

Title: Smart Antenna designing for wearable applications

Main theme

- A. Communication
- B. Antenna design

Application: Military and Healthcare applications

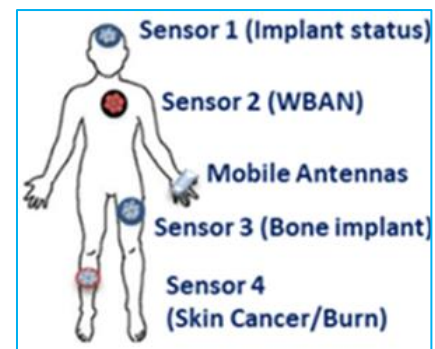
Project type: Simulations using electromagnetic problem solvers.

Skill set: Fundamental knowledge on electromagnetics, Logical thinking and problem solving

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***External collaborator (if any):** None

Introduction: Are you interested in learning and contributing to the fastest growing and highly demanding radio frequency technologies? At Radio Systems group we provide an opportunity to learn about these innovative technologies which shape and lead researchers to future inventors. This small project gives a golden opportunity for the students to step-in to the promising field of Antennas and Microwave engineering. After the project tenure the students will be able to understand the concept behind microwave antenna designs and the crucial factors which determine its performance in a complex design environment. The students will also get exposed to the state-of-the-art electromagnetic problem solving tools. Wearable microwave antennas which are inevitable in various high end applications(Defense, Healthcare, Entertainment etc..) will be designed in this project. Multiple projects are available in smart antenna designing for various applications at Radio Systems group.



Description: The major objective of this project is to design microwave antennas for wearable applications. Antennas working at ISM frequency bands will be designed with proper radiation coverage for communication from in & out of the body. A proper design strategy will be developed to overcome the effect of body and its dielectric actions. It is also challenging for the designer to keep the antenna properties intact with human movement and other physical activities. The student is supposed to design antennas which can work in single band or multiband frequencies with some special properties suitable for wearable applications.