

[Envisaging the Future of Home Rehabilitation](#)

Research Article

**Rehabilitative TeleHealthCare for post-Stroke Outcome Assessment**Cite [BibTeX](#) [Plain Text](#)**Gabriela Postolache<sup>1,2,\*</sup>, Claudia Maia Moura<sup>2</sup>, Pedro Silva Girão<sup>3</sup>, Octavian Postolache<sup>1</sup>**

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**Abstract**

The article summarizes ongoing research on intelligent Tele-rehabilitation Assistants for in home rehabilitation of post stroke patients. The designed system is expressed by a set of smart sensors including a microwave FMCW Doppler radar that are connected to an embedded computing platform based on digital signal processor (DSP). This platform assures advanced data processing and wireless data transmission to a human machine interface (HMI) Android OS compatible device expressed by a tablet or by a smart phone as part of a health care intelligent ambient. The information from the health status and motor activity smart sensors is added to the patient localization given by a radar RFID device. Additionally, well-established neuronrehabilitation instruments are used to evaluate the results obtained by the proposed architecture implemented in a ubiquitous and pervasive manner.

**Keywords** RFID technology FMCV Doppler radar vital signs activity of daily living pervasive computing stroke rehabilitation

Published 2012-04-17 Publisher IEEE

<http://dx.doi.org/10.4108/icst.pervasivehealth.2011.246141>

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