presenter: Justin Alec Miot Antonio, Marco Jovance Cajes Auza, University of San Carlos, Philippines
16:30 - 16:45 **CS773**	Paper Title: Multi-Dimensional Evaluation of Research Papers Using Aspect-Based Sentiment Analysis and Linguistic Quality Indices Author(s): Nitheesh Pugazhanthi, Dhanush Suresh Jettipalle, Rohan M. Gunjiganur, Ketan Kancharla, Richa Sharma Presenter: Nitheesh Pugazhanthi, PES University, India
16:45 - 17:00 **CS775**	Paper Title: A Hybrid Project Management Framework for Large-Scale ERP Implementations: Design and Empirical Validation Author(s): Sarker Mahatab Masud, Zarif Wasif Bhuiyan, Hasan Masud, Mashrur Ahmed Khan, Imtiaz Ahmmed, Shazid Chowdhury, Monosij Kanti Sarker, Abu Bakar Mohammad Abdullah, Toushif Hossain, Nujhat Nahar, Asif Mahmood Presenter: Sarker Mahatab Masud, Independent University, Bangladesh
17:00 - 17:15 **CS778**	Paper Title: A Graph Machine Learning and Anomaly Detection Framework for Financial Fraud in GST Author(s): Harveen Kaur, Kshama Jain, Pratyush Tripathi, Moulik Machaiah, Sudeepa Roy Dey, Chandan Sadananda Presenter: Harveen Kaur, PES University, India
17:15 - 17:30 **CS793**	Paper Title: Application of Ensemble Stacking Models for the Optimization of a Company's Logistic Processes Author(s): Christian Ovalle, Frans Cardenas Palomino, Daniel Chirinos Armas Presenter: Christian Ovalle, Universidad Tecnológica del Perú, Peru
17:30 - 17:45 **CS4045**	Paper Title: Ethical Risk and Data Protection of Synthetic Data Generation Author(s): Yu Zhang, Ying Zhang, Xiaolin Chen, Ju Huang Presenter: Yu Zhang, The Third Research Institute of Ministry of Public Security, China

ONLINE SESSION

ON06: ML Across Domains and Time Series Analysis

Chair: Isaac Olusegun Osunmakinde, Norfolk State University, USA

15:30-18:00 | Feb. 5, 2026 | Zoom B 827 5683 7636 Password: 020305

Invited Speaker

Jixin Ma | 15:30 - 16:00
University of Greenwich, United Kingdom

Speech Title: Time Series and Applications

Abstract: Various models have been proposed for presenting and reasoning about time series and state sequences. However, in the literature, there is lack of formal characterisations of time series itself, and temporal aspects of states are neglected. This talk introduces a universal framework for representing and matching time series and state sequences which can subsume all the other existing relevant formalisms. A time-series, complete or incomplete, is formally characterised as a list of time elements temporally ordered one after another, where a state, denoting a time-independent episode of the world, is described in terms of a collection of fluents; and in turn, a state sequence, complete or incomplete, is formalised as a list of states, temporally ordered one after another. The problem of matching temporal sequences will be discussed, and some applications will be demonstrated.

TAIK DETAILS

Time	Presentation
16:00 - 16:15 CS622	Paper Title: Multiple-Expert Scenarios for Contagion Systemic Risk Model Using Kernel SVMs Author(s): Ayoub El Haddaji, Sanaa Harroudi, Karam Allali, Diego Hernan Peluffo-Ordoñez Presenter: Ayoub El Haddaji, University Hassan II of Casablanca, Morocco
16:15 - 16:30 CS803	Paper Title: Computational Analysis of User Ratings, Sentiments, and Text Classification Across Distinct Mobile App Categories Author(s): Wenjie Zou, Yuxuan Li, Yanlong Li, Xianbo Li Presenter: Wenjie Zou, University of Electronic Science and Technology of China, China
16:30 - 16:45 CS811	Paper Title: Identification of Genuine Leather and Faux Leather (Synthetic) on Belts Using Convolution Neural Network Author(s): Ella S. Ong, Quennie C. Torralba, Ernesto M. Vergara

	Presenter: Ella Santos Ong, Mapua University, Philippines
16:45 - 17:00 CS821	Paper Title: Visualization of Time Series Data with Time Differences Using Clustered Heatmaps and Line Graphs Author(s): Reika Endo, Hiroshi Hosobe Presenter: Reika Endo, Hosei University, Japan
17:00 - 17:15 CS824	Paper Title: Water Body Extraction with Landsat Imagery Using Improved Deep Multi-Scale Residual Method Author(s): Yue Yuan, Botian Zhou, Shuaipeng Wang Presenter: Botian Zhou, Chongqing Institute of Green and Intelligent Technology, Chinese Academy of Sciences, China; Shuaipeng Wang, Chongqing University of Posts and Telecommunications, China
17:15 - 17:30 CS750	Paper Title: An Integrated IoT and AI Framework for Sustainable and Compliant Property Management: The i-Ruma Ecosystem Author(s): Ng Ian Ouii Presenter: Ng Ian Ouii, University of Malaya, Malaysia
17:30 - 17:45 CS779	Paper Title: A Primer on AI-Driven Agricultural Advisory Systems for Rural Communities Author(s): Palepu Sreecharan, Piyush Sahoo, Parvathi Prakash, Pooja Agarwal Presenter: Sreecharan Palepu, PES University, India
17:45 - 18:00 CS828	Paper Title: Speech-to-Text-to-Sign Language Communication in Bahasa Melayu Using Deep Learning: A Hybrid Architecture for Real-Time Malaysian Sign Language Pose Generation Author(s): MUHAMMAD ARIF MUSTAFA, RUHAILA MASKAT, NURUL A. EMRAN Presenter: RUHAILA MASKAT, Universiti Teknikal Malaysia Melaka, Malaysia

ONLINE SESSION

Chair: KASTHURI SUBARAMANIAM, University Malaya, Malaysia

15:30-17:30 | Feb. 5, 2026 | Zoom C 893 9623 0561 Password: 020305

Invited Speaker

Hamed Sarbazhosseini | 15:30 - 16:00
University of Canberra, Australia

Speech Title: Shaping the digital future by aligning people, processes, data, and technology paradigm

Abstract: This speech examines the role of artificial intelligence (AI) in project management and presents a framework for evaluating AI systems and technologies through the lenses of people, processes, data, and technology. The framework has been applied in several domains, including project management, construction, higher education, and cybersecurity, and the speech will discuss some preliminary validation results from these applications.

Abhimanyu Mukerji | 16:00 - 16:30
Amazon, USA

Speech Title: Applications of Gen AI to Causal Inference

Abstract: This talk will provide an overview of cutting-edge methods in AI and how they can be applied to the field of causal inference.

M.L.Ravi Chandra | 16:30 - 17:00
Srinivasa Ramanujan Institute of Technology, India

Speech Title: Native AI in 6G: Enabling the future of RAN Intelligence, Connectivity, and Network Optimization

Abstract: Learning radio could dynamically learn and set up bespoke waveforms, constellations, and pilot signals that make more efficient use of available spectrum, resulting in improved performance. AI/ML-based physical layer solutions can enhance the energy efficiency of 6G networks by achieving as much as a 50% reduction in transmit power over 5G for the same bandwidth and data rate. On the MAC layer, AI/ML could customize signaling and access schemes, which could adapt to the service needs automatically. A learned air interface could embrace hardware non-linearities and limitations and fully adapt to any target platform. AI/ML could choose among all the myriads of parameters in a radio network far more

effectively than a human. A learned AI/ML air interface could transform how R&D is done by fundamentally altering the way algorithms are designed. In 6G, 20X network capacity is achieved through new spectrum and extreme massive MIMO. Scaling AI to reach its full potential is no trivial undertaking. To do so efficiently, it's imperative for AI processing to be intelligently distributed between the cloud and edge devices. generative AI-based search cost per query is estimated to increase by 10 times compared to traditional search methods. Hybrid AI will allow generative AI developers and providers to take advantage of the compute capabilities available in edge devices to reduce costs. "Hybrid AI" allows devices and cloud to run models concurrently — with devices running light versions of the model while the cloud processes multiple tokens of the full model in parallel and corrects the device answers if needed. AI transforms the design and evolution of the air interface (i.e., waveform, coding), bringing new capabilities like dynamic channel adaptation.

Burra Venkata Durga Kumar | 17:00 - 17:30

Xiamen University Malaysia, Malaysia

Speech Title: Prediction and recommendation of relevant diagnosis for skin pigmentation by using bigdata analysis

Abstract: Diagnostic dilemmas Skin pigmentation diseases (melanoma, vitiligo, and seborrheic keratosis) are painful to diagnose because of visual resemblances, and because clinical evaluation is subjective. The world has a shortage of health practitioners therefore there is a dire need of an automated diagnostic tool that is accurate, easy to use and safe. In this research, the Intelligent Skin Pigmentation Diagnostic System (ISPDS) is proposed and confirmed as the web application that integrates technologies of big data analytics and deep learning. The paper is based on the quantitative experimental approach, where a dataset of 22,216 skin images is used, and it contributes three important innovations to the area of study. First, this system is based on a specialized EfficientNetB0 architecture that is optimized on standard CPUs (Intel i7) as opposed to traditional methods of deep learning that need high-performance GPUs. This method eliminates model parameters by about 96 percent, spurring the idea of green AI and making them deployable in a decentralized manner. Second, to solve the problem of reliability of the black box models, this research applies a novel confidence-based safety gating mechanism. The system is focused on patient safety rather than algorithmic throughput by automatically discarding low-confidence (<80%) predictions due to environmental noise, which means high data fidelity. Third, this system does not just stop classification. It uses a visual analysis with patient metadata (age, gender and type of skin color) and a rule-based recommendation engine to deliver personalized medical triage recommendations.Empirical evidence demonstrates that the system demonstrated over 95% diagnostic accuracy on validation data, which confirms the effectiveness of the lightweight system. Finally, it has been established that ISPDS is a scalable, ethical and people-centric system that closes the divide between patients and professional care delivering a new standard of safety and efficiency in dermatological AI.

Tirumala Rao Chimpiri | 17:30 - 18:00

Stony Brook University, New York, USA

Speech Title: From ERP Systems of Record to Systems of Intelligence: The CAIP-HE Reference Framework

Abstract:

ERP (Enterprise Resource Planning) systems play a critical role in organizational operations, but many ERP modernization and AI projects continue to have challenges in using analytics to create coordinated enterprise-wide decisions. Organizations frequently experience fragmentation among generating insight, exercising decision authority and executing that decision across very complicated enterprise systems.

This presentation introduces CAIP-HE, a platform-agnostic reference framework for reasoning about intelligent ERP systems. Rather than prescribing architectures, tools, or implementation methods, CAIP-HE provides a conceptual and evaluative lens for understanding how enterprise systems evolve from transactional systems of record into intelligent, decision-enabling environments.

The framework identifies four interdependent capability domains—Cognitive Automation, Advanced Analytics, Integration and Interoperability, and Personalization—and explains why intelligence emerges only when these domains operate coherently as a system. While initially articulated through higher education ERP environments, CAIP-HE is intentionally cross-industry and applicable to complex enterprise systems across sectors.

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