Foot haptic perception in Hospital wayfinding
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Abstract
Space is not perceived equally by everyone. People with visual impairment and elderly with low vision are within the group of hospital users for whom interpreting a building is a difficult task, where some even depend from auxiliary staff to lead them around. This paper is about a research project developed in a hospital, in building a sensorimotor wayfinding system, reinforcing spaces’ visual communication with haptic foot texture information, for orienting patients within the building and to deliver a building’ efficient use to everyone. The project permitted to gauge and identify, within people over 65 years old and with low vision, their visual and motor impairments, as well as, their real perceptions in environment interpretation and landmarks definition when shifting. Analysing space, distribution of services, and questioning technical teams, regarding the functionality and the degree of interpellation that users achieve to identify destinations in the building, were determinant for spatial analysis. The increasing ageing population and the biological changes, especially related to visual perception, balance, dexterity and independent mobility, inherent to this target group, were some of the main aspects of the research work. The user-centred design sensory-motor wayfinding pilot project developed, enabling people in reaching their different hospital areas, by interacting through a visual and foot touch textured communication system.

Keywords: visual impairment, elderly, low vision, sensory-motor, foot haptic