

Call for Graduate Research Assistant

Project Title: Modelling of switched beam antenna with beam tracking for vehicle-to-vehicle (V2V)

Project Description: Vehicle-to-vehicle (V2V) communication requires fast and stable network in the modern radio systems. Antenna beamforming is required to provide sufficient link quality in V2V communications. The main objective of the project is to model switched beam antenna system mathematically with the best strategy of beam steering for V2V communication. At first, a modelling of beam switching with tracking ability is developed by applying Dedicated Short Range Communication (DSRC) or sensor information along with 5G network. Then, modelling of switched beam antenna array is performed and compared with omni-directional beam to provide optimal beam steering results.

Source of Funding: FUNDAMENTAL RESEARCH GRANT SCHEME (FRGS) (Ministry of Higher Education (MOHE))

Project Duration: 2 years (24 Months) Sep. 2021 till Sep. 2023

Monthly Allowance: RM 2000

Benefits of the project:

- Pursuing Master in Engineering Science (M.Eng.Sc). Tuition fee will be waived
- Attending local conferences

Role and Responsibilities:

- Design and experiment on new algorithms for switchable beam antenna system
- Implementation of software prototype using Matlab
- Research publication

Requirements:

- Bachelor's degree in Electronics Engineering, preferably in telecommunication field
- CGPA of 2nd class and above
- Proficiency in Matlab/C++/Java languages. Excellent command in written and oral English.
- Able to carry out research independently and enjoy programming works.

Applicants who are interested can submit their resumes through email to Ir. Dr. Tiang Jun Jiat (Project Leader) at jjtiang@mmu.edu.my. All queries regarding the project are welcomed.