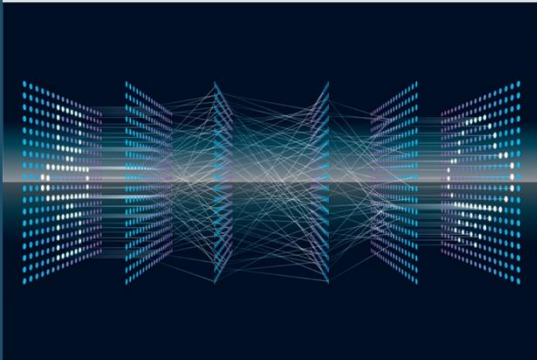




Workshop on

# Deep learning Applications and Assistive Humanitarian Devices



Signal Processing, Machine, and Deep learning have applications in Assistive devices involving measurement, instrumentation, and control. The overall goal of such research is to develop humanitarian assistive devices as they are designed to support and meet the sustainable Development Goals. For example, Skin disease detection, abnormality detection from musculoskeletal radiographs, Tuberculosis detection from chest radiographs, covid 19 detections from chest x-rays, and water waste-collecting robot are some of the innovations that we led and they are humanitarian. In such cases, machine and deep learning techniques are also employed to have improved performance parameters. The measurement, instrumentation, and control mechanisms used in such devices are effective for intelligent tasks, even applicable and usable by disabled communities. Such devices are low cost, scalable, and sustainable to support the rural community.

## Speaker:

### Prof. Celia Shahnaz



iSMIEEE, Fellow IEB, received a Ph.D. degree from Concordia University, Canada, and is currently a Professor, Department of EEE, BUET, Bangladesh since 2015. She has published more than 150 international journal/conference papers. She is a recipient of the Canadian Commonwealth Scholarship/Fellowship and Bangladesh Academy of Science Gold Medal for her contribution to Science and Technology. Her research interests include the areas of Deep learning, pattern recognition and machine learning for audio, video, biomedical and power signals, signal processing for speech analysis and speech enhancement, multimodal emotion recognition, digital watermarking, audio-visual recognition for biometric security, multimedia communication, control system, robotics, and humanitarian technology. She has around 20 years of experience (more than 18 years as an IEEE volunteer) of leading impactful Technical, Professional, Educational, Industrial, Women Empowerment and Humanitarian Technology and PES related Projects at national/international levels.



## WORKSHOP

The International Conference on Advancements in Computing 2020

11<sup>th</sup>

Dec. 2020



1:30 pm  
to  
2:30 pm