

University of Surrey
Centre for Vision, Speech and Signal Processing (CVSSP)

2 PhD Studentships available

Studentship 1

Title: Computer Vision and Deep Learning for Autonomous Vehicles Guidance and Navigation

Applications are invited for a fully funded PhD studentship within the Centre for Vision Speech and Signal Processing at the University of Surrey. The funding is for a three-year research programme leading to the degree of PhD. The project will investigate AI and computer vision approaches to perception and its use for long term path planning and navigation. The work will focus on deep learning applied to local perception and will investigate semantic segmentation in the image plane integrated into a ROS control and path planning system vs Birds Eye View (BEV) estimation direct from images using deep learning. Local perception will be fused with live information from multiple sources, each of which has unique error characteristics, and the fused data will be used for guidance through the application of collision avoidance rules.

Start Date on or after Oct 2020 (applications accepted all year round until position filled)

This is an industrial funded studentship in collaboration with an external partner. The studentship covers the University tuition fees (at EU/UK level) and provides an annual tax free stipend (rate for 2020-2021 is £15,285 p.a. tax-free). It will also cover UK/EU fees. Please note, it will not cover the overseas tuition fees (currently £22K from Oct 2020) for students who are outside of the EU.

A first Class or Upper Second Honours degree (or equivalent overseas qualification) in an appropriate discipline (e.g., engineering, computer science, signal processing, applied mathematics, physics). You should be able to demonstrate excellent mathematical, analytic, programming skills. Previous experience in computer vision, machine/deep learning, or augmented reality would be advantageous.

Studentship 2

Title: Computer Vision and Deep Learning for Automatic Sign Language Recognition, Translation and Production

Applications are invited for a fully funded PhD studentship within the Centre for Vision Speech and Signal Processing at the University of Surrey. The funding is for a three-year research programme leading to the degree of PhD. The project will develop computer vision approaches to recognising and translating sign language into spoken language using AI and deep learning, specifically sequence to sequence models.

Start Date on or after Jan 2021 (applications accepted all year round until position filled)

This studentship is part of a larger project funded by the Swiss National Science Foundation (SNSF) called SMILE2 and is a successful continuation of our previous collaboration between the University of Surrey, IDIAP, HfH Zurich and the University of Zurich. The studentship covers the University tuition fees (at EU/UK level) and provides an annual tax-free stipend (rate for 2020-2021 is £15,285 p.a. tax-free). It will also cover UK/EU fees. For exceptional candidates there is the opportunity that an additional bursary can be provided for the overseas tuition fees (currently £22K from Oct 2020) for students who are outside of the EU.

A first Class or Upper Second Honours degree (or equivalent overseas qualification) in an appropriate discipline (e.g., engineering, computer science, signal processing, applied mathematics, physics). You should be able to demonstrate excellent mathematical, analytic, programming skills. Previous experience in computer vision, machine/deep learning, or augmented reality would be advantageous. Experience of any national sign language would also be of great value.

Informal enquiries should be sent to r.bowden@surrey.ac.uk

Formal applications should be made here <https://www.surrey.ac.uk/postgraduate/vision-speech-and-signal-processing-phd#apply>