

Millimetre Wave Vehicular Communications

Type of award **PhD Research Studentship**

Department **Electrical and Electronic Engineering**

*Scholarship
Details* **Minimum £17,668 p.a. subject to confirmation of award.**

Duration **3.5 years**

Eligibility **Home (UK)**

Start Date **From January 2023**

PhD Topic Background/Description

Applications are invited from highly qualified and motivated candidates to take up a new PhD studentship opportunity at the Department of Electrical and Electronic Engineering, University of Bristol.

Based in the Communication Systems and Networks Group (CSN) at the University of Bristol, this is an exciting opportunity to join a dynamic team working on wireless communications. This PhD studentship is connected with industrial funded projects on millimetre Wave (mmWave) communications.

Sixth generation (6G) wireless communication has attracted tremendous research attention recently. Future mmWave communications are also expected to support applications in vertical industries, including transport that require high quality of service (QoS) with respect to connection reliability, transmission latency, and security. mmWave techniques have been introduced as a means of achieving high data rate streams in transport scenarios.

The PhD can be focused in any area of vehicular communications and 6G networks. This project will focus on first identifying the current state-of-the art theory, implementations and challenges. The project will require a mix of theoretical and practical skills.

In this project multiple antennas and adaptive beamforming will be considered to increase throughput and coverage. Mobility requirements will be fed into the beam alignment development. Machine learning tools and situational awareness can help on beam selection and base station handover based on past observations.

You will be expected to support the activities of the CSN Group at Bristol, including contributing to the supervision of MSc Research Students, attending and presenting at International Conferences on wireless communications, and writing research papers on the outcomes of your research.

Further Particulars

Candidate Requirements

Applicants must hold/achieve a minimum of a Master's degree (or international equivalent) in a relevant engineering, mathematics, physics or similar numerate discipline. Applicants without a Master's qualification may be considered on an exceptional basis, provided they hold a first-class undergraduate degree. Please note, acceptance will also depend on evidence of readiness to pursue a research degree.

You should have domain expertise in wireless communications.

Scholarship Details

A tax-free stipend of £17,668 p.a. for 3.5 years will also cover tuition fees.

Informal enquiries

For questions about the **research** topic please contact [Prof Angela Doufexi](#)

For questions about **eligibility and the application** process please contact SCEEM Postgraduate Research Admissions sceem-pgradmissions@bristol.ac.uk

Application Details

Prior to submitting your application, please send the academic listed a CV. No indication of an offer can be made until we receive a completed application.

To apply for this studentship, submit a PhD application through <https://www.bristol.ac.uk/study/postgraduate/2023/eng/phd-electrical-and-electronic-engineering/> and click on the 'Apply Now' link.

Please ensure that in the Funding section you tick "I would like to be considered for a funding award from the **Electrical and Electronic Engineering** Department" and specify the title of the scholarship in the "other" box below along with the name of the supervisor.