

## 4<sup>th</sup> IJCACI 2020 PROGRAM SCHEDULE

<b>DAY 1 (20/11/2020)</b>				
<b>Date</b>	<b>Time</b>	<b>Event</b>	<b>Virtual Venue Link</b>	<b>Rapporteur</b>
<b>20/11/2020</b>	09:00 AM - 09:45 AM	<b>Inauguration Ceremony</b>		
	09:45 AM- 10:30 AM	<b>Keynote I</b> <b>Speaker:</b> Prof. Dr. Mohammad Kaykobad, BRAC University <b>Session Chair:</b> Prof. Dr. Mohammed Shorif Uddin, Jahangirnagar University		Md. Sazzadur Ahmed, Senior Lecturer, DIU
	10:30 AM- 11:00 AM	<b>Invited Talk I</b> <b>Speaker:</b> Dr. Fuad Rahman, Founder and CEO, Apurba Technologies Inc. <b>Session Chair:</b> Prof. Dr. Syed Akhter Hossain, Daffodil International University	<a href="https://meet.google.com/tkm-verh-iup">https://meet.google.com/tkm-verh-iup</a>	Zerin Nasrin Tumpa, Lecturer, DIU
	11:00 AM- 12:30 PM	<b>Technical Session 1 (NLP)</b> <b>Session Chair:</b> Dr. Fuad Rahman, Founder and CEO, Apurba Technologies Inc. <b>Session Co-Chair:</b> Sheikh Abujar, Daffodil International University		
	12:45 PM – 03:00 PM	<b>Lunch &amp; Prayer Break</b>		
	03:00 PM – 03:45 PM	<b>Keynote II</b> <b>Speaker:</b> Prof. Dr. Khandaker Abdullah Al Mamun, United International University <b>Session Chair:</b> Prof. Dr. M. Ameer Ali, Bangladesh University of business and Technology		Dewan Mamun Raza, Lecturer, DIU
	03:45 PM- 05:15 PM	<b>Technical Session 2 (AI-ML)</b> <b>Session Chair:</b> Prof. Dr. Mohammad Zahidur Rahman, Jahangirnagar University <b>Session Co-Chair:</b> Dr. Saddam Hossain Mukta, United International University	<a href="https://meet.google.com/pwh-nfau-jhx">https://meet.google.com/pwh-nfau-jhx</a>	Amit Chakraborty, Lecturer, DIU
	05:15 PM – 06:00 PM	<b>Keynote III</b> <b>Speaker:</b> Prof. Dr. S. K. Khatri, Amity University, India <b>Session Chair:</b> Dr. Md. Dewan Farid, IUT Lumière – Université Lyon 2, France		Tanzina Afroz Rimi, Lecturer, DIU
	06:00 PM - 07:30 PM	<b>Technical Session 3 (AC)</b> <b>Session Chair:</b> Prof. Dr. Md. Monzur Morshed, University of Dhaka <b>Session Co-Chair:</b> Dr. Nova Ahmed, North South University		Saima Afrin, Lecturer, DIU

<b>DAY 2 (21/11/2020)</b>					
<b>Date</b>	<b>Time</b>	<b>Event</b>	<b>Virtual Venue Link</b>	<b>Rapporteur</b>	
<b>21/11/2020</b>	09:00 AM – 10:30 AM	<b>Technical Session 4 (SP-CV)</b> <b>Session Chair:</b> Prof. Dr. Md. Hasanul Kabir, Islamic University of Technology <b>Session Co-Chair:</b> Dr. Nabeel Mahmud, North South University	<a href="https://meet.google.com/dnu-pbiq-iyu">https://meet.google.com/dnu-pbiq-iyu</a>	Abdus Sayef Reyadh, Lecturer, DIU Tapasy Rabeya, Lecturer, DIU	
	10:30 AM - 11:25 AM	<b>Keynote IV</b> <b>Speaker:</b> Prof. Dr. M Sohel Rahman, Bangladesh University of Engineering and Technology, Bangladesh <b>Session Chair:</b> Prof. Dr. Mohammed Shorif Uddin, Jahangirnagar University			
	11:25 AM- 01:00 PM	<b>Technical Session 5 (AR)</b> <b>Session Chair:</b> Prof. Dr. Touhid Bhuiyan, Daffodil International University <b>Session Co-Chair:</b> Dr. Sheak Rashed Haider Noori, Daffodil International University		Shahana Shultana, Lecturer, DIU Mushfiqur Rahman, Lecturer, DIU	
	01:00 PM – 02:30 PM	<b>Lunch &amp; Prayer Break</b>			
	02:30 PM – 04:00 PM	<b>Technical Session 6 (NS)</b> <b>Session Chair:</b> Prof. Dr. M Shamim Kaiser, Jahangirnagar University <b>Session Co-Chair:</b> Dr. M. M. Mahbubul Syeed, American International University Bangladesh	<a href="https://meet.google.com/xnu-xmko-viq">https://meet.google.com/xnu-xmko-viq</a>	Raja Tarikul Hasan Tusher, Senior Lecturer, DIU Eshita Khatun, Lecturer, DIU	
	04:00 PM – 04:45 PM	<b>Keynote V</b> <b>Speaker:</b> Prof. Dr. Jagdish Chand Bansal, South Asian University <b>Session Chair:</b> Prof. Dr. Md. Abdur Razzaque, Green University Bangladesh			
	04:45 PM – 05:30 PM	<b>Technical Session 7 (DM-SA)</b> <b>Session Chair:</b> Prof. Dr. Md. Obaidur Rahman, Dhaka University of Engineering and Technology <b>Session Co-Chair:</b> Dr. Mohammad Rezwanul Huq, East West University, Bangladesh		Saiful Islam, Senior Lecturer, DIU Sharmin Akter, Lecturer, DIU	
	05:30 PM – 06:00 PM	<b>Invited Talk II</b> <b>Speaker:</b> Prof. Dr. Alamgir Hossain, Teesside University <b>Session Chair:</b> Prof. Dr. Syed Akhter Hossain, Daffodil International University			
	06:00 PM – 07:00 PM	<b>Closing Ceremony</b>			

## 4<sup>th</sup> IJCACI 2020 Inauguration Ceremony

Date: 20<sup>th</sup> November, 2020

*Virtual Venue Link:* <https://meet.google.com/tkm-verhiup>

<b>Time</b>	<b>Guests</b>
09:00 AM -09:04 AM	<b>Welcome Speech:</b> <b>Syed Akhter Hossain</b> General Chair, IJCACI 2020 & Head of the Department, Dept. of CSE, Daffodil International University
09:04 AM- 09:10 AM	<b>Inauguration Speech:</b> <b>Mohammad Shorif Uddin</b> General Chair, TPC Chair Professor, Jahangirnagar University
09:10 AM- 09:15 AM	<b>Special Guest:</b> Professor Engr. A. K. M. Fazlul Hoque, PhD Registrar Daffodil International University
09:15 AM- 09:45 AM	<b>Special Guest:</b> Prof. Dr. Mohammad Kaykobad BRAC University And <b>Keynote Speech I</b>
09:45 AM- 09:50 AM	<b>Special Guest:</b> Prof. Dr. J. C. Bansal South Asian University
09:50 AM- 09:55 AM	<b>Guest of Honor:</b> Professor Dr. S.M. Mahbub Ul Haque Majumder Patron, IJCACI 2020 & Pro-Vice Chancellor, Daffodil International University
09:55 AM- 10:00 AM	<b>Guest of Honor:</b> Professor Dr. Farzana Islam Patron, IJCACI 2020 Vice-Chancellor, Jahangirnagar University
10:00 AM- 10:10 AM	<b>Guest of Honor:</b> Professor Dr. R. K. Mohanty Patron, IJCACI 2020 & President, South Asian University
10:10 AM- 10:30 AM	<b>Inauguration by Chief Guest</b> <b>Professor Dr. Sazzad Hossain</b> Honorable Member of UGC
10:30 AM- 11:00 AM	<b>Invited Talk-I</b> Dr. Fuad Rahman CEO and Founder, Apurba Technologies Inc.

<b>Technical Session 1: Friday, 20 November 2020</b>	
<b>Topic:</b> Natural Language Processing (NLP)	
<b>Virtual Venue Link:</b> <a href="https://meet.google.com/tkm-verh-iup">https://meet.google.com/tkm-verh-iup</a>	<b>Time:</b> 11:00 AM-12:30 PM
<b>Session Chair:</b> Fuad Rahman, Founder and CEO, Apurba Technologies Inc.	
<b>Session Co-Chair:</b> Sheikh Abujar, Daffodil International University	
<b>Rapporteur:</b> Md. Sazzadur Ahmed, Senior Lecturer, DIU & Zerine Nasrin Tumpa, Lecturer, DIU	
<b>Paper ID</b>	<b>Title</b>
58	Jannatul Ferdousi Sohana, Ranak Jahan Rupa and Moqsadur Rahman. Bengali Stop Word Detection Using Different Machine Learning Algorithms
87	Mohammad Faiyaz Khan, S.M. Sadiq-Ur-Rahman Shifath and Md Saiful Islam. Improved Bengali Image Captioning via deep convolutional neural network based encoder-decoder model
99	Aroni Saha Prapty, Md. Rifat Anwar and K. M. Azharul Hasan. A Rule Based Parsing for Bangla Grammar Pattern Detection
110	Mahfuz Ahmed Masum, Sheikh Junayed Ahmed, Ayesha Tasnim and Md Saiful Islam. BAN-ABSA: An Aspect-based Sentiment Analysis dataset for Bengali and its baseline evaluation
116	Md Tareq Rahman Joy, Md. Nasib Shahriar Akash and K. M. Azharul Hasan. An Intelligent Bangla Conversational Agent: TUNI
121	Nauros Romim, Mosahed Ahmed, Hriteshwar Talukder and Md Saiful Islam. Hate Speech detection in the Bengali language: A dataset and its baseline evaluation
131	Mohammad Reduanul Haque, Rubaiya Hafiz, Mohammad Zahidul Islam, Amina Khatun, Morium Akter and Mohammad Shorif Uddin. Handwritten Indic Digit Recognition using Deep Hybrid Capsule Network
<b>Technical Session 2: Friday, 20 November 2020</b>	
<b>Topic:</b> Artificial Intelligence & Machine Learning (AI & ML)	
<b>Virtual Venue Link:</b> <a href="https://meet.google.com/pwh-nfau-jhx">https://meet.google.com/pwh-nfau-jhx</a>	<b>Time:</b> 03:45 PM- 05:15 PM
<b>Session Chair:</b> Prof. Dr. Mohammad Zahidur Rahman, Jahangirnagar University	
<b>Session Co-Chair:</b> Dr. Saddam Hossain Mukta, United International University	
<b>Rapporteur:</b> Dewan Mamun Raza, Lecturer, DIU & Amit Chakraborty, Lecturer, DIU	
<b>Paper ID</b>	<b>Title</b>
56	Shakhawat Hossain, Md Zahid Hasan, Muhammed J. A. Patwary and Mohammad Shorif Uddin. An Expert System to Determine Systemic Lupus Erythematosus under Uncertainty
83	Abu Zahid Bin Aziz, Md. Al Mehedi Hasan and Jungpil Shin. Deep Transfer Learning Based Musculoskeletal Abnormality Detection
95	M. Raihan, Md. Nazmos Sakib, Sk. Nizam Uddin, Md. Arin Islam Omio, Saikat Mondal and Arun More. Smartphone based Heart Attack Prediction using Artificial Neural Network
104	Mariam Hussain, Nusrat Sharmin and Seon Ki Park. Dhaka Air Quality Forecasting using ANN

114	Md. Mehedi Hasan, Md. Rejaul Alam, Minhajul Abedin Shafin and Mosaddek Ali Mithu. Determining the Inconsistency of Green Chili Price in Bangladesh Using Machine Learning Approach
122	Supriya Sarker and Md Mokammel Haque. An approach towards data change rule based classification of driving maneuver with LSTM network

### Technical Session 3: Friday, 20 November 2020

<b>Topic:</b> Algorithms and Computing (AC)	
<b>Virtual Venue Link:</b> <a href="https://meet.google.com/pwh-nfau-jhx">https://meet.google.com/pwh-nfau-jhx</a>	<b>Time:</b> 06:00 PM - 07:30 PM
<b>Session Chair:</b> Prof. Dr. Md. Monzur Morshed, University of Dhaka	
<b>Session Co-Chair:</b> Dr. Nova Ahmed, North South University, Bangladesh	
<b>Rapporteur:</b> Tanzina Afroz Rimi, Lecturer, DIU & Saima Afrin, Lecturer, DIU	
Paper ID	Title
29	Mohammad N. Murshed, Moajjem Hossain Chowdhury, Md. Nazmul Islam Shuzan and M. Monir Uddin. Towards an improved Eigensystem Realization Algorithm for low-error guarantees
51	Nihal Ahmed, Ashfaq Ahmed and Muntasir Mamun. Comparative study of different Implicit Finite Difference methods to solve the heat convection-diffusion equation for a thin copper plate.
81	Kife I. Bin Iqbal, Xin Du, M. Monir Uddin and M. Forhad Uddin. Time restricted balanced truncation for index-I descriptor systems with non-homogeneous initial condition
96	Md. Fourkanul Islam, Sifat Bin Zaman, Muhammad Nazrul Islam and Md. Ashraful Islam. Design and Development of a Gaming Application for Learning Recursive Programming
98	Ravi Gugulothu, Narsimhulu Sanke Sanke, Farid Ahmed and Ratna Kumari Jilugu. Numerical Study on shell and tube heat exchanger with segmental baffle
126	Md Zahid Hasan, Shakhawat Hossain, Mohammad Shorif Uddin, Md. Mehadi Hassan and Martina Chakma. A Genetic Algorithm Based Optimal Train Route Selection Model

### Technical Session 4: Saturday, 21 November 2020

<b>Topic:</b> Signal Processing and Computer Vision (SP-CV)	
<b>Virtual Venue Link:</b> <a href="https://meet.google.com/dnu-pbiq-iyu">https://meet.google.com/dnu-pbiq-iyu</a>	<b>Time:</b> 09:00 AM – 10:30 AM
<b>Session Chair:</b> Md. Hasanul Kabir, Islamic University of Technology	
<b>Session Co-Chair:</b> Nabeel Mahmud, North South University	
<b>Rapporteur:</b> Abdus Sayef Reyadh, Lecturer, DIU & Tapasy Rabeya, Lecturer, DIU	
Paper ID	Title
37	Aishwariya Dutta, Md. Kamrul Hasan and Mohiuddin Ahmad. Skin Lesion Classification Using Convolutional Neural Network for Melanoma Recognition

42	Mohammad Badhruddouza Khan, Tobibul Islam, Mohiuddin Ahmad, Rahat Shahrrior and Zannatun Naiem Riya. A CNN Based Deep Learning Approach for Leukocytes Classification in Peripheral Blood from Microscopic Smear Blood Images
63	Md. Rakibul Islam, Abdul Matin, Md. Nahiduzzaman, Md. Saifullah Siddiquee, Fahim Md. Sifnatul Hasnain, S.M. Shovan and Tonmoy Hasan. A Novel Deep Convolutional Neural Network Model for Detection of Parkinson Disease by Analyzing the Spiral Drawing
119	Anik Pramanik and Amlan Sarker. Parkinson's Disease Detection from Voice and Speech Data Using Machine Learning
130	Nakib Aman and Md. Rabiul Islam. Ada Boost Classifier based Binary Age Group Stratification by CASIA Iris Image

#### Technical Session 5: Saturday, 21 November 2020

<b>Topic:</b> Automation and Robotics (AR)	
<b>Virtual Venue Link:</b> <a href="https://meet.google.com/dnu-pbiq-iyu">https://meet.google.com/dnu-pbiq-iyu</a>	<b>Time:</b> 11:25 AM-01:00 PM
<b>Session Chair:</b> Touhid Bhuiyan, Daffodil International University	
<b>Session Co-Chair:</b> Sheak Rashed Haider Noori, Daffodil International University	
<b>Rapporteur:</b> Shahana Shultana, Lecturer, DIU & Mushfiqur Rahman, Lecturer, DIU	
Paper ID	Title
19	Nishat Ara Tania, Md.Mosabberul Islam, Jannatul Ferdoush and A S M Touhidul Hasan. A Real-Time Health Monitoring System with Wearables and Ensemble Learning
26	Md. Rahat Khan, A. S. M. Shafi and Mohammad Motiur Rahman. Statistical Texture Features Based Automatic Detection and Classification of Diabetic Retinopathy
45	Md Hafizul Imran, Md Ziaul Haque Zim and Minhaz Ahmmed. PIRATE: Design & Implementation of Pipe Inspection Robot
94	Tashnova Hasan Srijony, Md. Khalid Hasan Ur Rashid, Utchash Chakraborty, Imran Badsha and Md. Kishor Morol. A Proposed Home Automation System for Disable People Using BCI System
117	Shovon Niverd Pereira, Noshin Tasnim, Rabiul Sunny Rizon and Muhammad Nazrul Islam. Blockchain based Digital Record-keeping in Land Administration System
128	Md Zahid Hasan, Shakhawat Hossain, K. M. Zubair Hasan, Mohammad Shorif Uddin and Md. Ehteshamul Alam. Fuzzy Rule-based KNN for Rainfall Prediction: A case Study in Bangladesh

#### Technical Session 6: Saturday, 21 November 2020

<b>Topic:</b> Network and Information Security (NS)	
<b>Virtual Venue Link:</b> <a href="https://meet.google.com/xnu-xmko-viq">https://meet.google.com/xnu-xmko-viq</a>	<b>Time:</b> 02:30 PM –04:00 PM
<b>Session Chair:</b> Prof. Dr. M Shamim Kaiser, Jahangirnagar University	
<b>Session Co-Chair:</b> Dr. M. M. Mahbulul Syeed, American International University Bangladesh	
<b>Rapporteur:</b> Raja Tarikul Hasan Tusher, Senior Lecturer, DIU & Eshita Khatun, Lecturer, DIU	
Paper ID	Title

12	Sajib Biswas and Md. Monowar Hossain. Fully Blind Data Hiding by Embedding within DNA Sequences Using Various CIPHERING and Generic Complimentary Base Substitution
49	Faiza Huma, Maryeama Jahan, Ismat Binte Rashid and Mohammad Abu Yousuf. Wavelet and LSB based Encrypted Watermarking Approach to Hide Patient's Information in Medical Image
75	Merajul Islam, Abdur Rahman, Jannatul Ferdous and Zakia Zaman. Fake Hilsa Fish Detection Using Machine Vision
86	Uzma Hasan, Shaila Tajmim, Ashiqur Rahman and Lt Col Dr. Muhammad Nazrul Islam. User Centred Design (UCD) Based Privacy and Security Framework for Developing Mobile Health Applications
97	Jannatul Ferdous Srabonee, Zahrul Jannat Peya, M. A. H. Akhand and N. Siddique. Alcoholism Detection from 2D Transformed EEG Signal
105	Md. Mustaqim Abrar, Akib Uz Zaman, Arnab Pal and T. M. Shahriar Sazzad. Bit Plane Slicing and Quantization Based Color Image Watermarking in Spatial Domain
123	Keerthi Priya L and Varalakshmi P. A Novel Intrusion Detection System for Wireless Networks using Deep Learning

<b>Technical Session 7: Saturday, 21 November 2020</b>	
<b>Topic:</b> Data Mining and Sentiment Analysis (DM-SA)	
<b>Virtual Venue Link:</b> <a href="https://meet.google.com/xnu-xmko-viq">https://meet.google.com/xnu-xmko-viq</a>	<b>Time:</b> 04:45 PM – 05:30 PM
<b>Session Chair:</b> Prof. Dr. Md. Obaidur Rahman, Dhaka University of Engineering and Technology	
<b>Session Co-Chair:</b> Dr. Mohammad Rezwanul Huq, East West University, Bangladesh	
<b>Rapporteur:</b> Saiful Islam, Senior Lecturer, DIU & Sharmin Akter, Lecturer, DIU	
<b>Paper ID</b>	<b>Title</b>
59	Md. Mashfiq Rizvee, Md Amiruzzaman and Md. Rajibul Islam. Data Mining and Visualization to Understand Accident-prone Areas
88	Tonmoy Hasan and Abdul Matin. Extract Sentiment from Customer Reviews: A Better Approach of TF-IDF and BOW Based Text Classification Using N-gram Technique
91	Anusha Aziz, Suman Saha and Dr. Mohammad Arifuzzaman. Analyzing Banking Data using Business Intelligence (BI): A Data Mining Approach
102	Md. Shah Jalal Jamil, Forhad An Naim, Bulbul Ahamed and Mohammad Nurul Huda. Customer Review Analysis by Hybrid Unsupervised Learning Applying Weight on Priority Data
103	Avishek Das, Md. Kowsher and Fahmida Afrin. Machine Learning and Deep Learning-Based Computing Pipelines for Bangla Sentiment Analysis
115	Kishwara Sadia and Sarnali Basak. Sentiment Analysis Of COVID-19 Tweets: How Does BERT Perform?

## **4<sup>th</sup> IJCACI 2020 Closing Ceremony**

**Date: 21<sup>th</sup> November, 2020**

**Virtual Venue Link:** <https://meet.google.com/xnu-xmko-viq>

<b>Time</b>	<b>Guests</b>
06:00 PM - 06:05 PM	<b>Welcome Speech:</b> Syed Akhter Hossain General Chair, IJCACI 2020 & Head of the Department, CSE, Daffodil International University
06:05 PM- 06:10 PM	<b>Closing Speech:</b> Mohammad Shorif Uddin General Chair, TPC Chair Professor, Jahangirnagar University
06:10 PM- 06:15 PM	<b>Special Guest:</b> Prof. Dr. Alamgir Hossain Teesside University
06:15 PM- 06:20 PM	<b>Special Guest:</b> Prof. Dr. Sohel Rahman Professor, Bangladesh University of Engineering & Technology
06:20 PM- 06:30 PM	<b>Guest of Honor:</b> Prof. Dr. Celia Shahnaz Professor, Bangladesh University of Engineering & Technology
06:30 PM- 06:50 PM	<b>Chief Guest:</b> <b>Prof. Dr. S. K. Khatri</b> Director of Campus Amity University Tashkent, Uzbekistan Amity University, India
06:50 PM- 07:00 PM	<b>Vote of Thanks:</b> Dr. Sheak Rashed Haider Noori Associate Head, Department of CSE Daffodil International University