

Student Bachelor Project

Project title: Dual band dual directive antennas for 6G communication application.

Project type: Bachelor Thesis Project

Faculty and Research group: EEMCS, RadioSystems Group

Contact:

Dr.Sujith Raman - s.raman@utwente.nl

Project description

The aim of this project is to design dual band antennas, working at any two frequency of choice. Moreover it is also aimed to design the radiation pattern in two different directions. The electromagnetic energy from the transmission line is to be coupled to dual radiators and thereby to generate dual beam characteristics. The simulation is to be done using Ansys HFSS software.

The novelty of this project is the development of such dual band dual beam prototype to upcoming 6G applications.

Type of work: Theory 20%, Design 30%, Experimental 20%, Documentation & Reporting 30%

Student tasks

1. Simulate novel design on Ansys HFSS software with acceptable reflection and transmission parameters on a selected low loss substrates.. Which includes
 - Design of transmission line with extremely low loss.
 - Design of novel antennas with the provided specifications.
 - Optimisation of the design for dual directive communication applications
2. Measurement of the radiation parameters of the antenna.