

Research Topic: Safe interactions between humans and autonomous vehicles

Prior work of researchers in our group has focused on the assessment of safety-critical systems, including autonomous vehicles (self-driving cars). The open question for a PhD studentship in this area is to determine under what circumstances it is safe for a human driver to transfer control of the car to the autonomous driving software. A human driver will typically have an enhanced awareness of the road environment due to his or her ability to interpret the behaviours of other human drivers and engage in non-verbal communication with them. Part of the task is therefore to determine the value of this enhanced awareness, and to explore how a similar awareness might be provided to the autonomous driving software.

Requirements: Applicants should have a very strong first degree or (preferably) a Master's degree in Engineering, Computer Science, Mathematics or other relevant area, and are expected to have strong interdisciplinary interests (e.g. in robotics, human factors, neuroscience). They are also expected to have very good analytical skills and an interest in industrial applications of research.

Informal contact before application: the PhDs will be conducted under Prof Farshid Amirabdollahian's supervision and candidates are invited to contact f.amirabdollahian2@herts.ac.uk or Dr Catherine Menon (c.menon@herts.ac.uk).