Tutorials
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Smart Wearable Technologies for Personalised Health Management

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Abstract: There has been substantial growth observed for wearable technologies in past few years due to increased interest in health and wellness from peoples. Wearable systems are a popular and appealing option in health care services because they provide patients with personalise solutions for disease prevention, diagnosis, and treatment. Three wearable technologies for personalised health management would be discussed as follows:

(i) Diabetes is one of the fast growing chronic disease caused by insufficient insulin generation of the body. The wearable technology would allow the people to monitor the blood glucose continuously for proper diabetes management.

(ii) The Intelligent prosthetic arm has potential to improve the quality of the life for upper-limb prostheses. It has shown the outstanding ability to improve the experience towards prostheses. It can be useful to provide the support for activities of the daily living (ADL).

(iii) Epilepsy is a neurological illness that affects the brain as well as the nerves and spinal cord of the human body, resulting in unpredictable behaviours. The wearable device would allow the real-time monitoring of hypoxia and hypoglycaemia case to have continuous measurement for prediction of epilepsy recurrence episodes.

Speaker Biography:

Dr. Amit M. Joshi completed his M.Tech and Ph.D. from NIT, Surat in 2009 and 2015, respectively. He is currently working as an Assistant Professor at Malaviya National Institute of Technology, Jaipur (MNIT Jaipur) since July 2013. His specialisation areas are Biomedical signal processing, Smart healthcare, VLSI DSP Systems, and embedded system design. He is a senior member of IEEE and associate member of IETE. He has also published around 125+ research articles in excellent peer-reviewed international journals/conferences and also has filed three patents. He has a total of 1462 google scholar citations, i10 index 43, H-index of 19. Also, he served as a Technical Programme Committee member for IEEE conferences (iSES, ICCE, ISVLSI, VDAT). He also received the honour of UGC Travel fellowship, the award of SERB DST Travel grant, and CSIR fellowship. Also, He has also served as Mentor for IEEE Engineering in Medicine and Biology Society student mentorship program 2021. He has supervised 7 PhD thesis, 33 M.Tech projects and 17 B. Tech projects in Biomedical Signal Processing, VLSI/Embedded Systems.