Smart Technology/Algorithm of speech communication for smart Community

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Abstract: Examples of Smart Voice Communication for smart communities will be discussed. Devices in Use for smart voice communication will be introduced to the authors. Challenges in Smart Voice Communication will be highlighted. As a solution smart technologies/algorithms for Speech Enhancement will be proposed. Existing methods and their limitations will be pointed out. In order to overcome the limitations, the Proposed method, results & performance comparison with state of the art will be presented with concluding remarks

Biography: Celia Shahnaz received Ph.D. degree in electrical and computer engineering from Concordia University, Montreal, QC, Canada, in 2009. Currently she is serving as a Professor, Department of Electrical and Electronic Engineering, BUET, from where she received her B.Sc. and M.Sc. degrees in 2000 and 2002, respectively.

Dr. Celia, a senior member, IEEE, a fellow, IEB and has published more than 100 international journal and conference papers. She has been appointed as 2017-18 Chair, IEEE WIE Workshops Subcommittee and 2017-18 IEEE PES Women in Power (WiP) R10 Representative, 2017 Communications Chair, IEEE SIGHT steering committee, and 2017 member, IEEE SSIT WIE and SIT subcommittees. She has served as the IEEE R10 WIE Coordinator 2016. She is now serving as Chair, IEEE Bangladesh Section (BDS), where she was 2017 Vice-Chair (activity), 2012-13 membership Development Chair. She is, Founding Chair, WIE Affinity Group, IEEE BDS for which she is currently acting as an advisor. She was, founder and Technical Program Chair, IEEE WIECON-ECE 2015, the General Chair, IEEE WIECON-ECE 2016, General Co-chair, IEEE WIECON-ECE 2017 and IEEE R10 HTC 2017. She is, founder/co-founder, IEEE Signal Processing, IEEE Industrial Applications, IEEE Robotics and Automation societies and IEEE society on social implications on technology of Bangladesh Chapters.

She is the recipient of 2016 IEEE MGA Leadership award with citation " For leadership in engineering and technology driven innovative IEEE Women in Engineering activities for enhanced membership development and engagement in R10 and across the globe". She is the recipient of 2015 WIE Inspiring Member Award from IEEE WIE. Under her leadership, WIE BD AG has received 2015 WIE Affinity group of the year award-honorable mention from IEEE global WIE. She is the winner of 2013 IEEE R10 WIE Professional Volunteer award. While she was an advisor, WIE BD AG also has won 2016 R10 section WIE AG of the year award and 2017 WIE AG of the year award from IEEE WIE. BUET WIE SB has won WIE SB AG of the year award-honorable mention from global IEEE WIE and 2018 R10 WIE SB AG of the year award, she is serving as an advisor of the group.

Dr. Shahnaz was a recipient of the Canadian Commonwealth Scholarship and Fellowship for pursuing Ph.D. study in Canada in 2004. She is the mentor, of 2nd prize winning project in the IAS CMD Robotics Contest 2018 and that of Ist prize winning project in the Category HEALTH FACILITY in IAS CMD Humanitarian Project Contest 2017. She is the supervisor, 5th rank winning team, SPCUP competition in ICASSP 2015, Australia. Recently, her papers have received best paper awards in biomedical Engineering

tracks at TENCON 2017 and at IEEE WIECON-ECE 2016, in Humanitarian Challenge track at R10 HTC 2017, and the best interactive poster award at icIVPR 2017. Her papers have been selected for top ten best paper awards, student Paper Contests, 2014 MWSCAS, Texas, USA and the 2008 MWSCAS, TN, USA. She was the winner, Best Student Paper Award, 2008 IEEE ICNNSP, China. She was selected as one of the finalists, Student Research Presentation Competition, 2009 SYTACOM Workshop, Montreal, Canada. Her research interests include the areas of speech analysis, speech enhancement, digital watermarking, biomedical signal processing, audio-visual recognition for biometric security, pattern recognition and machine learning, multimedia communication, control system, robotics and signal processing & pattern recognition for power signals.