



SKIMA 2022

14th Int **IEEE** (Tech Co-sponsor) Conf on **Software, Knowledge, Information Management & Applications**
 (With The International Workshop on University and Digital Sustainability)
 02-04 December 2022, CamTech University, Phnom Penh, Cambodia
 (<http://skimanetwork.org> and <https://camtech.edu.kh/seminars-conferences/skima-2022/>)

Program Outline (2nd to 4th December 2022)

Time	Detail	In Charge Person
First Day (2nd December 2022)		
13:00 - 14:00	Conference Registration	CamTech Register Team
14:00 - 14:10	Welcoming Speech by Conference Co-Chair	Prof. Alamgir Hossain Vice President, CamTech University, Cambodia
14:10 - 14:30	Opening Speech	HE Professor Chhem Kieth Rethy , Minister Attached to the Prime Minister and Secretary of State, MISTI, Cambodia
14:30 - 14:55	Keynote Speech on Technology Road Map for Cambodia	Session Chair: Mr Siriwat Chhem , Director of Centre for Inclusive Digital Economy, AVI & Advisor of CamTech University, Cambodia Speaker: Dr Seingheng Hul , Director General, MISTI, Cambodia
14:55 - 15:00	Outline of the Program/Facilities by Program Co-Chair	Dr Pradorn Sureephong , Chiang Mai University, Thailand
15:00 - 15:30	Tea / Coffee Break	
15:30 - 16:00	Keynote Speech on Addressing AI Safety Regulation and Cooperation Dilemmas in Complex Systems.	Session Chair: Prof Keshav Dahal , University of the West of Scotland, UK Speaker: Professor Dr The Anh Han , Teesside University, UK
16:00 - 17:30	Parallel Session 2.1 on eACCESS; Room 601 Paper ID :13, 23, 34, 41, 42, 43 Parallel Session 2.2; Room: 602 Paper ID: 17, 18, 32, 54, 61, 74	Session Co-Chairs: Dr Pradorn Sureephong , Chiang Mai University, Thailand & Prof Najib Moalla , University of Leyon-2, France Session Co-Chairs: Prof Yacine Ouzrout , Leyon-2 University, France & Professor Rameshwar Rijal , Kantipur Engineering College, Nepal, CamTech University
18:00 - 21:00	Dinner and Special Session on International Academic & Research Collaboration. Outline of the Session: <ul style="list-style-type: none"> Local School to Local/International University Collaboration (Academic) Local University to Local/International University Collaboration for Teaching, Part/Whole Programs, Resource Sharing, etc. Students/Staff Exchanges, Short Visits, Joint Innovation Projects, Competitions, etc. Research & Innovation: Funding Bid, Joint Research/Publication, Joint PhD/MRes Degree /Supervision, etc. 	Facilitator: Professor Alamgir Hossain , Vice President, CamTech University Concluding Remarks by HE Professor Chhem Kieth Rethy , Minister Attached to the Prime Minister and Secretary of State, MISTI, Cambodia.

	<ul style="list-style-type: none"> Global Industrial Collaboration for Innovation/Problem Solving/Training for New Technologies, etc. Action Plan with a support from student recruiting agents/sponsors (5-7 min) 	
--	--	--

Second Day (3rd December 2022)

8:30 – 9:00	Keynote Speech on Artificial Intelligence in Health Care and Manufacturing.	Session Co-Chair: Professor Yacine Ouzrout , University of Lyon2, France & Prof. Keshav Dahal , University of the West of Scotland, UK Speaker: Professor Dr Xinheng Henry Wang , Xi'an Jiaotong-Liverpool University
9:00 – 9:30	Keynote Speech on Augmenting Human Intelligence for Practical Decision Making	Session Chair: Professor Keshav Dahal Speaker: Professor Ruhul Sarker , University of New South Wales, Canberra, Australia
9:30 – 9:45	Keynote Speech on STEM Education	Session Chair: Professor Alamgir Hossain , Vice President, CamTech University Speaker: HE Mr. Williams Dominic , British Ambassador, Cambodia
9:45 – 10:00	Coffee Break	
10:00 – 11:40	Parallel Sessions Session 3.1 Paper ID: 15,16,20,31,39,44	Co-Chairs: Dr Sophea Prum & Prof Nejib Moalla
	Session 3.2 Paper ID: 45,47,57,63,66,70	Co-Chairs: Dr Vatana Chea & Professor Ruhul Sarker
	Session 3.3 Paper ID: 65,67,68,72,76,85	Co-Chairs: Ms Omouy Heang & Professor Yacine Ouzrout
11:40 – 12:10	Keynote Speech on Applications of Extended Realities Technologies in Higher Education	Session Chair: Professor Ruhul Sarker , University of New South Wales, Canberra, Australia Speaker: Dr Marco Gilardi (University of the West of Scotland)
12:10 – 13:30	Lunch Break	
13:30 – 15:00	Parallel Special Sessions Session on Smart Agriculture: Paper ID: 48, 53, 71, 77, 91	Co-chairs: Professor Keshav Dahal
	Session on Digital Health: Paper ID: 12, 24, 27, 58, 64, 82;	Co-chairs: Dr Tineke Water , University Puthisastra & Professor Nuaman Aslam , Northumbria University (virtual) at Newcastle, UK
15:00 – 15:20	Tea/Coffee Break	
15:20 – 17:30	International Workshop on University and Digital Sustainability <i>Synopsis: The workshop aims to promote the concept of Digital Sustainability, which is defined as the effort to develop and apply intelligent technologies to achieve sustainable economic growth in the context of the United Nations (UNs) SDGs. It will be a two hours workshop with the heads of national and international higher education institutions (HEIs) to share experiences about the potential and challenges of the digital transformation for institutional digital services (finance, HR, library, sports, learning management systems, etc.), e-learning, blended learning, m-learning, VR/game-based learning, etc. The workshop's topic includes transforming cross-faculty research and innovation using new digital technologies, particularly data science and AI. It also aims to bring a new dimension to the universities to work with UNs SDG team, government agencies and policymakers to build a digital framework for sustainable socio-economic growth.</i>	

	Session Chair: Prof Chhem K Rethy , Member, UN/SDSN	
15:20 – 15:30	Welcoming Speech	Prof Chhem K Rethy , Member, UN/SDSN
15:30 – 16:00	Opening Speech	Prof Jeffrey Sachs , President, UN/SDSN
16:00 – 17:25	Panel Discussion on University and Digital Sustainability focusing on SDGs: <ul style="list-style-type: none"> ▪ Dr Sothy Khieng, President, CamTech University ▪ Prof Ian Findlay, President & Vice Chancellor, University of Puthisastra ▪ Mr Leo Fernandez, Vice President of Academic Affairs, Kirirom Institute of Technology ▪ Prof Keshav Dahal, University of the West of Scotland, UK ▪ Professor Ruhul Sarker, University of New South Wales, Australia ▪ Professor Yacine Ouzrout, University of Lyon2 ▪ Professor Rameshwar Rijal, Kantipur Engineering College, Nepal ▪ Other Local/International tbc 	
17:25 – 17:30	Closing Remarks with an indication of the plan to develop an MSc in Digital Transformation for Sustainability program focusing on SDGs	Professor Alamgir Hossain , CamTech University
18:00 – 20:30	Conference Gala Dinner	

Third-Day (4th December 2022)

8:30 – 9:00	Keynotes Speech on Assistive Technologies in Healthcare	Session Chair: Prof Dewan Md Farid , United International University Speaker: Professor Hongnian YU , Edinburg Napier University, UK
9:00 – 9:30	Keynote Speech on Big Data Analytics Employing Machine Learning: Challenges and Issues	Session Chair: Prof Yacine Ouzrout , University of Leyon-2, France Speaker: Prof Dr Dewan Md Farid , United Int. University)
9:30 – 10:30	Parallel Sessions Session 4.1 Paper ID: 75, 78, 50 Room: 601 Session 4.2 Paper ID: 14, 46, 69, 89; Room: 602 Session 4.3 Paper ID: 22, 35, 52; Room: 603	Chair: Prof Ruhul Sarker Prof Dewan Md Farid Dr Nejb Moalla
10:30 – 11:00	<i>Tea/Coffee Break</i>	
11:00 – 12:00	Parallel Sessions Session 4.4 Paper ID: 21,49,59,79; Room: 601 Session 4.5 Paper ID: 73,81,90,88; Room: 602	Chair: Prof Rameshwar Rijal Pradorn Sureephong
12:00 – 12:30	Closing Ceremony	
12:30 – 13:30	Lunch Pack	
13:30 – 17:00	Tour (Guided Tour in Phnom Penh City) Only registered participants for tour	

Accepted Papers

ID	Title
12	iTB-test: An Intelligent Image-enabled Diagnostic System for In Vitro Screening of Infectious Diseases

13	Optimal Placement of Phasor Measurement Units Ensuring Power System Observability
14	A Meta-Analysis of healthcare supply chain performance for patient safety
15	Designing a classification algorithm for skin lesions
16	A framework of ensemble CNN models for real-time sign language translation
17	Vibro-vestibular Wheelchair for Vehicle Riding Experience in Immersive Virtual Reality
18	Education Technology: Center of Excellent for Integration MySQL course to University of Health Sciences Students
20	A novel framework for co-designing of An Artificial Intelligence Based Television-enabled Application to Address Social Isolation and Alleviating Loneliness for Older People
21	ETB-SRF: An Efficient Trust-Based Secure Routing framework in Mobile Ad-Hoc Networks
22	Evolutionary Constrained Optimization with Dynamic Changes and Uncertainty in the Objective Function
23	Historical Data Based Monitoring of Hydro Generator Using Machine Learning
24	Hypertension Prediction Using Optimal Random Forest and Real Medical Data
27	The new progress and methods of privacy protection on medical and health big data
31	Multi-Scale Electrical Appliance Load Signature for Non-Intrusive Load Monitoring Classification
32	Women Entrepreneur Capacity Building toward Digital Economy Using All-in-One Platform
34	A 5.4 kWp Smart Grid Laboratory Development for Higher Education and Industrial Workshop
35	Data-Driven Approach to Raise the Marketing and Trade Strategy based on Halal Food Product Transactions of China Market
39	Fault Log Text Classification using Natural Language Processing and Machine Learning for Decision Support.
41	Optimization of battery storage capacity and operation for balancing residential PV installation
42	Electric Vehicle Impact Assessment on Distribution Network of Phuentsholing
43	Incorporating Extended Reality technology for delivering Computer aided Design and visualisation modules
44	Multidimensional disturbance propagation model for a network of bus lines
45	A DL based Framework for Multimodal Data Fusion in Traffic Jam prediction
46	Indoor Air Quality Assessment using IoT-based Sensors in Nursing Homes
47	EEG-based Epileptic Seizure Detection Using Generative Model
48	An Explainable Real-time Decision Support System for Identifying Fish Diseases and Analysing Water Quality
49	A T-Spherical Neutrosophic Fuzzy DEMATEL-ANP Approach to Problematiques of Blockchain Technology in Smart Cities
50	Evaluating Organization's Portfolio of Long-horizon Strategic Action Plans: An Integrated Delphi-DEMATEL-ANP Approach
52	Weeding Robot Based on Lightweight Platform and Dual Cameras
53	Drivers of Farmers' Continuance Intention on Smart Farming and Sustainability in Thailand
54	Design and Optimal Control of a Two-Stage Efficient and High PF AC-DC Converter for High-Power Density Industrial Applications
57	A Clustering Based Priority Driven Sampling Technique for Imbalance Data Classification
58	Spatiotemporal Gait Analysis for Cardiovascular Disease
59	A New Fault Detection Approach in Wireless Sensor Networks
61	Classifying Time-Series of IoT Flow Activity using Deep Learning and Intransitive Features
63	Deep Facial Features for Analysing Artistic Depictions – A Case Study in Evaluating 16th and 17th Century Old Master Portraits
64	Deep Learning Assisted Kidney Organ Image Analysis for Assessing the Viability of Transplantation
65	Attention-Based Scene Graph Generation: A Review
66	Slow Component Analysis Based Interictal-Preictal Electroencephalography Prediction
67	On Impact of Adversarial Evasion Attacks on ML-based Android Malware Classifier Trained on Hybrid Features
68	Meta-Learning in Supervised Machine Learning
69	Performance Measurement and Improvement in Short Food Supply Chains: A Case Study from Lyon, France
70	Encoder-Decoder Language Model for Khmer Handwritten Text Recognition in Historical Documents
71	Integration of augmented reality with blended learning to educate Manufacturing and industrial engineering: A Conceptual framework
72	Agriculture 4.0 in Bangladesh: Issues and Challenges
73	A Statistical Analysis of the Staff Data to Evaluate the Influence of the Retention Factors in the NHS England
74	Generation of high-quality relevant judgments through document similarity and document pooling for the

	evaluation of information retrieval systems
75	Preparation of an Excellence Center in Industry 4.0 based on Computer Engineering Paradigm
76	An Experimental Study on Hybrid Feature Selection Techniques for Sentiment Classification
77	Towards Smart Farming: Simulation Framework to Exploit Network Connectivity for End-to-End Data Transmission
78	Problem-based redesign of the BIS curriculum
79	Digital Transformation of Rural Villages in Developing Counties – Case study at Cambodia
81	Multi-Operator based Genetic Algorithm for Resource Constrained Project Scheduling
82	Evaluate the effectiveness of fall prevention exercise posture for elderly
85	A VR based children formula feed preparation training simulator with AI-enabled automated assessment features
88	Cybersecurity Readiness in Developing Countries: An Age Group Focused Survey to Demonstrate Potential Risks of the Cambodians
89	Cambodia's EduTech Roadmap 2030
90	Family Background as the Determinant of University Student's Technological Readiness: Evidence from Cambodia
91	DRYING HERBS WITH A SMART DEHYDRATOR

Emergency Contacts

1. CamTech University

Phone: +855 78 21 21 81 / +855 86 21 21 81

Address: CamTech Street, Sangkat Prek Tasek, Khan Chroy Chongvar Phnom Penh, Phnom Penh, 121003

2. Police – Phnom Penh

Phone: 117

3. Tourist Police – Phnom Penh

Phone: +855 12 942 484

Address: St. 598, 12107, Phnom Penh

4. Traffic Police – Phnom Penh

Phone: +855 12 999 999 / +855 23 650 6767

Address: St. 598, Kilometre Lek 6 Village, 12108, Phnom Penh

5. Intercare Medical Center

Phone: +855 23 996 900

24/7 Emergency: +855 0968 119 119

Address: Olympia Medical Hub, Building C5 Tower Street 161 Phnom Penh, 12253

6. Calmette Ambulance – Phnom Penh

Phone: 119 or +855 23 724 891 or +855 23 426 948

Calmette Ambulance: +855 12 912 947 / +855 16 585 108 / +855 92 858 434

Address: No. 3, Preah Monivong (St. 93), 12201, Phnom Penh

7. Public Institutions

Ministry of Tourism: +855 23 211 593

Ministry of Foreign Affairs and International Cooperation: +855 23 214 441

Ministry of Public Works and Transport: +855 23 427 845

State Secretariat of Civil Aviation: +855 23 725 938 / +855 23 216 645

Department of Immigration: +855 23 890 380 / +855 12 434 849 / +855 12 856 233