**The Smart Armband: Expanding Wearable Interface Area and Suggesting Interaction Scenarios**

2015 Mobile HCI (Submitted)

In this paper, we describes an armband-shaped smart textile module which is capable to recognize user arm-bending and designed to receive handwriting touch gestures. This system supports small-sized wearable devices such as smartwatch with its large input area.

**The Smart Mat as a Part of Wireless Sensor Network System for Smart Home Services**

2015 The Asian International Journal of Life Science (Accepted)

Smart home service market is growing as sensor network technologies are developed and as it makes our life pattern simpler, safer and richer. User identification technologies have been investigated to provide personalized service, and floor sensing is the most reasonable way for it because it arises little privacy issues. However, there is an installation cost problem where it is installed on whole floor. In this paper, we propose a novel smart home sensor system with a foot mat shaped user identification sensor.