

# **DRIVE & SORT PhD Studentship 2024-25**

The School of Computer Science and Electronic Engineering at the University of Essex is offering one PhD research Studentship for an exceptional student, starting in October 2024, studying PhD Computer Science or PhD Electronic Systems. The student will work on two projects funded by the Engineering and Physical Sciences Research Council:

- **New Signal Design and Processing for Future Vehicular Communications (DRIVE)**

Over 1.3 million people die each year because of road traffic crashes, according to the estimate of World Health Organisation. Automation could ultimately provide safer roads and less fatalities, but in order for driverless technology to become mainstream, much needs to change; more efficient communication and networking are essential for fully autonomous driving.

Overall, the project seeks ground-breaking research outcomes by addressing several fundamental problems in vehicle-centric transmission signal design and receiver processing. These will enable the improvements required for advanced applications to achieve the connected autonomous vehicle aspirations for future transportation systems.

- **Evolving Sequences for Beyond-5G Machine-Type Communications (SORT)**

Sequences with certain structural properties lie at the very heart of every communication/radar system design. On the other hand, legacy sequence theory is drastically challenged by the ever-growing requirements of the modern machine-type communication systems. With tens of billions of communication devices, sensors, tablets, vehicles, and robots getting connected wirelessly, it is urgent to develop new sequences and their associated processing algorithms in order to enhance a number of key performance indicators.

Given the interdisciplinary nature of the project, the complementary skills of the team members, as well as our novel sequence angle, ground-breaking research outcomes of SORT are anticipated. These will in turn influence the evolution of future mobile systems, accelerate the technology commercialization, create more high-salary jobs, and ultimately reinforce the UK's role as a global leader, academically and economically.

This is an exciting opportunity for a highly motivated student with a solid background in wireless communications and signal processing, who is keen to learn new skills to design the upcoming 6G mobile systems. The candidate is also expected to have a strong mathematical foundation and excellent programming skills (e.g., C, Python, MATLAB).

The successful applicant will receive a full PhD Studentship, including full tuition fee discount for three years of study, a stipend payment towards your living costs and Proficio funding towards training, conferences, and travel.

Full funding Studentship available is as outlined below.

Type of award	Funding available
<b>Full-funding award</b>	<ul style="list-style-type: none"> <li>■ Home or Overseas tuition fee waiver.</li> <li>■ Living costs stipend at the UK Research and Innovation recommended level per year. The stipend amount for 2024-25 has not yet been announced, but <i>to give an indication</i>, the 2023-24 was £18,622.</li> <li>■ £2,500 (in total) in the University of Essex Proficio funding, which may be used to 'buy' advanced skills training, including conferences and travel.</li> </ul>

## Terms and conditions

### Eligibility

- Receipt of the Studentship is subject to applying for PhD Computer science or PhD Electronic Systems. You will need to register as a postgraduate student at the University of Essex for the 2023-24 academic year on a PhD commencing in October 2024 or mutually agreed shortly thereafter, and meeting all conditions of our offer.
- Students must have achieved an honours degree (1<sup>st</sup> class or 2:1, or equivalent). A Masters in a relevant subject is desirable (but not essential) and substantive previous professional experience in the relevant area can be counted towards this requirement.
- If English is not your first language, you will also need to meet the English language entry requirements for the PhD you have applied for.
- This Studentship is available for **three** years of study.
- These Studentships are restricted to students who would otherwise be entirely self-funded.

- The award cannot be held in conjunction with any other University of Essex Studentships or scholarships.
- Successful applicants should be available for promotional activities.

\*Students receiving a repayable loan to fund their studies will be considered as self-funded.

## Students who are not eligible

The following students are NOT eligible for this Studentship regardless of meeting the above criteria:

- This Studentship award does not apply to deferred entry. Where a Studentship has been awarded to a student who subsequently defers entry to the following academic year, the award will be withdrawn and the applicant will be considered again in line with the terms and conditions that apply in the new proposed year of entry.
- Students who are fully or partly sponsored.
- Students on a 4-year integrated PhD course.

## How to apply

You should apply separately for the PhD course, and the Studentship.

To apply for the Studentship, please email a cover letter, research proposal (capped to 2000 words), CV, academic transcripts to [zilong.liu@essex.ac.uk](mailto:zilong.liu@essex.ac.uk) by **11:59pm on Friday 31<sup>st</sup> May 2024**.

You will also need to apply for PhD Computer Science or PhD Electronic Systems. Our online course application process is quick and straightforward, and the following pages give you all the details: [PhD application information | University of Essex](#)

You can learn about postgraduate research at the University of Essex more generally here:

<https://www.essex.ac.uk/postgraduate/research>.

You should apply for a place to study as soon as possible, and at the latest by **11:59pm on Friday 31<sup>st</sup> May 2024**.

## Payment arrangements

- The tuition fee discount as part of this Studentship will be made available as a reduction on the tuition fee that is payable on registration at the University. Payment cannot be offset against a tuition fee deposit if one is required.

- If you intermit from your course, you may, at the discretion of the University, be entitled to a pro-rata payment of the remainder of your award on your return to study. Please contact the [Funding Team](#) for further information.
- This Studentship is awarded for each year of study for a period of three years. The fee element will be deducted automatically, and the stipend will be paid in quarterly instalments in October, January, April and July.
- Awards are granted for one year in the first instance but will be renewed, subject to the award holder's satisfactory progress (as defined by the Code of Practice: Postgraduate Research Degrees), for a second and third year – up to a maximum tenure of nine terms or three years, provided the award holder is still engaged in full-time research (and excepting the circumstances stated in the section on termination).
- Where progress is satisfactory, renewal of the award is automatic. Students who wish to extend their period of study beyond the nine terms will have to meet the additional costs themselves.

## **Studentship suspension**

Students must be registered and meet the above conditions to receive payment. The Studentship will be suspended during a period of approved leave of absence (intermission) where this period covers a whole or part of an academic year and may be reinstated on your return to full-time study subject to the conditions above. On your return to study, you will be entitled to the balance of the Studentship for the stage. There will be no payment for repeat periods of study in any circumstances.

## **Holiday**

Studentship holders are entitled to a maximum of eight weeks' holiday (including bank holidays and the University closure at Christmas) per annum and pro-rata. Holidays should be agreed in advance with the supervisor and, in cases where the awardee is engaged in teaching and demonstrating, with the approval of the head of the student's department, school or centre.

## **Termination of Studentship**

The University will terminate a Studentship when progress or performance is deemed to be unsatisfactory. The Studentship will be terminated if a student ceases to be registered as a student with the University, or for good cause at the discretion of our Dean of Postgraduate Research & Education, or their nominee for this purpose.

If a Studentship is terminated prematurely for any reason, an awardee must repay to the University any monies including maintenance, travel, subsistence, fees overpaid from the date of the termination of the

Studentship. If an awardee submits his/her thesis before the end of the Studentship, the Studentship will be terminated on the date of submission. If an awardee takes up full-time employment whilst in receipt of a Studentship, the Studentship will be terminated as of the first day of employment.

## **Transferability**

Due to the nature of the funding, a change of course may result in the termination of the Studentship. Please refer to your supervisor in the first instance. The student is required to continue working on the specified projects to continue receiving the Studentship.

## **Data Privacy Statement**

The University of Essex takes confidentiality very seriously, your application form will only be seen by members of staff involved in processing your application. Information is kept in accordance with the General Data Protection Regulation (GDPR) as it applies in the UK, tailored by the Data Protection Act 2018. Personal data will be used solely for statistical purposes and electronic record keeping and may be made available to authorised University staff to allow statistical information to be analysed.

This data will not be passed to any other third party without your consent, except when the University is required to do so by law. Any formal enquiries concerning the use of data noted here should be addressed to the Head of Student Services.

## **Resolution of disputes**

Acceptance of this award constitutes acceptance of these terms and conditions. Registered students should contact the [Funding Team](#) in the first instance for guidance regarding this award. In cases not covered by the above terms and conditions, or where a student claims exceptional circumstances, or disputes a decision not to make payments due under an award, final appeals on decisions regarding eligibility must be made via the [Student Complaints process](#). The Academic Registrar or their nominee will review the case and his/her decision will be final.

*These terms and conditions apply to the academic year 2024-25. The University of Essex reserves the right to update these terms and conditions as necessary.*