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## Applications of wireless techniques to e-health industry

**Jose Manuel Lopez Guede**

University of the Basque Country, Spain

Diabetes mellitus (DM) is one of the leading causes of death in both developed and in developing countries. Peripheral vascular problems derived from DM imply consequences, such as the appearance of continuous ulcers and, among other aspects, vascular failures and different degrees of ischemia which make it a chronic disease with important social and economic repercussions. One of the consequences of this condition is the so-called diabetic foot (PD), an ulceration of tissues of the foot. At present, although new treatments are being developed, the absence of systems that allow determining a prognosis of diabetic foot ulcers as a first step in prevention increases the uncertainty of the impact of treatment. The control of the healing process is one of the premises that must be considered to avoid amputation. For this, the vascular evaluation, the own cure of the ulcers and the patient commitment are key to this monitoring process. One of the possibilities for vascular assessment is the measurement of blood flow by the ultrasonic Doppler effect. For this, the market has complex equipment located at hospitals level. However, there are no ambulatory and use-type systems portable with connection to smartphones that would allow the monitoring of flow parameters arterial. In this talk we will analyze the specific design problems of such sensor as well the connectivity issues to mobile devices using wireless technologies.

## Biography

Jose Manuel Lopez Guede received his PhD degree in Computer Sciences from Basque Country University. He got three investigation grants and worked in a company for four years. Since 2004 he worked as full time Lecturer and since 2012 as Associate Professor. He has been involved in 24 competitive projects and published more than 150 papers, 38 on educational innovation and the remaining in specific research areas. He has 32 ISI JCR publications, more than 32 other journals and more than 85 conferences. He has belonged to more than 10 organizing committees of international conferences and to more than 15 scientific committees.

jm.lopez@ehu.es