PhD/Master Openings in Applied Electromagnetics and Wireless Communications

**Position description**: Applications are invited for fully funded 4-year PhD positions as well as 2-year Master positions. The start date will be in January, May, or September.

**Research project**: The positions generally involve theoretical and applied research in electromagnetics and wireless communications. The research projects cover a broad range of topics, with a particular focus on the development of high-performance computational platforms for emerging wireless technologies in intelligent transportation (air, ground, underground), 5G and beyond wireless communications, underwater communications, indoor/outdoor localisation, as well as biomedical sensing and healthcare applications. The successful candidates are expected to conduct research, particularly, but not exclusively in the following projects:

(1) Physics-based wireless channel modelling and measurement for large-scale environments (indoor, outdoor, underground, underwater, intra-body) as well as the intelligent planning and deployment of wireless communication systems/devices for Internet of Things (IoT) applications.

(2) Indoor/outdoor localization, electromagnetic sensing, radio wave propagation and scattering.

(3) Multiphysics and multiscale modeling for electromagnetic, micro-/nano-electronic, and biomedical applications.

(4) Application of machine learning or stochastic uncertainty quantification techniques in electromagnetics and wireless communications.

(5) Metasurface assisted wireless communications, reconfigurable intelligent surface, EMC/EMI, RF/microwave/millimeter-wave design & measurement.

Specific research topic for the position will depend on the candidate’s background. The candidate will have a chance to work with industry partners and international collaborators.

**Expected qualifications**: The successful candidate should hold a Bachelor or Master’s degree in electrical/electronic engineering, computational science, applied mathematics/physics or a related discipline, and should have a solid background in mathematics, electromagnetic and communication theory, as well as programming. Previous related research experience will be a plus.

**How to apply**: Interested candidates should send an email to Dr. Xingqi Zhang (xingqi.zhang@ucd.ie) along with your CV, academic transcripts, English qualifications, as well as any other documents that you believe can well demonstrate your research capability and potential.