Student Project

<u>Project title</u>: Near field sensing for biomedical application.

<u>Project type</u>: Bachelor / Master thesis project
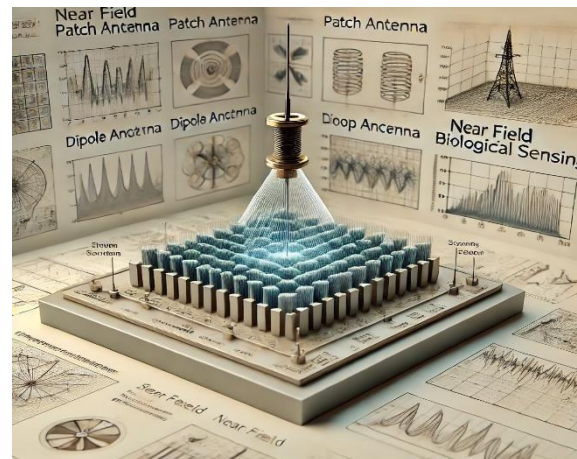
<u>Faculty and Research group</u>: EEMCS, RadioSystems Group

<u>Contact</u>:   Dr.Sujith Raman – s.raman@utwente.nl

<u>Project description</u>

The project aims to design Near field sensors for biomedical applications. The sensors will be designed using commercially available electromagnetic simulation software's (Ansys High Frequency Structure Simulator).

<u>Type of work</u>: Theory 20%, Design 30%, Experimental 20%, Documentation & Reporting 30%

Student tasks

1. Simulate a novel radiating design having prominent harmonic radiation on Ansys HFSS software with acceptable reflection and radiation properties on a selected material. Which includes
   - Design of radiating prototype on conventional low loss materials.
   - Extension of the design to biodegradable materials if possible with acceptable radiation properties.
   - Optimisation of the design for moisture sensing applications