21st International Conference on Advances in ICT for Emerging Regions (ICTer2021) - Conference Agenda

Opening of the UCSC Research laboratory and ICTer2021 Inauguration 1st of December 2021	
2.30 PM	Inauguration of the 21st International Conference on Advances in ICT for Emerging Regions (ICTer2021) Conference - Arrival of the Chief Guest
2.35 PM	Opening of the Research lab / Reception area / Museum Phase - II / Computer Laboratory
3.00 PM	Welcome Address by the Director of UCSC
3.05 PM	Address by the 21st International Conference on Advances in ICT for Emerging Regions (ICTer2021) Conference Co-chairs
3.20 PM	Address by the Vice Chancellor of University of Colombo
3.30 PM	*Keynote 1 -"Role of Metaphors in Information Visualisation" - Prof. Prasad Wimalaratne*
4.15 PM	*End of the* Ceremony - Vote of Thanks

AGENDA – 2nd December 2021

08.00 AM	Registration	
08.30 AM	Keynote 02 :Designing Immersive Experiences Using Multisensory Approaches - ***Dr. Roshan L. Peiris***	
09.30 AM	Platinum Sponsor Speech	
10.00 AM	Tea Break	
10.10 AM	*Sponsor Advertisement*	
	Session 1-A	**Session 1-B**
	Open Track	**Machine Learning Track**
10.20 AM	**9 - Generalization of LSTM CNN ensemble profiling method with time-series data normalization and regularization** *[Disni S. Rathnayake (UOC, Faculty of Science)*; Pasindu Perera[2] ; Heshan Eranga[3]; Manjusri I Wickramasinghe[4] ;(University of Colombo School of Computing)[1-4]]*	**8 - Ensemble Methods based Machine Learning Approach for Weather Prediction for Precision Agriculture** *[Nishadi Premachandra (KDU)*; PPNV Kumara (KDU)]*
10.40 AM	**22 - A Novel FPGA Architecture of Comment z-Walter Algorithm using Bit-Split String-Matching Engines** **[***Sugandima M Vidanagamachchi (University of Ruhuna)*; Shirley Dewasurendra (University of Peradeniya)]*	**97 - Machine learning approach for predicting career suitability, career progression and attrition of IT graduates.** *[Damith Eranga Bannaka (SLIIT)*; Hashini Dhanasekara (SLIIT); Sheena Khan (SLIIT); Anuradha Karunasena (SLIIT); Nadeesha Premadasa (SLIIT)*
11.00 AM	**108 - Movie Recommendation System Using Concurrent Hybrid Variational Autoencoders** *[Mathangi Krishnathasan (University of Colombo School of Computing)]*	**36 - Human Gut Microbiome Data Analysis for Disease Likelihood Prediction Using Autoencoders** *[Dinithi Wickramaratne [1]; Ms. C.R. Wijesinghe[2]; Dr. A.R. Weerasinghe[3]; (University of Colombo School of Computing)[1-3]]*

11.20 AM	**137 - A Decision Making Aid for Organizations during Epidemic Situations** *[Chobodi Padmaperuma[1]; Dr. A.R. Weerasinghe[2]; (University of Colombo School of Computing)[1-2]]*	**102 - Minimize Traffic Congestion with EmergencyFacilitation using Deep Reinforcement Learning** *[Dulmina Kodagoda[1]; U.D.I. Perera [2]; Prabhash Kumarasinghe[3]; Mr. Gihan P. Seneviratne[4]; (University of Colombo School of Computing)[1-4]]*
11.40 AM	**144 -IOT-Based Intelligent Assistant Mirror For Smart Life & Daily Routine Using Raspberry PI** *[Sudila S Sirinayaka[1]; Anjana K Dasanayake[2]; limalsha u Rodrigo[3]; Uditha Yasasvi Perera [4]; Hansika Mahadikara ;(Sri Lanka Institute of InformationTechnology) [1-4]]*	**103 - Suspicious Human Crowd Behavior Detection – A Transfer Learning Approach** *[Pumudu A Fernando[1]; Peshala R Liyanage[2];(Informatics Institute of technology)[1,2]]*
12.00 Noon	Unlocking National Innovation through Industry Academia Collaboration Powered by Dialog 5G Innovation Center and Innovation Foundry **Nayanathara Widyalankara – R&D Engineer (Product & Service Innovation Division)** **Akalanka Herath- Associate Lead Engineer (Product & Service Innovation Division)**	
	Session 1-C	**Session 1-D**
	Machine Learning Track	**Human computer interaction Track**
12.15 PM	**110 - Prediction of Student Satisfaction on online learning during the COVID-19 Pandemic - A Case Study on Sri Lankan Universities** *[Senthan S Prasanth[1]; Banujan Kuhaneswaran[2]; Dr. BTGS Kumara; Hiruni Rupasingha[3] (Sabaragamuwa University of Sri Lanka)[1-3]]*	**85 - Finding Feasible Image Processing Pipeline Using Genetic Algorithm** *[Binith A Jayasinghe[1]; Ravimal Bandara[2] (University of Sri Jayewardenepura)[1,2]]*
12.35 PM	**162 - TractNet: A Deep Learning Approach on 3D Curves for Segmenting White Matter** *[Logiraj Kumaralingam (Eastern University); Kokul Thanikasalam (University of Vavuniya)*; Sittampalam Sotheeswaran (Eastern University, Sri Lanka); Nagulan Ratnarajah (University of Jaffna)]*	**91 - An Investigation into UI generation compliant with HCI standards ensuring artefact consistency across SDLC** *[Sapthaka Nisal Godage [1]; Dumindu Nissanka[2]; Shashoda Kalindu[3]; Pathumi Uduwana[4]; Shyam M Reyal[5]; Samanthi E.R. Siriwardana[6]; Archchana Kugathasan[7]; (Sri Lanka Institute of Information Technology) [1-7]]*
12.55 PM	**232 - A Comparative Analysis of Clustering Techniques with Feature Selection for Breast Cancer Recurrence Prediction** *[Hansani S perera [1]; Rangika L Silva[2];(University of Sri Jayewardenepura) [1,2]]*	**222 - A predictive model to minimize false-positive declines in Electronic Card Not Present financial transactions using feature engineering techniques** *[Madhushika S Delgolla (University of Colombo School of Computing)*]*

01.15 PM	**Poster Session 1*** 133 - EasyGo: Public Transportation Management And E-Ticketing System 6 - OneVsRest approach for Test Scenario Generation based on Requirements Specification	**217 - Criminal investigation and management system using CCTV footage - "Eagle Eye"** *[Dewmal Fernando[1]; Praveen Fernando[2]; Givindu Perera[3]; Kasun Gunatilleke [4];(Sri Lanka Institute of Information Technology)[1-4]]*
01.30 PM	*Sponsor Advertisement*	
01.35 PM	Lunch Break	
01.50 PM	*Sponsor Advertisement*	
02.00 PM	Keynote 03: Today's *students are tomorrow's workforce, So what?* ***Dr.Chathuranga Manamendra***	
	Session 2-A **Applications of IT Track**	**Session 2-B** **Physical Computing Track**
3.00 PM	**49 - Supervised Learning Approach for Detection of Sinhala Depressive Posts based on Twitter** *[Lashini Rathnayake[1]; Isuri Anuradha[2];(Informatics Institute of technology)[1,2]]*	**25 - Towards Developing a Simple Lumped Parameter-based State Estimator for PneuNets** *[PDSH Gunawardane[1]; Nimali TMDNT Medagedara[2]; Thisara Pathirana[3];(The Open University of Sri Lanka)[1-3]]*
3.20 PM	**58 - English Language Trainer for Non-Native Speakers using Audio Signal Processing, Reinforcement Learning, and Deep Learning** *[Ravindu J Colambage[1],Akalanka Gajasinghe[2],Nehan N Naidabadu[3]; Tharinda N Rajapaksha[4]; Dharshana M Kasthurirathna[5]; Anuradha Karunasena[6] ;(Sri Lanka Institute of InformationTechnology) [1-6]]*	**26 - Indoor Localization System Based on Bluetooth Low Energy With Inertial Sensor Assist for Resource Constrained Environments** *[Lahiru Gunathilake[1]; Thameera Lakshan[2]; Subodha Charles[3]; Chandana Gamage[4];(University of Moratuwa)[1-4]*
3.40 PM	**96 - Non-Verbal Bio-Markers for Automatic Depression Analysis** *[Oshadi Yashodhika Balage[1] ; Samuditha De Silva[2];Kusal Chathuranga;*	**Poster Session 2*** 224 - Towards an Abstract Style for True-Push-Communication Enabled Rich Web-

	Ramishka Liyanage[3]; Pradeepa Samarasinghe[4] ; Shalindi C Pandithakoralage[5]; Vijani S Piyawardana[6]; (Sri Lanka Institute of Information Technology)[1-6]]	based Applications 223 - Towards a Framework for Online Exam Proctoring in Resource-Constrained Settings Focusing on Preserving Academic Integrity
04.00 PM	*Tea break*	
04.10 PM	*Sponsor Advertisement*	
04.20 PM	*Keynote 04 : Artificial Intelligence for Internet of Things Security and Forensics* **Dr. Nhien-An Le-Khac**	
05.20 PM	*Sponsor Advertisement and* End of the first day of the Conference	

AGENDA – 3rd of December 2021

08:00 AM	Registration	
08:20 AM	Keynote 05 - Elephants and algorithms - how computer science can revolutionize acoustic monitoring - ***Dr. Daniela Hedwig***	
9.20 AM	*Sponsor Advertisement*	
09:30 AM	Tea Break	
09.40 AM	*Gold Sponsor Speech*	
	Session 3-A	**Session 3-B**
	Machine Learning /NLP	**Application Of IT**
10.00 AM	**112 - Period Prediction of Sinhala Epigraphical Scripts using Convolutional Neural Networks** *[Pabasara Surasinghe[1]; Kokul Thanikasalam[2] ;(University of Vavuniya)[1-2]]*	**98 - SMART Garbage Bin Kit: Expandable and Intelligent Waste Management System using Deep Learning and IoT for Modern Organizations** *Pasindu Lochana Hewagamage [1]; Amith Mihiranga[2]; Dananjaya Perera[3]; Rahul Fernando[4]; Thusithanjana K K Thilakarathna[5]; Dharshana M Kasthurirathna[6]; (Sri Lanka Institute of Information Technology)[1-6]*
10.20 AM	**50 - Differential Diagnosis of Ringworm and Eczema Using Image Processing and Deep Learning** *[Venura Nimesh[1]; Rukshala Weerasinghe Arachchige[2]; (Informatics Institute of Technology)[1,2]]*	**16 - Party-based Sentiment Analysis Pipeline for the Legal Domain** *[Sahan Jayasinghe[1]; Lakith R Rambukkanage[2]; Ashan Silva[3]; Nisansa de Silva[4]; Amal Shehan Perera [5];(University of Moratuwa)[1-5]]*

10.40 AM	**93 - Detection of Wildlife Animals using Deep Learning Approaches: A Systematic Review** *[Vigneshwaran P Palanisamy (Sabaragamuwa University of Sri Lanka)*; Nagulan Ratnarajah (University of Jaffna)]*	**19 - Seeking Sinhala Sentiment: Predicting Facebook Reactions of Sinhala Posts** *Vihanga Jayawickrama[1]; Gihan R.A. Weeraprameshwara [2]; Nisansa de Silva[3]; Yudhanjaya Wijeratne (LIRNEasia);(University Of Moratuwa)[1-3]*
11.00 AM	**152 - A Rule Based Approach for Detection and Correction of Grammar Errors in Sinhala Essays** *[Uresha Sewwandi[1]; L. Ranathunga [2;] Sumudu N Wijetunge[3]; (University of Moratuwa)[1-3]]*	**206 - Project Zone : An Advanced Undergraduate Project Management System For Software Development** *[Nipun E Amarasekara[1]; Prabhashi Isurindi[2]; Thisura Hettiarachchi[3]; Osanda Gamage[4]; Uthpala Samarakoon[5]; Archchana Kugathasan[6]; (Sri Lanka Institute of Information Technology)[1-6]]*
11.20 AM	*Sponsor Advertisement*	
11:30 AM	**Session 3-C**	**Session 3-D**
	Poster Session 3* 129 - Natural Language Processing Based Approach to Identify Cholesterol Risk 143 - COVID-Tracker : Surveillance of Potential Clusters Using a Wristband and Location-based Data 160 - Smart Glasses for Blind in Sri Lanka (Outdoor Navigation) 211 - Topic modelling based expressive synthetic voice to reduce student boredom in online lecture recordings	**Poster Session 4*** 226 -Simulating Microscopic Traffic With Intelligent Vehicle Agents 230 -Addressing the Last-Mile Delivery Problem via Unmanned Aerial Vehicles for urban high-rise apartment buildings 231- Online Proctoring For Mass Examinations With Optimized Resource Usage
12.05 PM	*Sponsor Advertisement*	
12.15 PM	Panel Discussion - Research in Computing	
01:15 PM	*Sponsor Advertisement*	
01.25 PM	Lunch Break	

02.00 PM	*Sponsor Advertisement*	
	Session 4-A	**Session 4-B**
	Machine Learning / NLP	**NLP**
2.10 PM	**70 -Macroeconomic Event Base Expert Advisor for Forex Trades: Through Algo Trading** *[Hansika J Wanniarachchi [1]; Sachithra Rathnayake[2]; Ishara Thilina[3]; Dr.Upeksha Ganegoda[4]; Dr.Isuru Manawadu[5]; (Faculty of Information Technology,University Moratuwa)[1-5]]*	**3 - A Sinhala Natural Language Interface for Querying Databases Using Natural Language Processing** *Duneesha S Peduru Hewa [1]; Cassim Farook[2];(Informatics Institute of Technology)[1-2]*
2.30 PM	**214 - Mammogram-Based Cancer Detection Using Deep Convolutional Neural Network** *[Hasini R Thudawehewa [1]; Chamari Silva[2]; Pasangi Rathnayake (SLIIT); Tharanga Nisal[3] ; (Sri Lanka Institute of Information Technology)[1,2](Faculty of Medicine University of Colombo)[3]]*	**153 - Navigate-Me: Secure voice authenticated indoor navigation system for blind individuals** *[Lahiru V. Dissanayake[1]; Resara Rajapaksha[2]; sahan Piushan solanga[3]; Pasindu prabhshwara[4]; Dr.Anuradha C Jayakody[5]; (Sri Lanka Institute of Information Technology)[1-5]]*
2.50 PM	**186 - EEG Based Real-Time System for Video Advertisement Recommendation** *[Saumya K Bandara[1]; Sathsarani K Bandara[2]; BADRA P JAYALATH[3]; Uvini C Wijesinghe[4]; Prasanna Haddela[5]; Lumini Wickremesinghe[6]; (Sri Lanka Institute of Information Technology)[1-6]]*	**18 - Hate Speech Detection in Sinhala-English Code-Mixed Language** *[U.L. Oshadhi Gayangika Liyanage[1]; Krishnakripa Jayakumar[2]; (Informatics Institute of technology)[1,2]]*
3.00 PM	**192 - Human Tracking and Profiling for Risk Management** *Vishaka S Ranjith[1]; anuj s jayasekara[2]; lahiru l Ratnasooriya[3]; Thilini thili Jayasekara[4]; prabath L Rupasinghe[5]; Chethana Liyanapathirana[6] (Sri Lanka Institute of Information Technology)[1-6]*	**159 - Ontology-Based Question Answering System for Computer Network Module** *[Mohamed Ismail Mohamed Nowshad[1]; Samantha Rajapaksha[2]; (Sri Lanka Institute of Information Technology)[1-2]]*
3.20 PM		Poster Presentation ** 73 - Smart Digital Personal Fitness Trainer

3.40 PM	Keynote 06 : Making Smart Cities More Playable ***Prof. Anton Nijholt***
4.40 PM	*Sponsor Advertisement*
04.50 PM	Awarding of the Best Paper
05.20 PM	*Sponsor Advertisement*
05.30 PM	Vote of Thanks by Conference Co-Chair