Towards the improvement of Healthy Ageing with Humanoid Robots

Miguel Xochicale, *Doctoral Researcher*

Index Terms

Engineering; Robotics; Health Sciences

ABSTRACT

According to The World Health Organization (WHO) 125 million people worldwide were aged 80 years or older in 2015 and it is predicted that 350 million of older people will live in low- and middle-income countries by 2050 [1]. The WHO pointed out that some challenges in Healthy Ageing arena are the improvement of methodologies for measurement, monitoring and understanding ageing problems. For this work, I am proposing the use of Humanoid Robots (HR) to create methodologies for measurement, monitoring and understanding the physical activity of the elderly. Elderly care using Robots has been mainly developed in Japan. For instance, (a) Ri-Man robot can see, hear and assess a person's health; (b) Paro therapy bot helps people with dementia; and (c) Palro humanoid robot can play games and dance. Similarly, HR such as Pepper and NAO have been used to understand human emotions or to play games with humans. Recently, NAO has been also used to perform arm rehabilitation therapy for children and to teach diabetic children about various aspects of their condition. I am therefore planning to present preliminary outcomes of human-robot interaction applications in entertainment and rehabilitation for which NAO will be used as an instructor for the elderly whom will wear sensors to analyse the quality of movement. Finally, I will pointed out to the Mexican community that Humanoids Robots and sensors attached to the body will help us to measure, to analise, to understand and to improve the health of the elderly.

REFERENCES

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- *M. Xochicale is with the School of Electronic, Electrical and Systems Engineering, The University of Birmingham, U.K. E-mail: see http://mxochicale.github.io/*