

WEARABLE FLEXIBLE  
RECONFIGURABLE ANTENNA  
INTEGRATED WITH ARTIFICIAL  
MAGNETIC CONDUCTOR

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# ABSTRACT

- a wearable flexible reconfigurable folded slot antenna. The antenna is composed of a folded slot and a stub where the reconfigurability is achieved by turning a PIN diode ON and OFF, which alters the radiation characteristics of the stub. The operating frequency and polarization of the slot and stub are different.
- Hence, a polarization dependent dual-band Artificial Magnetic Conductor (AMC) surface is integrated with the antenna to improve its radiation performance and to reduce the Specific Absorption Rate (SAR)



# EXISTING SYSTEM

- Wireless Body Area Network (WBAN) is an active research topic, especially in the healthcare area, as it provides cost efficient and continuous monitoring of patients over a wide range of accessibility.
- In such a system, an array of body sensors is connected to a communication unit which collects the data and sends it to a health center.
- This unit can either be located near or worn directly by the patient to minimize the impact on daily life activities.

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# PROPOSED SYSTEM

- The antenna is designed and fabricated on a flexible substrate, and its performance is measured for both flat and curved configurations.
- The measurements show an excellent agreement with the simulations. To examine its performance as a wearable antenna, it is measured on a human body.
- Simulations show that the SAR level is reduced when the AMC surface is used as an isolator. The proposed wearable antenna structure can be used for Wireless Body Area Network (WBAN) and Worldwide Interoperability for Microwave Access (WiMAX) body-worn wireless devices.



# SOFTWARE REQUIREMENT

- Ansoft HFSS(High Frequency Structure Stimulator)
- CST

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# REFERENCES

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