

# 18<sup>th</sup> IBCAST 2021: ARTIFICIAL INTELLIGENCE AND SOFTWARE TECHNOLOGIES

## 12-15 January 2021

### Technical Program

	0945-1000	1000-1130					1150 – 1300		1400 – 1630						
<b>Day-1</b> January 12, 2021 Tuesday	Opening Remarks	<b>CNN-I</b>				B R E A K	<b>Health Care</b>		B R E A K	<b>CNN - II</b>					
		21AIST149	Talk 1 Dr. Syed Afaq Shah Murdoch University, Australia	21AIST346	21AIST300		Talk 2 Prof Dr. Shoab Khan Cofounder (CARE)	21AIST561		Talk 3 Prof M. Shafique NYUD-UAE, NYU-USA	21AIST375	21AIST345	21AIST283	21AIST21	21AIST26
<b>Day-2</b> January 13, 2021 Wednesday	<b>Process Modelling</b>				B R E A K	<b>Blockchain</b>		B R E A K	<b>Human/Aerial Monitoring</b>						
	21AIST351	21AIST286	Talk 1 Dr. M. Omair Shafiq Carleton University, Canada	21AIST495		Talk 2 Dr. Jamal Abdul Nasir National University of Ireland, Galway	21AIST531		Talk 3 Dr. Anwar Ul Haq Charles Sturt University, Australia	21AIST636	21AIST358	21AIST619	21AIST168	21AIST158	21AIST175
<b>Day-3</b> January 14, 2021 Thursday	<b>Sensor Data Analysis</b>				B R E A K	<b>RBF-NN</b>		B R E A K	<b>SVM</b>						
	21AIST342	21AIST422	Talk 1 Prof Peter Corke Queensland University of Technology, Australia	21AIST552		21AIST63	Talk 2 Mr. Tayyab Tariq Founder (Red Buffer)		21AIST315	Talk 3 Dr. Naveed Sherwani Chairman (Silicon Federation), USA	21AIST427	Talk 4 Prof Dr. Arif Mahmood Information Technology University, Pakistan	21AIST614	21AIST471	21AIST333
<b>Day-4</b> January 15, 2021 Friday	<b>Invited Talks AI&amp;ST</b>				B R E A K			B R E A K							
	Remarks	Talk 1 Dr. Syed Hassan Adil Iqra University, Pakistan	Talk 2 Prof Datin Dr. Sameem Abdul Kareem University of Malaya, Malaysia												

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Day 1: January 12, 2021

9:45 – 10:00 Opening Message		18 <sup>th</sup> IBCAST 2021: ARTIFICIAL INTELLIGENCE AND SOFTWARE TECHNOLOGIES	Dr. M Zafar Uz Zaman IBCAST
CNN-I	10:00 – 10:15	21AIST 149: Deep Learning based Sequence Modeling for Optical response retrieval of photonic nanostructures	Sadia Noureen ITU
	10:15 – 11:00	Deep Learning Systems for Defence against Adversarial Attacks	Dr. Syed Afaq Shah Murdoch University, Australia
	11:00 – 11:15	21AIST 346: Tomato Leaf Disease Detection Using Convolution Neural Network	Hareem Kibriya UET, Taxila
	11:15 – 11:30	21AIST 300: Classification and Detection of Glioblastoma Tumor from MRI Images	Muhammad Yasir Bahria University Islamabad
11:30 – 11:50		BREAK	
Health Care	11:50 – 12:35	Artificial Intelligence and Data Analytics in Healthcare: Potential, Scope and Local & Global Opportunities	Prof Dr. Shoab Khan Cofounder (CARE)
	12:35 – 12:50	21AIST 561: Convolution Neural Network based Approach for Breast Cancer Type Classification	Tasleem Kausar MUST
13:00 – 14:00		BREAK	
CNN - II	14:00 – 14:45	Energy Efficiency and Security for Edge AI: From Algorithms to Hardware Architectures	Prof M. Shafique NYUD-UAE, NYU-USA
	14:45 – 15:00	21AIST 375: Entity Classification for Military Knowledge Graph based on Baidu Encyclopedia Distance Learning	Huiran Jia BIT, China
	15:00 – 15:15	21AIST 345: Markerless Sensors for Physical Health Monitoring System Using ECG and GMM Feature Extraction	Mouazma Batool Air University
	15:15 – 15:30	21AIST 283: Recognition of Alzheimer and Mild Cognitive disease using Automated deep learning techniques	Laiba Zubair UET, Taxila
	15:30 – 15:45	21AIST 21: Forged Face Detection using ELA and Deep Learning Techniques	Qurat Ul Ain UET, Taxila
	15:45 – 16:00	21AIST 26: Liver Tumor Segmentation using Resnet based Mask-RCNN	Nouman Ul Haq UET, Taxila

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Day 2: January 13, 2021

<b>Process Modelling</b>	09:45 – 10:00	<b>21AIST 351:</b> IoT-Enabled Smart Home Energy Management Strategy for DR Actions in Smart Grid Paradigm	<b>Abdul Manan</b> UET, Taxila
	10:00 – 10:15	<b>21AIST 286:</b> A New Model for Co-ratings based similarity in Collaborative Filtering	<b>Mubbashir Ayub</b> UET, Taxila
	10:15 – 11:00	<b>User Intention Assessment in Online Reviews and Social Media</b>	<b>Dr. M. Omair Shafiq</b> Carleton University, Canada
	11:00 – 11:15	<b>21AIST 495:</b> UML Profile for Business Process Modeling Notation	<b>Anam Amjad</b> NUST
11:30 – 11:50		<b>BREAK</b>	
<b>Blockchain</b>	11:50 – 12:35	<b>Blockchain Applications and Software Engineering</b>	<b>Dr. Jamal Abdul Nasir</b> National University of Ireland, Galway
	12:35 – 12:50	<b>21AIST 531:</b> Blockchain-based Automated Formal Model for Smart Market System	<b>Muhammad Fayez Afzal</b> COMSATS, Sahiwal Campus
13:00 – 14:00		<b>BREAK</b>	
<b>Human/Aerial Monitoring</b>	14:00 – 14:45	<b>Knowledge Transfer in the Age of Deep Learning</b>	<b>Dr. Anwar Ul Haq</b> Charles Sturt University, Australia
	14:45 – 15:00	<b>21AIST 636:</b> Formal Verification and Development of Living Assistance System	<b>Ahsan Abbas</b> NUCEM
	15:00 – 15:15	<b>21AIST 358:</b> Unit Testing from Partial and Informal Requirements	<b>Muzammil Shahbaz</b> BTC, UK
	15:15 – 15:30	<b>21AIST 619:</b> On the Utilization of Optical Hardware for Single Image Blind Deblurring	<b>Babar Naseer</b> UET, Peshawar
	15:30 – 15:45	<b>21AIST 168:</b> Design and development of long-range vision and telemetry system for an aerial platform	<b>Muhammad Haroon</b> NUST
	15:45 – 16:00	<b>21AIST 158:</b> Software Defect Prediction with Naïve Bayes Classifier	<b>Aqsa Rahim</b> NUST
	16:00 – 16:15	<b>21AIST 175:</b> System Development and Evaluation of Rotary Unmanned Aerial Vehicle for Disaster Relief	<b>Imran Nusrat Ali</b> NUST

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Day 3: January 14, 2021

Sensor Data Analysis	09:45 – 10:00	<b>21AIST 342:</b> Machine Learning Inspired Efficient Audio Drone Detection using Acoustic Features	<b>Soha Salman</b> UET, Taxila
	10:00 – 10:15	<b>21AIST 422:</b> Mortality Prediction in ICU Patients Using Machine Learning Models	<b>Fawad Ahmad</b> UET, Taxila
	10:15 – 11:00	<b>Creating Robots That See</b>	<b>Distinguished Prof Peter Corke</b> Queensland University of Technology, Australia
	11:00 – 11:15	<b>21AIST 552:</b> Prediction of Perceived Stress Scores Using Low-Channel Electroencephalography	<b>Syeda Faiza Gillani</b> UET, Taxila
	11:15 – 11:30	<b>21AIST 63:</b> COVRAID: COVID-19 Rapid Artificial Intelligence Detection	<b>Majeed Ahmed</b> CESAT
11:30 – 11:50	<b>BREAK</b>		
RBF-NN	11:50 – 12:35	<b>Generating Business Value through ML &amp; AI</b>	<b>Mr. Tayyab Tariq</b> Founder (Red Buffer)
	12:35 – 12:50	<b>21AIST 315:</b> Prediction of Fatigue Crack Length in Aircraft Aluminum Alloys using Radial Basis Function Neural Network	<b>Muhammad Fahad Sheikh</b> UMT, Sialkot
13:00 – 14:00	<b>BREAK</b>		
SVM	14:00 – 14:45	<b>IC Design Ecosystem in Pakistan</b>	<b>Dr. Naveed Sherwani</b> Chairman (Silicon Federation), USA
	14:45 – 15:00	<b>21AIST 427:</b> Machine learning based approval prediction for enhancement reports	<b>Sadeem Ahmad Nafees</b> NUST
	15:00 – 15:45	<b>Identifying Firearms and Firearm-Carriers Using Artificial Intelligence</b>	<b>Dr. Arif Mahmood</b> Information Technology University, Pakistan
	15:45 – 16:00	<b>21AIST 614:</b> End to End Brightness Correction in X-Ray Images to Detect COVID-19	<b>Shahzeb Khoso</b> CESAT
	16:00 – 16:15	<b>21AIST 471:</b> Development of Interactive Dashboards and Intelligent Data Analytics for Visual Decision-Making in The Underground Mining Environment: The Sterkfontein Cave Case Study	<b>Iqra Atif</b> WMI, South Africa
	16:15 – 16:30	<b>21AIST 333:</b> Inter-Classifer Comparison for Upper Extremity EMG Signal at Different Hand Postures and Arm Positions Using Pattern Recognition	<b>Ali Asghar</b> ZUFESTM

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Day 4: January 15, 2021

Invited Talks AI & ST	09:45 – 10:00	REMARKS	Dr. Sajid Baloch CESAT
	10:00 – 10:45	Role of Software Analytics in Software Development	Dr. Syed Hassan Adil Iqra University, Pakistan
	10:45 – 11:30	AI: Past, Present, Future	Prof Datin Dr. Sameem Binti Abdul Kareem University of Malaya, Malaysia