IEEE Joint CSS-IMS Kolkata Chapter, India organizes Webinar on:
Assistive Humanitarian Devices: Measurement, Instrumentation and Control Perspective

Advancing Technology for Humanity

September 19, 2020, 17:30 Hrs. (Indian Standard Time, GMT+5:30)

Abstract of the talk

Signal Processing and Machine learning has 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, non-invasive glucose , Bilirubin level estimation and jaundice detection devices, voce , eye gaze, hand and brain signal controlled wheel chair, smart hat for preventing fall of elderly people, braille device, auto injection device, Digital Sthetho-phone and Wrist-card for health care, Anti-theft motor cycle security control device, wireless and wearable ECG monitoring device, water waste collecting robot are some of the innovations that we led and they are humanitarian in nature. In some 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.

Dr. Celia Shahnaz, PhD
Professor, Department of EEE,
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Chair, IEEE Bangladesh Section

Speaker: Celia Shahnaz, SMIEEE, Fellow IEB, received her BSc and MSc in Electrical and Electronic Engineering from BUET, Bangladesh, followed by PhD from Concordia University, Canada. Since 2015 she is a Professor, Department of EEE, BUET, Bangladesh.

She was a visiting researcher at NUPT, Nanjing, Jiangsu, China in 2015, recipient of Canadian Commonwealth Scholarship and Bangladesh Academy of Science gold medal for her contribution in Science and Technology.

Dr. Celia Shahnaz's 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 published more than 150 international journal/conference papers with a Google Scholar Citation of over 1200, with an h-index of 18 and i-10 index of 35. Dr. Celia Shahnaz is an active volunteer of IEEE. She is the Chair, IEEE Bangladesh Section, and holds many prestigious volunteering positions like IEEE New Initiative Committee 2020 Chair, Women in SIGHT Working Group, IEEE Signal Processing Society (SPS) Women in Signal Processing Committee, 2020 Member, IEEE WIE Senior Member Elevation Drive, IEEE WIE WePower Subcommittee, IEEE PES Women in Power (WiP) IEEE Region 10 Regional representative.

Participants: This webinar will be useful for the Masters and doctoral students as well as researchers with the background of Electrical, Electronics and Communication, Instrumentation Engineering.
Registration Fee: NIL.
Registration Link: Click here
Registration will be confirmed by September 18, 2020 and link will be provided to selected candidates only.
More information will be available at: **https://ewh.ieee.org/r10/calcutta/css_ims/index.html**