

IEEE CSDE & i-COSTE 2020 PROGRAM

16th – 18th December 2020, Gold Coast, Australia

Venue

Virtual: ZOOM and Google Meet

On Spot: [Melbourne Marriott Hotel](#)

Note: All the time slot in below should be noted [Australian Easter Daylight Time](#)



IEEE CSDE & i-COSTE 2020 Program	
Day 1: 16th December, 2020	
16.00-16.30 AEST	Virtual Registration & Cocktail Reception Virtual Lounge & Bar Area - Zoom
	Opening Ceremony
16.30-17.15	Keynote Talk I – Zoom I
17.15-18.45	Special Session I – Relation Design and Relation -Oriented Systems - Zoom

Day 2: 17th December, 2020	
08:30 – 10:00	Session I - Room: Zoom I; Session II - Room: Zoom II; Session III: Zoom III
10:00 - 10:30	Break Time for Tea and Coffee
10:30 – 11:45	Session IV - Room: Zoom I; Session V - Room: Zoom II; Session VI: Zoom III
11:45 – 13:00	Session VII - Room: Zoom I; Session VIII - Room: Zoom II; Session IX: Zoom III
13:00 - 14:15	Lunch
14:15 – 15:45	Session X - Room: Zoom I; Session XI - Room: Zoom II; Session XII: Zoom III
16:00 – 16:45	Keynote Talk II – Zoom I
16:50-17:35	Keynote Talk III – Zoom I
18:30 - 19:30	Walk for Healthy Life!

Day 3: 18th December, 2020	
08:30 – 10:00	Session I - Room: Zoom I; Session II - Room: Zoom II; Session III: Zoom III
10:00 – 10:30	Break Time for Tea and Coffee
10:30 – 11:45	Session IV - Room: Zoom I; Session V - Room: Zoom II; Session VI: Zoom III
11:45 – 13:00	Session VII - Room: Zoom I; Session VIII - Room: Zoom II; Session IX: Zoom III
13:00 - 14:15	Lunch
14:15 - 15:45	Session X - Room: Zoom I; Session XI - Room: Zoom II; Session XIII: Zoom III
16:00-16:45	Keynote Talk IV - Room: Zoom I
17.00-17.45	Keynote Talk V - Room: Zoom I
17.45-18.30	Conference Closing, Award Ceremony – Zoom I



IEEE CSDE & i-COSTE 2020 - Day 1

Date: 16th December 2020; Time: 16:00 – 16:30

Event: Opening Ceremony

Chief Guest: **Professor Young-Ho LEE**, Korea Maritime & Ocean University, South Korea

Master of Ceremonies: Prama Ali

Date: 16th December 2020; Time: 16:30 - 17:15

Keynote Talk I

Keynote Speaker: **Mr. Animesh Mishra**, Senior Director Architecture, Intel Corporation, Santa Clara, USA.

Title: Rise of AI/ML and Computation Growth

Chair: **Associate Professor Girija Chetty**, University of Canberra, Australia

Venue: Zoom I

Special Session CSDE I - Relationality Design and Relationality-oriented Systems

Session Chair: **Professor Shimohara Katsunori**, Doshisha University, Japan

Venue: Zoom I

Date: 16th December 2020; Time: 17:15 – 18:45

Paper ID: CSDE #	Paper Title
27 (17:15-17:30)	Visualizing Relationality as Assets toward Communities Vitalization <i>Mizuki Tanaka*</i> , <i>Ryo Shioya</i> , <i>Katsuhiko Yonezaki</i> , <i>Yurika Shiozu</i> , <i>Ivan Tanev</i> , <i>Katsunori Shimohara</i>
29 (17:30-17:45)	Proposal of regional application to confirm and strengthen the connection between residents <i>Ryo Shioya*</i> , <i>Mizuki Tanaka</i> , <i>Yurika Shiozu</i> , <i>Katsuhiko Yonezaki</i> , <i>Ivan Tanev</i> , <i>Katsunori Shimohara</i>
36 (17:45-18:00)	Examination of the optimum regional point system by Gift & Circulation Model <i>Yurika Shiozu*</i> , <i>Mizuki Tanaka</i> , <i>Ryo Shioya</i> and <i>Katsunori Shimohara</i>
39 (18:00-18:15)	Reading Notes as Media to Enrich Communications between Reader and Book <i>Satoko Yoshida*</i> , <i>Madoka Takahara</i> , <i>Ivan Tanev</i> , <i>Katsunori Shimohara</i>
68 (18:15-18:30)	Automatic detection of ironic expressions based on the implicit display theory <i>Akinori Sato</i> , <i>Ivan Tanev</i> , <i>Katsunori Shimohara</i>
62 (18:30-18:45)	Effective Graph Based Vertex Cover Algorithm Using Multi-document Node Summarizations <i>Mohammad Rashid Hussain*</i> , <i>Ayman Qahmash</i> , <i>Salem Alelyani</i> , <i>Mohammed Saleh Alsaqer</i>

IEEE CSDE & i-COSTE 2020 - Day 2 December 17, 2020



Parallel Session I - CSDE- Session Chair: Professor Richard Sinnott, Melbourne University, Australia	
Venue: Zoom I	
Date: 17th December 2020; Time: 8:30 – 10:00	
Paper ID: CSDE #	Paper Title
94 (8:30-8:45)	Causal Convolutional Neural Network-Based Kalman Filter for Speech Enhancement <i>Sujan Kumar Roy*, Kuldip K. Paliwal</i>
11 (8:45-9:00)	The Evolving Architecture of a National Platform for Urban Research in Australia <i>Richard Sinnott</i>
16 (9:00-9:15)	A Case Study of User Privacy based on WiFi Data in a Campus Setting <i>Richard Sinnott</i>
113 (9:15-9:30)	Event-Driven LSTM For Forex Price Prediction <i>Ling Qi*, Matloob Khushi, Josiah Poon</i>
69 (9:30-9:45)	Lepidoptera Classification through Deep Learning <i>Richard Sinnott</i>
21 (9:45-10:00)	Estimating the Size of Crowds through Deep Learning <i>Kazi Abir Adnan* and Richard Sinnott</i>

Parallel Session II - CSDE- Session Chair: Dr. Nahina Islam, CQUniversity, Australia	
Venue: Zoom II	
Date: 17th December 2020; Time: 8:30 – 10:00	
Paper ID: CSDE #	Paper Title
95 (8:30-8:45)	FPGA Deployment of neuroevolved Binary Neural Networks <i>Raul Valencia</i>
99 (8:45-9:00)	Adversarial Neuro Encoding with Binary Neural Networks <i>Raul Valencia</i>
26 (9:00-9:15)	Integrating Cloud ERP Systems with New Technologies Based on Industry 4.0: A Systematic Literature Review <i>Sunchai Tongsuksai* and Dr Sanjay Mathrani</i>
51 (9:15-9:30)	Deep Xi as a Front-End for Robust Automatic Speech Recognition <i>Aaron Nicolson* and Kuldip K. Paliwal</i>
54 (9:30-9:45)	Land Use Detection & Identification using Geo-tagged Tweets <i>Saeed Khan* and Md Shahzamal</i>
84 (9:45-10:00)	Efficient Decentralized Data Storage Based on Public Blockchain and IPFS <i>Morteza Alizadeh*, Karl Andersson, Olov Schelen</i>

Parallel Session III - CSDE- Session Chair: Associate Professor MGM Khan, USP, Fiji	
Venue: Zoom III	
Date: 17th December 2020; Time: 8:30 – 10:00	
Paper ID: CSDE #	Paper Title
79 (8:30-8:45)	Portfolio Optimization with 2D Relative-Attentional Gated Transformer <i>Tae Wan Kim* and Matloob Khushi</i>
56 (8:45-9:00)	Incremental Improvement for Sub-optimal Euclidean TSP Paths Generated by Traditional Heuristics <i>Andre L. C. Barczak*, Erik T. Barczak and Napoleon H. Reyes</i>
65 (9:00-9:15)	Algorithms Evaluation for Improving Classification and Counting Model in Warehouse Receiving Management <i>Judy X Yang, Lily D Li and Mahammad G. Rasul</i>
110 (9:15-9:30)	Security Testing of Android Based COVID Tracer Applications <i>Narmada Kohli and Mahsa Mohaghegh</i>
08 (9:30-9:45)	Performance Evaluation of Aloha and CSMA for LoRaWAN Network <i>Mounika Baddula*, Biplob Ray and Morshed Chowdhury</i>
15 (9:45-10:00)	Designing Mobile Health and Well-being Applications: A Value-oriented Approach <i>Krassie Petrova*, Maria Elena Villapol, Michele Edwin and Shahper Richter</i>

Parallel Session IV - CSDE- Session Chair: Dr. Anuradha Mathrani, Massey University, New Zealand	
Venue: Zoom I	
Date: 17th December 2020; Time: 10:30 – 11:45	
Paper ID: CSDE #	Paper Title
111 (10:30-10:45)	Analysis of Android Swapping Overhead and Implication of NVM-based Acceleration <i>Hyokyung Bahn* and Jisun Kim</i>
55 (10:45-11:00)	Digital Gender Divide in Online Education during Covid-19 Lockdown in India <i>Anuradha Mathrani*, Tarushikha Sarvesh and Sanjay Mathrani</i>
18 (11:00-11:15)	Transfer Learning from Pneumonia to COVID-19 <i>Hongen Lu*, Sandini Anuradha Hewakankanamge, Yuan Miao</i>
137 (11:15-11:30)	Performance Analysis of Multi-Node Hadoop Cluster Based on Large Data Sets <i>Nasim Ahmed*, Andre L.C. Barczak, Sibghat Ullah Bazai, Teo Susnjak and Mohammed A. Rashid</i>
28 (11:30-11.45)	Unsafe image classification using convolutional neural network for brand safety <i>Quan Minh Vo*, Nhan Thi Cao, and An Hoa Ton-That</i>

Parallel Session V - CSDE- Session Chair: Dr. Vinh Bui, Southern Cross University, Australia	
Venue: Zoom II	
Date: 17th December 2020; Time: 10:30 – 11:45	
Paper ID: CSDE #	Paper Title
145 (10:30-10:45)	COVID-19 Pandemic: A New Era of Cyber Security Threat and Holistic Approach To Overcome <i>Jabber Ahmed* and Quddus Tushar</i>
78 (10:45-11:00)	A Conceptual Framework for Generalised Audit Software Adoption in Saudi Arabia by Government Internal Auditing Departments using an Integrated <i>Abdulwahab Mujalli* and Ahmed Almgrashi</i>
23 (11:00-11:15)	An Empirical Evaluation of Collapsible Panel Interfaces <i>Joshua Leung* and Andy Cockburn</i>
155 (11:15-11:30)	Determinants of computerised accounting information system adoption using an integrated environmental perspective: An Empirical Study <i>Abdulwahab Mujalli</i>
74 (11:30-11.45)	Visualization of NAPLAN Data: What Do We Learn From? <i>Vinh Bui</i>

Parallel Session VI - CSDE- Session Chair: Dr. Avinesh Prasad, USP, Fiji	
Venue: Zoom III	
Date: 17th December 2020; Time: 10:30 – 11:45	
Paper ID: CSDE #	Paper Title
10 (10:30-10:45)	User Perspective on Usages and Privacy of eHealth Systems in Bangladesh: A Dhaka based Survey <i>Biplob Ray and Kamal Kumar Saha*</i>
20 (10:45-11:00)	Digital Forensics for Infected Computer Disk and Memory Acquire, Analyse, and Report <i>Aiman Al-Sabaawi</i>
107 (11:00-11:15)	Cryptanalysis of Vigenère Cipher: Method Implementation <i>Aiman Al-Sabaawi</i>
63 (11:15-11:30)	A Face-off - Classical and Heuristic-based Path Planning Approaches <i>Vishal Chand*, Avinesh Prasad, Kaylash Chaudhary, Bibhya Sharma and Samlesh Chand</i>
60 (11:30-11:45)	Strategic Creation and Placement of Landmarks for Robot Navigation in a Partially-known Environment <i>Avinesh Prasad*, Bibhya Sharma and Sandeep Kumar</i>

Parallel Session VII - CSDE- Session Chair: Dr. Golam Rabiul Alam, BRAC, Bangladesh	
Venue: Zoom I	
Date: 17th December 2020; Time: 11:45-13:00	
Paper ID: CSDE #	Paper Title
121 (11:45-12:00)	A Privacy-Aware Digital Voting System employing Blockchain and Smart Contracts <i>Syada Tasmia Alvi*, Mohammed Nasir Uddin, Linta Islam and Sajib Ahamed</i>
120 (12:00-12:15)	Classification of Blockchain based Voting : Challenges and Solutions <i>Syada Tasmia Alvi*, Mohammed Nasir Uddin, Linta Islam and Sajib Ahamed</i>
64 (12:15-12:30)	Digital Literacy: A Catalyst for the 21st Century Education <i>Pritika Reddy*, Kaylash Chaudhary, Bibhya Sharma and Ronil Chand</i>
80 (12:30-12:45)	Cyberbullying Detection on Social networks Using Machine Learning Approaches <i>Md Manowarul Islam, Md Ashraf Uddin*, Linta Islam, Arnisha Akter, Selina Sharmin and Uzzal Kumar Acharjee</i>
105 (12:45-13:00)	Autism Spectrum Disorder Detection in Toddlers for Early Diagnosis Using Machine Learning <i>Shirajul Islam*, Tahmina Akter, Shareea Sabreen, Sarah Zakir, Muhammad Iqbal Hossain</i>

Parallel Session VIII - CSDE- Session Chair: Dr. Meena Jha, CQUniversity, Australia	
Venue: Zoom II	
Date: 17th December 2020; Time: 11:45-13:00	
Paper ID: CSDE #	Paper Title
82 (11.45-12:00)	Reducing Wrong Labels using Conflict Score in Distant Supervision for Relation Extraction in Bangla Language
	<i>Tanzim Mahfuz, Tasneem Farhana Suha* and Md Musfique Anwar</i>
83 (12:00-12:15)	Reducing Social Media Users' Biases to Predict the Outcome of Australian Federal Election 2019
	<i>Badhan Chandra Das*, Md Musfique Anwar and Iqbal H. Sarker</i>
59 (12:15-12:30)	Classification of Motor Imagery Tasks for Brain Computer Interface using EEG Signals
	<i>Lafiz Maruf*, Md Musta E Nur Rahman, Zawad Alam, Md Anisur Rahman, Peter Hough and Mohammad Zavid Parvez</i>
118 (12:30-12:45)	Biomarker CA125 Feature Engineering and Class Imbalance Learning Improves Ovarian Cancer Prediction
	<i>Xiaoyan Yang*, Matloob Khushi and Kamran Shaukat</i>
72 (12:45-13:00)	Code Complexity Analyser and Visualiser for Novice Programmer
	<i>Siripond Mullanu*, Sunwit Petchoo and Caslon Chua</i>

Parallel Session IX - CSDE- Session Chair: Dr. Md Mamunur Rashid, CQUniversity, Australia	
Venue: Zoom III	
Date: 17th December 2020; Time: 11:45-13:00	
Paper ID: CSDE #	Paper Title
106 (11.45-12:00)	Student Background An Invaluable Player for Academic Success
	<i>Sarnesh Deo*, Dr Kaylash Chaudhary and Dr Bibhya Sharma</i>
71 (12:00-12:15)	Performance Enhancement of Intrusion detection System Using Bagging Ensemble Technique with Feature Selection
	<i>Md Mamunur Rashid*, Joarder Kamruzzaman, Mohiuddin Ahmed, Nahina Islam, Santoso Wibowo and Steven Gordon</i>
136 (12:15-12:30)	Cyber Attacks Detection from Smart City Applications Using Artificial Neural Network
	<i>Md Mamunur Rashid*, Joarder Kamruzzaman, Tasadduq Imam, Shahriar Kaisar and Md Jahangir Alam</i>
05 (12:30-12:45)	Evaluation of Earthquake Resistance of Urban Buildings using Image Processing and Machine Learning Techniques
	<i>Tahsinur Rahman*, Yasin Ahmed, Tawsiful Alam, Md. Hasibur Rahman Shakil, Md. Tanjidul Hossain, Fairuz Nower Khan, Shakib Mahmud Dipto, Mostafijur Rahman Akhond and Md Ashraful Alam</i>
119 (12:45-13:00)	A Novel Approach using Deep Neural Network Vessel Segmentation & Retinal Disease Detection
	<i>Nancy Kaur*, Girija Chetty and Lavneet Singh</i>

Parallel Session X - CSDE- Session Chair: Dr Yi Zuo, Dalian Maritime University, China	
Venue: Zoom I	
Date: 17th December 2020; Time: 14.15 – 15:45	
Paper ID: CSDE #	Paper Title
112 (14:15-14:30)	Bangla Sign Language Recognition and Sentence Building Using Deep Learning
	<i>Safayet Anowar Shurid*, Khandaker Habibul Amin, Md. Shahnawaz Mirbahar, Dolan Karmaker, Mohammad Tanvir Mahtab, Farhan Tanvir Khan, Md. Ashrafal Alam and Md. Golam Rabiul Alam</i>
22 (14:30-14:45)	A robust airflow envelope tracking and digitization approach for automatic detection of apnea and hypopnea events
	<i>Md Bashir Uddin*, Chin Moi Chow, Sai H Ling, and Steven W Su</i>
67 (14:45-15:00)	A Real Time Neurophysiological Framework for General Monitoring Awareness of Air Traffic Controllers
	<i>Rajamanickam Yuvaraj*, Sun Woh Lye, and Hong Jie Wee</i>
100 (15:00-15:15)	Classification Algorithm of Ship Trajectory Based on Machine Learning Techniques
	<i>Haocheng Wang, Yi Zuo*, Tieshan Li and Zhenyu Wang</i>
14 (15:15-15:30)	An Exploration of Clicking-on LBA Decision
	<i>Heng-Li Yang*, Shiang-Lin Lin and Bo-Yi Li</i>
17 (15:30-15:45)	Fake News Detection Using Content-Based Features and Machine Learning
	<i>Okuhle Ngada* and Bertram Haskins</i>

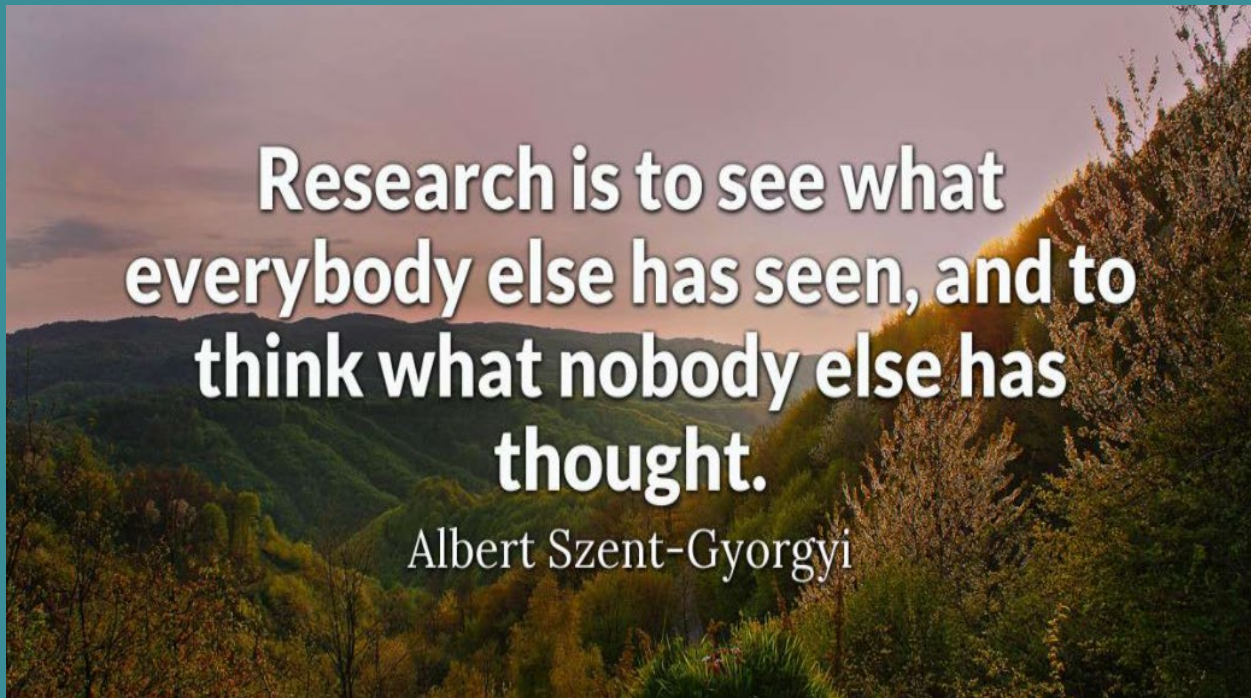
Parallel Session XI - CSDE- Session Chair: Dr. Md. Ashrafal Alam, BRAC University, Bangladesh	
Venue: Zoom II	
Date: 17th December 2020; Time: 14.15 – 15:30	
Paper ID: CSDE #	Paper Title
124 (14:15-14:30)	Paired Augmentation for Improved Image Classification using Neural Network Models
	<i>Shikar Rajcomar*, Anban Pillay and Edgar Jembere</i>
38 (14:30-14:45)	Enhancing Reliability Predictions by Considering Learning Effects Based on One-Parameter Lindley Distribution
	<i>Lutfiah Al Turk and Norah Al-Mutairi*</i>
33 (14:45-15:00)	Improvement of the lighting fixtures based indoor localization method CEPHEID
	<i>Hiroyuki Kobayashi</i>
58 (15:00-15:15)	CRI: Measuring City Infection Risk amid COVID-19
	<i>Mingliang Liu, Shuo Yu, Xinbei Chu, and Feng Xia</i>
98 (15:15-15:30)	A Comparative Study of Ensemble Approaches to Fact-Checking for the FEVER Shared Task
	<i>Oluwabamigbe Oni</i>

Parallel Session XII – CSDE & i-COSTE- Session Chair: Dr. Ritesh Ajoodha, The University of the Witwatersrand, South Africa

Venue: Zoom III

Date: 17th December 2020; Time: 14.15 – 15:45

Paper ID: CSDE #	Paper Title
61 (14:15-14:30)	Application of Artificial Neural Networks to Forecast River Discharge Rates: A Case Study of the Grootfontein Aquifer <i>Yolanda Kanyama*, Ritesh Ajoodha and Helen Seyler</i>
76 (14:30-14:45)	Application of deep learning to forecast the South African unemployment rate: a multivariate approach <i>Rudzani Mulaudzi* and Ritesh Ajoodha</i>
81 (14:45-15:00)	A LSTM Recurrent Neural Network for Lightning Flash Prediction within Southern Africa using Historical Time-series Data <i>Yaseen Essa*, Hugh Hunt and Ritesh Ajoodha</i>
96 (15:00-15:15)	The use of Automatic Speech Recognition in Education for Identifying Attitudes of the Speakers <i>Lomthandazo Matsane*, Ashwini Jadhav, and Ritesh Ajoodha</i>
19 (15:15-15:30)	Image Generation Containing Invisible QR Code by Convolutional Neural Network <i>Kohei Yamauchi* and Hiroyuki Kobayashi</i>
131 (15:30-15:45)	Attribute-driven Topical Influential Users Detection in Online Social Networks <i>Aditi Dhali*, Sarmistha Sarna Gomasta, Md Musfique Anwar and Iqbal H. Sarker</i>



**Research is to see what
everybody else has seen, and to
think what nobody else has
thought.**

Albert Szent-Gyorgyi

Keynote Talk Session

Date: 17th December 2020; **Time:** 16:00 – 16:45

Keynote Talk II

Keynote Speaker: [Professor Pablo Moscato, The University of Newcastle, Australia](#)

Title: A new method for Artificial Intelligence inspired in 1748's Mathematics?

Chair: [Professor Md Musfique Anwar, Jahangirnagar University, Bangladesh](#)

Venue: Zoom I

Date: 17th December 2020; **Time:** 16:50 – 17:35

Keynote Talk III

Keynote Speaker: [Dr. Mark Griffin, University of Sydney, Australia](#)

Title: Business Analytics - is it more than just Data Science?

Chair: [Professor Heng-Li Yang, National Cheng-Chi University, Taiwan](#)

Venue: Zoom I

“All truly great thoughts are conceived
while walking” - *Friedrich Nietzsche*



IEEE CSDE & i-COSTE 2020 - Day 3 December 18, 2020



Parallel Session I - CSDE- Session Chair: Associate Professor Bibhya Sharma, USP, Fiji

Venue: Zoom I

Date: 18th December 2020; Time: 8:30 – 9:45

Paper ID: CSDE #	Paper Title
31 (8:15-8:30)	Predicting Students Final Academic Performance using Feature Selection Approaches <i>Gomathy Ramaswami*, Teo Susnjak, Anuradha Mathrani and Rahila Umer</i>
130 (8:30-8:45)	Gender Associated with Proactivity: An Investigation in Higher Education <i>Gavin Khan, Mohammed Naseem, Sunaina Nair, Goel Lal, Sarvesh Chand, Salsabil Nusair*, Emmenual Reddy and Bijeta Kumar</i>
128 (8:45-9:00)	Pacific Ethnicity Associated to Proactivity: An Investigation in Higher Education <i>Bibhya Sharma, Bijeta Kumar, Mohammed Naseem, Emmenual Reddy, Goel Lal, Sunaina Nair, Gavin Khan and Salsabil Nusair*</i>
45 (9:00-9:15)	Breast Cancer Risk Prediction based on Six Machine Learning Algorithms <i>Md.Razu Ahmed, Md. Asraf Ali, Joy Roy, Shakil Ahmed, Andre L.C. Barczak, and N. Ahmed*</i>
144 (9:15-9:30)	Adoption of Internet of Things-based innovations for improving healthcare in Saudi Arabia: a Methodology Approach <i>Feisal Masmali* and Shah Jahan Miah</i>
32 (9:30-9:45)	Assessing the Acceptance of Clinical Decision Support Tools using an Integrated Technology Acceptance Model <i>Soliman Aljarboa* and Shah Jahan Miah</i>

Parallel Session II - CSDE- Session Chair: Dr. Michael J. Dinneen, The University of Auckland, New Zealand

Venue: Zoom II

Date: 18th December 2020; Time: 8:30 – 9:45

Paper ID: CSDE #	Paper Title
48 (8:15-8:30)	Inductive Position Sensing of Power Cable for Autonomous Vehicle Navigation <i>Wonoo Choo* and Erkan Kayacan</i>
125 (8:30-8:45)	Evaluating the Malware Threat Cases in Fiji 2020 <i>Priynka Sharma and Kaylash Chaudhary</i>
13 (8:45-9:00)	Ref-CAMLA: A Reference Architecture for context Aware Mobile Learning Applications <i>Bimal Aklesh Kumar*, Bibhya Sharma and Elisa Yumi Nakagawa</i>
127 (9:00-9:15)	A comprehensive review on the influence of social media marketing in harnessing international students to Australia <i>Dona Lankika Shamalee Paranawithana*, Ergun Gide, Ghulam Chaudhry and Robert Yu</i>
150 (9:15-9:30)	Impact of Technology Adoption on the success of e-commerce Strategies in SMEs <i>Ziad Almtiri and Shah Jahan Miah</i>
133 (9:30-9:45)	Analyzing students' online presence in undergraduate courses using Clustering <i>Ravneil Nand*, Ashneel Chand and Mohammed Naseem</i>

Parallel Session IV – i-COSTE- Session Chair: Dr. Sanjay Mathrani, Massey University, New Zealand

Venue: Zoom I

Date: 18th December 2020; Time: 10:30 – 11:45

Paper ID: i-COSTE #	Paper Title
09 (10:30-10:45)	Assesing Flood Frequency Analysis Changes in ARR 2016 and the Impact on Creek Hydrology <i>Matthew Johnson* and Rezaul Chowdhury</i>
15 (10:45-11:00)	Barriers for an Integrated Lean and ISO 14001 Implementation for Sustaining Environmental Performance in the Manufacturing Industry <i>Aqeel Ahmed*, Sanjay Mathrani and Nihal Jayamaha</i>
06 (11:00-11:15)	Deep Machine Learning Digital library recommendation system based on Metadata for Arabic and English Languages <i>Maram Almaghrabi* and Girija Chetty</i>
10 (11:15-11:30)	A probabilistic approach to evaluate the relationship between visual and quantified pavement distress data using logistic regression <i>Tamina Tasmima*, James Wang, David Richards, Hussein Dia and Quddus Ahmed Tushar</i>
13 (11.30-11.45)	Impact of Load on Total Harmonic Distortion in a Photovoltaic System <i>Syed Khawar Hussain Shah*, Ali hellany, Mahmood Nagrial and Jamal Rizk</i>

Special Session II - CSDE- Session Chair: Dr. Md. Ashraful Alam, BRAC University, Bangladesh	
Venue: Zoom II	
Date: 18th December 2020; Time: 10:30 – 11:45	
Paper ID: CSDE #	Paper Title
90 (10:30-10:45)	Detection and 3D Visualization of Brain Tumor using Deep Learning and Polynomial Interpolation <i>Md. Akram Hossan Tuhin*, Tarunya Pramanick, Humayoun Kabir Emon, Wasiur Rahman, Md. Muzahidul Islam Rahi and Md. Ashraful Alam</i>
40 (10:45-11:00)	Classification of Non Topological Magnetic Configurations Using Machine Learning <i>Saffat Bokul, Samiha Sabrin Md Abdus Shukur, Saquib Ahmed, Tonmoy Kumar Bhowmick and Md. Ashraful Alam</i>
143 (11:00-11:15)	Machine Learning Approach for Face Recognition from 3D Models Generated by Multiple 2D Angular Images <i>Sabrina Jahan Prova*, Moinuddin Mahmud, Shegufta Mehzabin, and Md. Ashraful Alam</i>
5 (11:15-11:30)	Classification of Motor Imagery Tasks for Brain Computer Interface using EEG Signals <i>Tahsinur Rahman, Yasin Ahmed, Tawsiful Alam, Md. Hasibur Rahman Shakil, Md. Tanjidul Hossain, Fairoz Nawer Khan, Shakib Mahmud Dipto, Mostafijur Rahman*</i>
135 (11.30-11.45)	A Machine Learning Approach to Detect Depression and Anxiety using Supervised Learning <i>Anamika Ahmed*, Raihan Sultana, Md Tahmidur Rahman Ullas, Mariyam Begom. Md. Muzahidul Islam Rahi and Md. Ashraful Alam</i>

Parallel Session V – CSDE & i-COSTE - Session Chair: Dr. Wan Yun Hong, Universiti Brunei Darussalam, Brunei	
Venue: Zoom I	
Date: 18th December 2020; Time: 11:45-13:00	
Paper ID: CSDE & i-COSTE #	Paper Title
11 (11.45-12:00)	Sizing and Mission Analysis of Multirole Short-Haul All-Electric Seaplane for Sustainable Aviation <i>Nouman Uddin*, Devendra Singh and Rajkumar S. Pant</i>
05 (12:00-12:15)	Statistical Analysis and Predictive Modelling of Air Pollutants Using Advanced Machine Learning Approaches <i>Wan Yun Hong*, David Koh, Anis Asma Ahmad Mohtar and Mohd Talib Latif</i>
77 (12:15-12:30)	Determinants of computerised accounting information system adoption using an integrated environmental perspective: An Empirical Study <i>Ahmed Almgrashi</i>
37 (12:30-12:45)	Dominance of Deep LSTM In Smartphone Sensor Based Human Activity Classification <i>Amir Faiyaz*, Nazmuddin Al Masood, Md. Sifat Ibn Awlad, Mostafijur Rahman Akhond, Md. Golam Rabiul Alam</i>
126 (12:45-13:00)	Random Forest Classifier for Detecting Credit Card Fraud based on Performance Metrics <i>Maung Hein Aung, Penelope Tane Seluka*, Jean Tiana Rose Fuata, Maria Josephine Tikoisuva, Matalita Seremana Cabealawa, Ravneil Nand</i>

Parallel Session VII – CSDE & i-COSTE - Session Chair: Dr. Hayati Yassin, Universiti Brunei Darussalam, Brunei

Venue: Zoom II

Date: 18th December 2020; Time: 11:45-13:00

Paper ID: CSDE & i-COSTE #	Paper Title
123 (11:45-12:00)	Stock Market Prediction using Supervised Machine Learning Techniques: An Overview <i>Zaharaddeen Karami Lawal*, Hayati Yassin and Rufai Yusuf Zakari</i>
134 (12:00-12:15)	Machine-learned models for the performance of six different solar PV technologies under the tropical environment <i>Hayati Yassin</i>
17 (12:15-12:30)	Quality for Sustainability: SPC Analysis of Photovoltaic Modules Flash Test <i>Raid Al-Aomar* and Mohamed Al-Shehhi</i>
73 (12:30-12:45)	Efficient Portfolio Management Using TOPSIS and Ada-Boost <i>A. K. M. Amanat Ullah*, Mohammad Tanvir Mahtab and Md. Golam Rabiul Alam</i>
149 (12:45-13:00)	A Comparison Based Analysis on the Performance of Deep Neural Network Models in Terms of Classifying Pneumonia from Chest X-ray Images <i>Mst. Nasrin Akter*, Tanzim Reza and Md. Ashrafal Alam</i>

Parallel Session VIII – i-COSTE- Session Chair: Dr. Noor Hanis Izzuddin, Universiti Sains Islam Malaysia, Malaysia

Venue: Zoom III

Date: 18th December 2020; Time: 11:45-13:00

Paper ID: i-COSTE #	Paper Title
24 (11:45-12:00)	Trajectory Tracking of a Quadrotor with Disturbance Rejection using Extended State Observer <i>Izzuddin Mat Lazim, Liyana Ramli, Abdul Rashid Husain, Aminurrashid Noordin*, Mus'ab Sahrim and Ahmad 'Athif M. Faudzi</i>
25 (12:00-12:15)	Distributed Velocity Controllers of the Individuals of Emerging Swarm Clusters <i>Sandeep Ameet Kumar*, Jito Vanualailai and Avinesh Prasad</i>
16 (12:15-12:30)	A QUBO Formulation For the K-densest Common Subgraph Isomorphism Problem Via Quantum Annealing <i>Nan Huang</i>
19 (12:30-12:45)	Computational Flow Analysis on 45degrees inclined, Real-scale Archimedes Screw Turbine <i>Dylan S. Edirisinghe*, Kim-Byeong Ha, S. D. G. S. P. Gunawardane, Jong-Myung Paik, Min-Sung Kim and Young-Ho Lee</i>
20 (12:45-13:00)	Novel Tidal Energy Harnessing System Utilizing Quadruple Bi-directional Turbine Arrangement <i>A.H Samitha Weerakoon*, Ho-Seong Young, Won-Kil Kim and Young-Ho Lee</i>

Parallel Session X – CSDE & i- COSTE - Session Chair: Dr. Prasanna Gunawardane, University of Peradeniya, Sri Lanka

Venue: Zoom I

Date: 18th December 2020; Time: 14.15 – 16:00

Paper ID: CSDE& i-COSTE #	Paper Title
42 (14:15-14:30)	JobFit: Job Recommendation using Machine Learning and Recommendation Engine <i>Kevin Appadoo, Muhammad Bilaal Soonnoo and Zahra Mungloo-Dilmohamud*</i>
43 (14:30-14:45)	EyeSee: Camera to Caption with Attention Mechanism <i>Tarini Ramsewak, Dave Appadoo, Zahra Mungloo-Dilmohamud*</i>
104 (14:45-15:00)	Aiding Speech Therapy Using Audio and Video Processing <i>Anant Gadodia, Harshitha Koppisetty, Kanak Potdar, Ameyaa Biwalkar</i>
52 (15:00-15:15)	New and Simple Offline Authentication Approach using Time-based One-time Password with Biometric for Car Sharing Vehicles <i>Haqi Khalid*, Shaiful Jahari Hashim, Sharifah Mumtazah Syed Ahamed and Muhammad Akmal Chaudhary</i>
32 (15:15-15:30)	Geometric optimization of an L shaped vibration energy harvester for a bridge structure <i>Prasanna Gunawardane, Chanuka Gunarathne* and Young-Ho Lee</i>
92 (15:15-15:45)	Performance Evaluation of Permissioned Blockchain Platforms <i>Ahmed Afif Monrat*, Olov Schel'en, and Karl Andersson</i>

Special Session III - CSDE- Session Chair: Mr. Phumlani Nhlanganiso Khoz, The University of the Witwatersrand, South Africa

Venue: Zoom II

Date: 18th December 2020; Time: 14.15 – 16:00

Paper ID: CSDE #	Paper Title
41 (14:15-14:30)	Automated and interpretable m-health discrimination of vocal cord pathology enabled by machine learning <i>Nabeel Seedat*, Vered Aharonson and Yaniv Hamzany</i>
86 (14:30-14:45)	Using Machine Learning to Classify Android Application Behavior <i>Modhi AlSobeihy*, Shorouq Altamimi, Elaaf Salem, Haya Alhazzani and Ebtehal Alhjaile</i>
07 (14:45-15:00)	Distributed Database Using Sharding Database Architecture <i>Bahaa Mahmoud Ahmad Abdelhafiz</i>
138 (15:00-15:15)	Non-Parametric Response Surface Analysis: Detecting Network Homotopy Variation <i>Phumlani Khoza</i>
103 (15:15-15:30)	Towards an Analytical Probe for Twitter Information Flow Micro-structure <i>Pheello Maboea</i>
91 (15:15-15:45)	Automatic Prediction of Learning Styles in Learning Management Systems: A Literature Review <i>Nisreen Alzahrani*, Maram Meccaw and Muazzam Ahmed AbdAlsamei Siddiqu</i>

Parallel Session XII – i-COSTE- Session Chair: Dr. Kamal Jaafar, University of Wollongong in Dubai, UAE

Venue: Zoom III

Date: 18th December 2020; Time: 14.15 – 16:00

Paper ID: i-COSTE #	Paper Title
08 (14:15-14:30)	An EEG analysis approach towards brain-to-brain synchronization <i>Kamran Hameed*, Ijlal Shahrukh Ateeq, Sana Hyder Khan and Shafia Tabassum</i>
07 (14:30-14:45)	Piecewise Linear Optimization for Public EV Charging Depots in Different Utility Environments <i>Alexander Brissette*, David Coats and Don Scoffield</i>
26 (14:45-15:00)	Maximizing Energy Performance Through Innovative Sustainable Design <i>Kamal Jaafar* and Sisizakele Kubheka</i>
22 (15:00-15:15)	Meteorology of the Red Planet by dust devils <i>Fares M. Howari, Imen Ben Salem, Mr. Manish Sharma*, Cijo Xavier, Yousef Nazzal, and Fatima AlAydaros</i>
23 (15:15-15:30)	Application of hyperspectral imaging technique to determine the quality of Photo and Thermal exposed and contaminated pharmaceutical formulations: A cost effective way of quality testing <i>Fares M. Howari, Cijo Xavier*, Mr. Manish Sharma, Yousef Nazzal, and Fatima AlAydaros</i>

Keynote Talk Session

Date: 18th December 2020; Time: 16:00 – 16:45

Keynote Talk IV

Keynote Speaker: [Professor Suzanne Wilkinson, Massey University, New Zealand](#)

Title: Encouraging Resilience Building in Engineering

Chair: [Professor Young Ho LEE, KMOU, South Korea](#)

Venue: Zoom I

Date: 18th December 2020; Time: 16:50 – 17:35

Keynote Talk V

Keynote Speaker: [Scientia Professor Boualem Benatallah, UNSW, Australia](#)

Title: Natural Language based Augmentation of Conversations with Processes: Issues, Applications and Directions

Chair: [Associate Professor Feng Xia, Federation University, Australia](#)

Venue: Zoom I

Date: 18th December 2020; Time: 17:45 – 18:30

EVENT: CONFERENCE CLOSING & AWARD CEREMONY

Virtual Venue: Zoom I

[Melbourne Marriott Hotel, Corner Exhibition & Lonsdale Streets, Melbourne 3000 Australia](#)

