

## Textile UWB antenna bending and wet performances

### Abstract :

The vision and ideas of wearable computing systems describe future electronic systems as an integral part of our everyday clothing that provides the wearer with such intelligent personal assistants. Recently, there has been growing interest in the antenna community to merge between wearable systems technology, ultrawideband (UWB) technology and textile technology. This work aimed to make closer steps towards real wearability by investigating the possibilities of designing wearable UWB antenna where textile materials are used for the substrate as well as the conducting parts of the designed antenna. Two types of conducting materials have been used for conducting parts, while a nonconducting fabric has been used as antenna substrate material. A set of comparative results of the proposed design were presented and discussed. Moreover, effects on the return loss by means of measurements for each fabricated antenna prototype under bent and fully wet conditions were discussed in more details.