

# 15th Int IEEE (Tech Co-spon) Conf. on Software, Knowledge, Information Management & Applications

8th - 9th December, Corus Hotel, KL, Malaysia

See details SKIMA Network site: <http://skimanetwork.org>

Time	Day 1 (8 Dec 2023, Friday)	
	Ballroom 2	Corus 2 Room
08:30 - 09:00	Registration: Ballroom 2 (Hallway)	
09:00 - 11:00	Session 1a	Session 1b
11:00 - 11:15	Coffee break (Hallway)	
11:15 - 12:45	Session 1d	Workshop: Safety and Risks of AI Systems (Open to all)
12:45 - 14:00	Lunch break (Dondang Sayang Restaurant)	
14:00 - 15:30	Session 1e	Session 1f (Virtual)
15:30 - 17:00	Opening Ceremony, Keynote 1 and Keynote 2	
17:00 - 17:30	Networking Tea (Hallway)	
19:30 - 21:00	SKIMA Gala Dinner (Ballroom 1)	

Time	Day 2 (9 Dec 2023, Saturday)	
	Ballroom 2	Corus 2 Room
08:30 - 09:00	Registration: Ballroom 2 (Hallway)	
09:00 - 11:00	Session 2a	Session 2b
11:00 - 11:15	Coffee break (Hallway)	
11:15 - 12:45	Panel Session: Accreditation of Programs and Internationalization experiences at South Asian HEIs (SSAPI)	Session 2d (Hybrid)
12:45 - 14:00	Lunch break (Dondang Sayang Restaurant)	
14:00 - 16:00	Session 2f (Virtual)	Session 2g (Virtual)
16:00 - 17:00	Keynote 3 and Keynote 4	
17:00 - 17:15	Closing Ceremony	
17:15 - 17:30	Networking Tea (Hallway)	

Opening Ceremony	
15:30 - 15:45	Opening speech by Conference chairman
15:45 - 16:15	Keynote speaker 1
16:20 - 16:50	Keynote speaker 2
Keynote Speech 1	
Prof. Ir. Dr. Mohammad Faizal Ahmad Fauzi (Multimedia University, Malaysia)	Addressing Towards Precision Medicine: Artificial Intelligence in Digital Pathology for Cancer Treatment Recommendation
Keynote Speech 2	
Khondaker A. Mamun (United International University (UIU), Dhaka)	Building Digital Health Ecosystem to Achieve Universal Health Coverage

Keynote Speech 3	
Prof Dr Yonghong Peng (Manchester Metropolitan University (MMU) UK)	Human-Machine Cooperative Intelligence: towards the new generation of Human-Centred AI
Keynote Speech 4	
Prof. Victor Chang (Aston University, UK)	An Improved Federated Learning Algorithm for Privacy Preserving in Cybertwin-Driven 6G System

SKIMA Gala Dinner (Ballroom 2)	
19:30 - 20:00	Opening speech n VIP speech
20:00 - 20:30	Cultural performance
20:30 - 20:45	Best paper award
20:45 - 20:50	SKIMA 2024 Declaration (by Indonesian partner)
20:45 - 21:00	Photography session

Technical Session: Day 1, 8 December 2023 (Friday)

Session/Venue/Time/ Session Chair	Paper ID	Authors	Paper Title
<p>Session 1a: Smart Health I Room: Ballroom 2, Corus Hotel</p> <p>Friday, 8 December 2023, 9.00 am - 11.00 am</p> <p>Session Chair: Prof Florentinus Budi Setiawan (f.budi.s@unika.ac.id)</p>	43	Keerthana Mannarapparambil Sivan, Shanfeng Hu, Nauman Aslam, Xiaomin Chen, Pradorn Sureephong, Suwit Wongsila and Sabeela Q. Ahmed	Heart Rate Anomaly Detection Using Contractive Autoencoder for Smartwatch-Based Health Monitoring
	87	Khalil Khan, Taimur Ahmad and Irfan Uddin	Cardiac Deep Learning Model for Congenital Heart Disease Recognition
	47	Akmal Hakim Sham, Nurul Muazzah Abdul Latiff, Fahad Taha, Nurul Fariesya Suhaila Md Sazihan, Sanzida Rahman and Nor Aishah Muhammad	Voice Pathology Detection System Using Machine Learning Based on Internet of Things
	73	Insaf Mellakh, Tao Wang, Robin Jacquot, Nejjib Moalla and Rabaa Youssef-Douss	Enhancing the Etiological Diagnosis of Uveitis with Artificial Intelligence: A Predictive Approach
	42	Drishya Raj, Shanfeng Hu, Nauman Aslam, Xiaomin Chen, Worasak Rueangsirarak, Surapong Uttama and Fatimah Nauman	Elderly Standing Imbalance Detection Using Noise-Resilient Robust Mean Estimator and Deep Learning
	61	Slamet Riyadi, Arifin Wibisono, Leonardus Heru Pratomo, Florentinus Budi Setiawan and Bishal Rimal	Switched Reluctance Generator : An Alternative Source for Microgrid
<p>Session 1b: Electrical and Communication Engineering Room: Corus 2 Room, Corus Hotel</p> <p>Friday, 8 December 2023, 9.00 am - 11.00 am</p> <p>Session Chair: Prof. Ir. Dr. Sharifah Hafizah Syed Ariffin (shafizah@utm.my)</p>	6	Khaled Yahya Mohamed Mahmoud Elkarazle, Valliappan Raman, Caslon Chua and Patrick Then	PolyLite: A Lightweight Transformer with Multi-Scale Attention for Colorectal Polyp Segmentation
	30	Farah Adriana Samsul, Nik Noordini Nik Abd Malik, Najla Ilyana Ab Majid and Arnidza Ramli	Improvement Sidelobe Level Suppression of Circular Collaborative Beamforming through the Imperialist Competitive Algorithm
	8	Sushil Paudel and Prashant Kumar Shah	The Influence of Load Growth on Nepal's Distribution Network: Examining the Integration of Electric Cooking Stove
	50	Sanzida Rahman, Nadiatulhuda Zulkifli and Akmal Hakim Sham	Physical Layer Investigation on the Coexistence strategies of GPON, NGPON1 and NGPON2
	48	Noratiqah Binti Abdul Muin, Nurul Ashikin Binti Daud and Nur Najohatul Huda Saris	Nanocavity Waveguide in Two-Dimensional Photonic Crystal Structure
	66	Arifin Wibisono, Slamet Riyadi and Dimas Yanuardi	The Influence of Partial Shading on the Active Power Output of Solar Grid Tied Inverter
<p>Session 1d: Artificial Intelligence Applications I Room: Ballroom 2, Corus Hotel</p> <p>Friday, 8 December 2023, 11.15 am - 12. 45 pm</p> <p>Session Chair: Prof Nejjib Moalla (nejib.moalla@univ-lyon2.fr)</p>	45	Ahmed Aman Ibrahim, Noah Hassan Ugail, Tazkia Hoodh Jayatileke, Millie Hope Saffery and Hassan Ugail	Facial Beauty Analysis using Distribution Prediction and CNN Ensembles
	60	Kangjing Li, Sober Elsayed, Ruhul Sarker and Daryl Essam	Landscape-based Genetic Algorithm with Quantum Entanglement for Dynamic Optimization Problems
	75	Prum Sophea, Cholsa Kosal and Bunnarath Saroeun	Kun Khmer Posture Recognition using Body Landmarks and Comparative Experiments with Multiple Classifiers
	13	Jodian Fariza Aji and Arian Dhini	Short-Term Prediction of Water Level on Ciliwung River with Hybrid Neural Network
	14	Gilang Akbar and Arian Dhini	Fault Detection Model of Rotating Machinery Using Machine Learning: Case Study of Oil and Gas Company
<p>Session 1e: Education and other Areas Room: Ballroom 2, Corus Hotel</p> <p>Friday, 8 December 2023, 14.00 pm - 15.30 pm</p> <p>Session Chair: Prof Aicha Sekhari (aicha.sekhari@univ-lyon2.fr)</p>	83	Md Shakil Ahmed, Ravi Koirala, Andrii Prokhorchenko and Keshav Dahal	Ridesharing in rail-freight transport and use of digital aggregator: prospects and difficulties – a developer's perspective
	85	Balaji Aresh, Parag Vichare, Keshav Dahal, Tony Leslie, Marco Gilardi, Alyona Lovska and Glib Vatulia	Integration of Extended Reality (XR) in non-native undergraduate programmes
	89	Parag Vichare, Sushil Paudel, Bishal Rimal, Sujan Adhikari, Violetta Panchenko, Rameshwar Rijal and Keshav Dahal	Traditional, Video and Extended Reality (XR) assisted Flipped Classroom teaching methods: an approach and comparison
	54	Seingheng Hul, Raksmei Thinh, Noy Mounh, Sovann Chen, Molika Seng, Sokliep Pheng and Sovan Tep	Industrializing Cambodia through Technology Transfer and Adoption
	67	Florentinus Budi Setiawan, Slamet Riyadi, Leonardus Heru Pratomo and Arifin Wibisono	Design of Electric Resource for Solar Tunnel Dryer for Night and Cloudy Condition
<p>Session 1f: (Virtual Session) Smart Health II Room: Corus 2 Room, Corus Hotel</p> <p>Friday, 8 December 2023, 14.00 pm - 15.30 pm</p> <p>Session Chair: Prof. Pradorn Sureephong (dorn@camt.info)</p>	82	Sharif Ahmed, Alamgir Hossain and Zia Ush Shamszaman	Exploration of the NHS Staff Engagement and Morale for the Patient Safety and Health Care Experiences
	79	Lijuan Ren, Randa Cheima Bendjeddou, Giacomo Kahn, Aicha Sekhari Sekloui, Bat-Erdene Myagmar and Ariuntuul Garidkhuu	An Intelligent Remote Consultation System for Oral Prevention in Children: A Case Study in Mongolia
	16	Marzia Hoque Tania and David Clifton	Unleashing the Power of Federated Learning in Fragmented Digital Healthcare Systems: A Visionary Perspective
	68	Roshan Kumar, Ramesh Kumar Ayyasamy, Anbuselvan Sangodiah, Kesavan Krishnan, Abdulkarim Kanaan Jebna and Lim Jit Theam	Sentiment Analysis of ChatGPT Healthcare Discourse: Insights from Twitter Data
	78	Sanae Allam, Adiba El Bouzekri El Idriissi, Aicha Sekhari Sekloui and Noredine El Kinani	Evaluating Product Data Modeling for Vaccine Lifecycle Management

Technical Session: Day 2, 9 December 2023 (Saturday)

Session/Venue/Time/ Session Chair	Paper ID	Authors	Paper Title
<p>Session 2a: Artificial Algorithms and Software I</p> <p>Room: Ballroom 2, Corus Hotel</p> <p>Saturday, 9 December 2023, 9.00 am - 11.00 am</p> <p>Session Chair: Prof Yacine Ouzrout (yacine.ouzrout@univ-lyon2.fr)</p>	40	Chethana Chandrasiri, Subodha Dharmapriya and Asela Kulatunga	Reconfiguring Main Stream Vegetable Supply Chain in Sri Lanka to Reduce Distribution Related Post Harvest Losses & Emissions
	44	Siti Zaleha Harun, Norafida Ithnin, Nur Haliza Abdul Wahab and Khairunnisa Abdul Kadir	Facial Feature-Based Microsleep Detection with High Precision Using Deep Learning
	38	Chien-Sing Lee, Yu-Han Eu, Jesslyn Xiao-Lin Chai, Wui-Ling Chai, Hannah Xiao-Ai Ho, Jia-Ying Tan, Muhammad Haziq Husni Morsim, Julia Than Aye and Ee-Yaang Siew	Innovation Helixes, blockchain, open innovation and phased rewards in promoting circular design in waste management: A conceptual HCI study
	52	Yong Ann Voeurn and Sophea Prum	Designing a Rabbit-Inspired Hexapod Robot with Steed-Beast Mechanism
	15	Nourma Sabagh, Yvonne Lee and Lilian Anthonysamy	Investigation Adoption and User Experience of Digital Health Technologies Amongst Elderly Population
<p>Session 2b: Artificial Algorithms and Software II</p> <p>Room: Corus 2 Room, Corus Hotel</p> <p>Saturday, 9 December 2023, 9.00 am - 11.00 am</p> <p>Session Chair: Prof Rameshwar Rijal (rijaLrameshwar@kec.edu.np)</p>	76	Sophea Prum, Kimlong Seng, Mengthong Long and Yong Ann Voeurn	Cambodian Multi-Script License Plates Recognition: An Experimental Study
	21	Firnanda Al-Islama Achyunda Putra, Mardiana Andarwati, Galandaru Swalaganota and Andini Risfandini	Comparison SIFT and HOG Algorhythm for Vehicle Classification in Malang Probolinggo
	77	Antal Kristof and Zoltán Szabó	Application of artificial intelligence in heuristic models for process improvement
	65	Ildikó Szabó and Katalin Ternai	Mapping digital readiness model into ontology
	81	Nur Fatinah Md Hafiz, Syamsiah Mashohor, Mohammad Habib Shah Ershad Mohd Azrul Shazril, Mohd Fadlee A. Rasid and Azizi Mohd Ali	Comparison of Mel Frequency Cepstral Coefficient (MFCC) and Mel Spectrogram Techniques to Classify Industrial Machine Sound
<p>Session 2d: (Hybrid Session) Security and Safety Room: Corus 2 Room, Corus Hotel</p> <p>Saturday, 9 December 2023, 11.15 am - 12.45 pm</p> <p>Session Chair: Dr Ravi Koirala (Ravi.Koirala@uws.ac.uk)</p>	69	Sharifah Hafizah Syed Ariffin, Nordurratul Hikmah Mustaffa, Favian Dewanta, Ida Wahidah Hamzah, Muhammad Ariff Boharudin and Nur Haliza Abdul Wahab	Hybrid Feature Selection Based Lightweight Network Intrusion Detection System for MQTT Protocol
	31	Ferda Ernawan, Ng Ching Onn, Suraya Abu Bakar and Muhammad Zarlis	Secure Image Authentication and Copyright Protection Using Integer Wavelet Transform
	37 (Virtual)	Muhammad-Haziq Mohd-Tojudin, Shahbe Mat-Desa and Junaidi Abdullah	Traffic Density Identification From UAV Images Using Deep Learning: A Preliminary Study
	7 (Virtual)	Binura Ganegoda and K.A.D.C.P Kahandawaarachchi	Unlocking the Potential of Non-Fungible Tokens: A Novel Approach for Privacy-Preserving in EHR
	86 (Virtual)	Usha Moorthy	Improving Smoke Detection and Forest Fire Through Deep Learning with the Implementation of Learning Without Forgetting
19 (Virtual)	Farhan Ishtioque, Erina Binte Motahar, Md Sakibur Rahman Sajal, M Ashraful Amin, Farhana Sarker and Khondaker A. Mamun	Students' Attention Classification During Class Lecture Using BCI and Machine Learning: A Pathway Towards Neurofeedback-based Learning	

## Technical Session: Day 2, 9 December 2023 (Saturday)

<p><b>Session 2f: (Virtual Session)</b>  <b>Artificial Intelligence Applications II</b>  <b>Room: Ballroom 2, Corus Hotel</b></p> <p><b>Saturday, 9 December 2023,</b>  <b>14.00 pm - 16.00 pm</b></p> <p><b>Session Chair:</b>  <b>Dr Marco Gilardi</b>  <b>(Marco.Gilardi@uws.ac.uk)</b></p>	64	Mengji Yang, Aicha Seklouli, Haiqing Zhang, Lijuan Ren, Xi Yu and Yacine Ouzrout	Popularity Prediction of Micro-blog Hot Topics Based on Time-series Data
	12	Hongmei Shu, Ahmad Yahya Dawod, Lei Mu and Worawit Tepsan	A Survey of Machine Learning Applications in Microseismic Signal Recognition and Classification
	56	Yashashvisindhu Basha Boina, Alamgir Hossain, Kabir Kazi, Sureephong P, Prum Sopea, Stembrouck J, Sum Odum, Vaian V A and Wiraningsih E D	Optimal Fish Feeding Strategy Through Behaviour Analysis for Dynamic Influencing Factors
	71	Md Mahmudul Hasan, Silvia Cirstea and Meherun Nesa Sharaboni	NeuroXRFitness: Music Therapy for Mental Stress Relief Using EEG Signal
	53	Md. Mahmudul Hasan, Ashim Chakraborty, Abu Kowshir Bitto, Nazia Hameed, Muhammad Mahfuzur Rahman and Ruchika Nanwani	Net0Chain: An AI-enabled climate and environmental risks (CER) framework for achieving net-zero
<p><b>Session 2g: (Virtual Session)</b>  <b>Education and Other Areas</b>  <b>Room: Corus 2 Room, Corus Hotel</b></p> <p><b>Saturday, 9 December 2023,</b>  <b>14.00 pm - 16.00 pm</b></p> <p><b>Session Chair:</b>  <b>Prof Slamet Riyadi</b>  <b>(riyadi@unika.ac.id)</b></p>	49	Geraldine Bengsch, Antesar Shabut, Sorrel Harriet and Jim Diocou	Unravelling the skills deficit in tech: An educator's perspective
	58	Ananya Subhra Trisha, Ishmam Bin Rofi, Mashiyat Mahjabin Eshita, Joy Biswas and Md. Sabbir Ahmed	Content, Consumption, and Productivity: An Empirical Analysis of Compact Streaming and Reel Content's Effects on the Productivity of Today's Emerging Generation
	22	Prashant Barge, Bhakti Agarwal, Dr. Shailesh Rastogi, Saumya Singh, Aman Pushp and Pracheta Tejasmayee	Does the Digital payment system affect the Poverty Score in India?
	20	Humberto de Souza, Ivan Bentes, Jean Brito, Jorge da Silva, Saulo Gomes, Tainá Felix and Thayza Barros	Challenges in distributed software development: a systematic review
	29	Monyrath Buntoun and Fidero Kuok	Cross-race Effect in Face Recognition: An Observation on Southeast Asian

# Workshop Session: Industrial Engagement of Drone and AI Risks

Day 1, 8 December 2023 (Friday)

11. 15 am - 12. 45 pm

Corus 2 Room, Corus Hotel

Session Chair :	Prof. Keshav Dahal, University of the West Scotland, UK
Topics & Demonstrators:	Opportunities and Challenges of Drone Technology for Agriculture. <i>Mr. Sokly Leng (CEO of Drone Khmer Technology)</i>
	Risks of Artificial Intelligent Systems: Analyse, Evaluate and Mitigate your risks for research and SMEs <i>Prof Alamgir Hossain (CEO, Digital Readyness and Intelligence Ltd., UK)</i>
	Paper ID 26: An Explainable AI Tool for Operational Risks Evaluation of AI Systems for SMEs <i>M A Hossain, Naeimeh Nourmohammadi, Julius Hossain, M Hoque Tania, T A Han, D Pandit, S Joneidy and M M Hasan</i>