



## **CITISIA 2020- Conference** **Schedule**

### **25th November- Wednesday – Opening Ceremony**

#### **Zoom link – 1: 9.00 am – 11 am**

9:00 am - Welcome Message (Student Representative) followed by Conference Opening (Master of Ceremony);

9:03 am - Welcome Speech - A/Prof Chandana Withana, Co-Chair CITISIA 2020;

9:05 am - Introduction to CITISIA – A/Prof Arosha Senanayake (Founder CITISIA Conference);

9:10 am – Charles Sturt University (CSU) Pro Vice-Chancellor (Research and Innovation) Professor Michael Friend;

9:15 am - Greetings from CSU Provost and Deputy Vice-Chancellor (Academic) Professor John Germov;

9:20 am - Greetings from the Minister for Industry, Science and Technology, the Hon Karen Andrews MP

9:25 am - Greetings from the Chief Academic Officer, Study Group Australia (SGA) Professor Elizabeth More;

9:30 am - Greetings from the Chair, IEEE NSW, Mr. Colin Elston;

9:35 am - Greetings from CISCO Regional Manager, ANZ & PI Ms. Emma Broadbent;

9:40 am – Official Conference Opening by the Shadow Minister for Education & Training, the Hon Tanya Plibersek;

9:45 am – **Key-Note Speech 1** - Fabio Ramos, Professor of Robotics and Machine Learning, School of Computer Science, University of Sydney;

“Learning to Make Decisions with Reinforcement Learning and Physics Simulators”

Abstract:

Machine learning and physics/scientific models have so far been treated as separate solutions to automated prediction and decision-making tasks. We aim to close this gap and develop machine learning methods that, as much as possible, integrate prior knowledge into the pipeline. Recent advancements in Bayesian inference enables a probabilistic treatment for the problem of estimating model parameters and their uncertainty given sequences of observations. In this talk, I will describe the integration of parameter inference for scientific simulators with both model-free reinforcement learning and model-based control in a novel sequential algorithm that alternates between learning a better estimation of parameters and improving automated decision making. This approach exploits the interdependence between the two problems to generate computational efficiencies and improved reliability when a scientific simulator is available. Experimental results suggest that these strategies have better performance compared to pure machine learning methods.

10:15 am – **Key-Note Speech 2:** Subhas Mukhopadhyay, Professor of Mechanical/Electronics Engineering, School of Engineering, Macquarie University; Distinguished Lecturer – IEEE Sensors Council;

Title: Trends for Wearable and Medical Devices Abstract

An increase in world population along with a significant ageing proportion is forcing rapid rises in healthcare costs. The healthcare system is going through a transformation in which continuous monitoring of the population is possible even without hospitalization. Advances of sensing technologies, embedded systems, wireless communication technologies, nanotechnologies, and miniaturization makes it possible to develop smart medical systems to continuously monitor the human activities. Wearable sensors detect abnormal and/or unforeseen situations by monitoring physiological parameters along with other symptoms, thus facilitating provision of immediate intervention in times of dire need. This seminar reviews the latest reported systems and trends on wearable and medical devices used to monitor human activities to tackle the challenges.

10:45 am – Vote of Thanks - A/Prof Abeer Alsadoon, Secretary CITISIA 2020.

- End of Morning Session -

**Afternoon Session**

12:00 am – 2:00 pm : Zoom link -1  
Workshop -1 Professor Subhas Mukhopadhyay

Title: Publishing a good scientific paper in IEEE

**Abstract**

Conducting a very high quality research may be the fundamental job for scientists but their survival in the long run depends on their ability to write good papers, articles, and reports and publish them in highly ranked journals. The writing process can be intimidating to many researchers even to experienced professionals. According to IEEE Member Matthias Reumann, a postdoctoral Fellow at the IBM Thomas J. Watson Research Center in Yorktown Heights, "Writing requires discipline, organization, thoroughness, understanding of the background and consequences, and planning," This seminar will present some ground rules on writing and publishing good scientific papers in IEEE transactions and journals. Personal experience with the association with IEEE over 34 years as an associate editor (18+ years with IEEE Sensors Journal, 13+ years with IEEE TIM and 3 years with IEEE Mechatronics) and dealing over 2000 papers will be shared.

12.00 pm - 1.00 pm: Zoom link - 2

**Special Session -2:** Biomedical Imaging, Visualisation and Data Augmented Methods and technologies (BIVDAMT)

Session Chair - A/Prof Abeer Alsadoon

<i>Paper ID</i>	<i>Paper Title</i>
201	MRI-based Diagnosis of Brain Tumours Using a Deep Neural Network Framework
203	Deep learning for ovarian follicle (OF) classification and counting: displaced rectifier linear unit (DReLU) and network stabilization through batch normalization (BN)
202	A Novel Solution of an Enhanced Error and Loss Function using Deep Learning for Hypertension Classification in Traditional Medicine
208	A Novel Augmented Reality Approach in Oral and Maxillofacial Surgery: Super-Imposition Based on Modified Rigid and Non-Rigid Iterative Closest Point
206	Survey on Real-Time Tracking and Treatment of Infectious Diseases Using Mixed Reality in Visualisation Technique with Autoimmune Therapy
204	Convolutional Neural Network with Segmentation in Brain Tumour Diagnosis: An extensive review.
205	Digital Fiat Currency (DFC): A Taxonomy for Automatic Sleep Stage Classification
213	DFA Taxonomy for the classification of ECG data for effective health monitoring using ML technology
223	Enhancing Local Binary Patterns for higher accuracy in Fatty Liver classification using Deep Learning

- 12.00 pm - 1.00 pm: Zoom link - 3  
**General Track-11: Data Mining & Different Technologies**  
 Data Mining/Different Technologies (DM&DT)  
 Session Chair - *Prof. Sardar M. N. Islam*

<i>Paper ID</i>	<i>Paper Title</i>
220	Software Defect Prediction Using Atomic Rule Mining and Random Forest
221	Use of Wearable Technologies for Analysis of Activity recognition for sports
231	Reverse Engineering UML Sequence Diagrams for Program Comprehension Activities
241	An Explainable Content-Based Recommender System
242	Digital Energy Management amid the COVID-19 Pandemic in Mauritius
248	An evaluation model for Cloud-based Data mining Systems with Hadoop

- 1.00 pm - 2.00 pm: Zoom link - 4  
**General Track – 1: Blockchain & Computer Network & Wireless & Cloud (BCCNWC)**  
 Session Chair - *Mr Sentil Suntharalingam*

<i>Paper ID</i>	<i>Paper Title</i>
209	Grid Computing for MSE during Volatile Economy
210	Wireless sensors networks using image processing for fire detection
254	Review of gesture recognition technique using cloud-assisted wearable devices for real-time healthcare
262	Smart farm and monitoring system for measuring the Environmental condition using wireless sensor network - IOT Technology in farming.
269	Computational intelligence in photonics technology and optical networks: a survey and future perspectives
286	A Review of Blockchain-based on IoT applications ( challenges and future research directions)

- 1.00 pm - 2.00 pm: Zoom link -5  
**General Track - 2: Internet of Things (IoT)**  
 Session Chair - *Dr. Sabih Rehman*

<i>Paper ID</i>	<i>Paper Title</i>
106	Smart Parking Utilizing IoT Embedding Fog Computing Based on Smart Parking Architecture
151	Techno-economic Analysis for Implementation of Hybrid Renewable Energy System in a Rural Smart Village
168	Latency Optimization in Smart Cities through Vehicular Fog Computing
175	A study of fall detection monitoring system for elderly people through IOT and mobile based application devices in indoor environment
212	A pedestrian tracking method based on Mechanical device

- 1.00 pm - 2.00 pm: Zoom link -6  
**General Track – 10: Internet of Things (IoT)**  
 Session Chair - *Prof Tarik A. Rashid*

<i>Paper ID</i>	<i>Paper Title</i>
244	Towards Adapting Autonomous Vehicle Technology for the Improvement of Personal Mobility Device
251	Detection of Chipless RFID Tag Using a Single Antenna RFID Reader System
279	Soft Real Time Data Driven IoT for Knee Rehabilitation
295	IoT for Smart Learning/Education

- 2.00 pm - 3.00 pm: Zoom link -7  
**General Track – 3: Deep Learning and Machine Learning Image Processing (MLDLIP)**  
 Session Chair - *A/Prof Abeer Alsadoon*

<i>Paper ID</i>	<i>Paper Title</i>
267	Application of Machine learning algorithms in diagnosis and detection of psychological disorders
235	RNN-CNN MODEL:A Bi-directional Long Short-Term Memory Deep Learning Network For Story Point Estimation
219	A Novel Softmax Regression enhancement for Handwritten Digits Recognition
229	A Novel Hybrid Fall Detection Technique Using Body Part Tracking and Acceleration
225	A Hybrid Method of Smart Scanning and Terrestrial Laser Scanner (SSaTLS): Improving the Accuracy of the Measurement Method
278	Classification of Melanoma (Skin Cancer) using Convolutional Neural Network
293	Convolution Neural Network for Brain Tumor Detection & Segmentation using Deep Learning Techniques
19	Analysis of Algorithms in Automated Marking in Education: A Proposed Hybrid Algorithm

- 2.00 pm - 3.00 pm: Zoom link  
**Special Session – 06: Telecommunications and AI: Use-Cases in Healthcare and Agriculture**  
 Session Chair - *Prof. Sakshi Kaushal*

<i>Paper ID</i>	<i>Paper Title</i>
255	Enhanced Advanced Encryption Standard with Randomised S Box
256	Text Analysis for Honey-pot Misuse Inference
298	Development of Internet of Things Based Automated Irrigation System for Crop Farmers in Namibia
300	OVERCOMING SECURITY BASED RISKS OF RFID TAG USING AUTHENTICATION TECHNIQUES IN THE HEALTHCARE INDUSTRY
303	Modelling Environmental Impact on Public Health using Machine Learning: Case Study on Asthma

- 2.00 pm - 3.00 pm: Zoom link -9  
**Special Session - 04:** Data Mining and analysis, Big Data, and Data Engineering  
 Session Chair - *Prof. Nedhal A. Al-Saiyd*

<i>Paper ID</i>	<i>Paper Title</i>
224	Rule Based Approach to Extract Metadata from Scientific PDF Documents
233	An Unsupervised Machine Learning Technique for Recommendation Systems
253	Improving the quality of education system using Data Science Technologies : Survey
222	Political Arabic Articles Classification Based on Machine Learning and Hybrid Vector
240	An Optimized RNN-LSTM Approach for Parkinson’s Disease Early Detection using Speech Features
250	Proactive Big Data Analysis for Traffic Accident Prediction

**26<sup>th</sup> November - Thursday**

- 9:30 am: Zoom - 1 **Key note speech-3** – Mr Yohan Ramasundara (30 min)
- 10.15 am – 11.15 am – ACS Professional Year Program – Navitas Professional
- 10:00 am – 3:00pm - **Work shop - 1** (Prof. Lau - Big Data Visualisation)
- 10.00 am - 11.00 am: Zoom link -2  
**General Track – 4:** Data Mining/Different Technologies (DM&DT)  
 Session Chair - *Dr. Sudath Heiyantuduwage*

<i>Paper ID</i>	<i>Paper Title</i>
237	Green Computing Sustainable Design and Technologies
200	Web-based Enhancement of Employees Continuous Professional Development
214	Design & Evaluation of Layout-Agnostic Tactile Guides for In-Vehicle Touchscreens
215	Predictive analysis of the supply chain management using Machine learning approaches: Review and Taxonomy
216	A review of data analytics techniques for effective management of big data using IoT
217	Analysing Stock Market’s Trend Prediction using Machine & Deep Learning Models: A Comprehensive Review

- 10.00 am - 11.00 am: Zoom link -3  
**General Track - 5: Blockchain & Computer Network & Wireless & Cloud (BCCNWC)**  
 Session Chair - *Dr Razwan Mohmed Salah*

<i>Paper ID</i>	<i>Paper Title</i>
272	A Decentralised Land Sale and Ownership Tracking System using blockchain technology
273	A Decentralised Registry for Firearm Tracking using Blockchain Technology
218	Enhanced the Quality of Telemedicine Real-Time Video Transmission and Distortion Minimization in Wireless Network
288	Content Caching and Clock Synchronization Assisted Low-Latency Communication in 5G Networks
291	Post study of Blockchain in smart health environment

- 10.00 am - 11.00 am: Zoom link -4  
**Special Session – 05: Machine Learning for Next Generation Wireless Communication**  
 Session Chair - *Dr. M. Arif Khan*

<i>Paper ID</i>	<i>Paper Title</i>
258	Comparison of 4G and 5G Cellular Network Architecture and proposing of 6G, a new era of AI
263	Analyzing Vehicle-to-Everything Communication for Intelligent Transportation System: Journey from IEEE 802.11p to 5G and Finally Towards 6G
264	Towards Real-Time Drowsiness Detection for Elderly Care
238	Maximum Power Point Tracking with Modified Incremental Conductance Technique in Grid-Connected PV Array

- 11.00 am -12.00 pm: Zoom link -5  
**General Track - 6: Deep Learning and Machine Learning Security (DLMLS)**  
 Session Chair - *Ms Simi Bajaj*

<i>Paper ID</i>	<i>Paper Title</i>
58	Data security and privacy in cloud computing focused on transportation sector with the aid of block chain approach.
98	Cloud computing-based Elliptic Curve Augmented Encryption framework for Vehicular Ad-Hoc Networks
104	Security of data and privacy in Content Sharing on Mobile Cloud with the help of the cryptographic method
118	The effect of cloud storage by video producing at Multimedia
124	A review on Deep Learning technique based Artificial Neural Network Strategy to prevent Cyber-Attacks
207	A Model to Enhance Governance Issues through Opinion Extraction
211	Review of scalable privacy protection techniques in mobile crowdsensing service for security of data

- 11.00 am -12.00 pm: Zoom link -6  
**Special Session – 07:** Advanced Software Engineering and Application  
 Session Chair - *Dr. Nguyen Tran Quoc Vinh*

<i>Paper ID</i>	<i>Paper Title</i>
252	A NOVEL SOLUTION FOR ANTI-MONEY LAUNDERING SYSTEM
265	Optimizing mutant generation for Lustre programs with multi-threading
283	A COMPARITIVE ANALYSIS OF EXISTING METHODOLOGIES OF LEGACY APPLICATION MIGRATION TO CLOUD

- 11.00 am -12.00 pm: Zoom link -7  
**Special Session – 03:** Image Processing and Pattern Recognition using Deep Learning and Machine Learning  
 Session Chair - *Dr. Mohammad Khubeb Siddiqui*

<i>Paper ID</i>	<i>Paper Title</i>
239	An In-Depth Review of the various Intelligent Approaches applied in the Detection and Prediction of Coronary Artery Diseases
245	Motion Classification Using CNN Based on Image Difference
247	Automatic Camera Switching in Soccer Game using Decision Tree
260	Strokes Classification in Cricket Batting Videos
277	Investigation of Mobile Machine Learning Models to Preserve the Effectiveness of User Privacy

- 1.00 pm - 2.00 pm: Zoom link -8  
**General Track:** Deep Learning and Machine Learning Security (DLMLS)  
 Session Chair - *Dr Ahmad B. Al-Khalil*

<i>Paper ID</i>	<i>Paper Title</i>
227	Authentication in E-Health Services
228	Bot Detection Using Machine Learning Algorithms on Social Media Platforms
259	Study of Security and Privacy Issues in Internet of Things.
280	Proposing 2-tier Architecture for Permission-ed and Permission-less Blockchain Consensus Algorithms Based on Voting System.
294	REVIEW OF FACE RECOGNITION TECHNIQUES FOR SECURED CLOUD DATA SURVEILLANCE USING MACHINE LEARNING
296	Review of Image encryption techniques using neural network for optical security in the healthcare sector – PNO System
297	Authentication method to secure cloud data centres using biometric technology



- 2.00 pm - 3.00 pm: Zoom link -9  
**General Track – 8: Deep Learning or Machine Learning in Health/Augmented Reality and Virtual**  
 Session Chair - *A/Prof Arosha Senanayake*

<i>Paper ID</i>	<i>Paper Title</i>
15	Research on Behavioural Recognition of patients using body sensors with the help of Deep Neural Networks in healthcare
114	A Novel Detection of Surgical Instrument using deep learning: Minimally invasive computer assisted surgery
128	Predicting Early Phase of Type 2 Diabetic by Deep Learning
139	Visualizing Data Using Augmented Head Up Displays in Surgery
270	Mobile-Enabled Virtual Reality Visualisation Improves Learning And Training In Health Care
274	Augmented Reality Navigation in Spine Surgery.
275	Heart disease monitoring and predicting by using machine learning based on IoT technology
285	Abnormal Activity Detection in Healthcare

- 2.00 pm - 3.00 pm: Zoom link -10  
**General Track – 9: Deep Learning and Machine Learning Image Processing (MLDLIP)** Session Chair - *Ms Angelika Maag*

<i>Paper ID</i>	<i>Paper Title</i>
292	Human-System Interaction Interface Utilizing 3D Gesture Recognition Techniques based on Wearable Technology
69	A DFC taxonomy of Speech emotion recognition based on convolutional neural network from speech signal
105	Pre-processing, Feature Extraction and Detection (PFD): Taxonomy for Intrusion Detection in IoT environment using ML technology
234	Blockchain for data sharing in the rational use of coastlines and seaport demands in inter-organizational networks: Development of a new intelligent decision support system
271	Predictive analysis of the supply chain management using Machine learning approaches: Review and Taxonomy
301	Using Machine Learning to Forecast Time Series in Spacecrafts
232	Strategy-oriented Digital Transformation of Logistics Enterprises: The roles of artificial intelligence and blockchain
234	Chromosome Encoding Schemes in Genetic Algorithms for the Flexible Job Shop Scheduling: A State-of-art Review Useful for Artificial Intelligence Applications

**27<sup>th</sup> November -Friday**

9:30 am – **Keynote Speech - 4** (Adam Radford/Simon King - CISCO - 30 min)

10:00 am – 2:00 pm –Zoom -1: Work shop -2 (CISCO Devnet - George)