UNIVERSITA`CAMPUS BIO-MEDICO DI ROMA

Seminario

Unità di Misure e Strumentazione Biomedica

Artificial Intelligence for designing resilient medical devices for low-resource settings

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Abstract:
The majority of the global population is diagnosed and treated in low-resource medical settings, which are abundant in low-income countries and in some cases are also present in remote areas or suburbs of high-income nations. However, 90% of the global medical device market is in high-income countries (e.g., USA, EU and Japan accounting for 80% of the global market). Consequently, medical devices end up being designed to comply with the needs, markets and regulations of high-resource settings, which designers take for granted.
This dichotomy jeopardises the safety and effectiveness of medical devices in low-resources settings. Artificial intelligence, internet, 3D-printing and mobile phones offer an unprecedented and unexplored platform to design resilient, safe and affordable medical devices for low-resources settings.
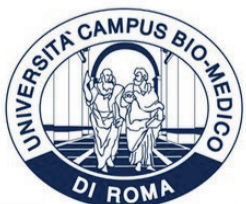This presentation will give an overview of ongoing researches in the Applied Biomedical Signal Processing and Intelligence eHealth lab, directed by Dr Pecchia at the University of Warwick, UK.

Biography
Leandro Pecchia graduated in Biomedical Engineering in 2005 and received the PhD in Biomedical Engineering and Management of Healthcare Services in 2009 from the University "Federico II" of Naples. Since 2013, he joined The University of Warwick, UK, where he is Associate Professor of Biomedical Engineering. In 2014 he founded the Applied Biomedical Signal Processing and Intelligent eHealth Lab (ABSPIE), which he is directing. Dr Pecchia authored more than 100 peer-reviewed papers on journals, books and conferences in the fields of Health Technology Assessment (HTA), machine learning and biomedical signal processing applied to healthy ageing, chronic diseases, and fall prediction in the later life. Moreover, his research covers medical device design, regulation, maintenance and assessment, with a particular focus to low-resource settings.
Dr Pecchia is Secretary General of the IUPESM, Treasurer of the IFMBE Clinical Engineering Division, and Elected President of the EAMBES. He also served the IFMBE Healthcare Technology Assessment Division as Chair (2015-18) and Treasurer (2012-15).

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