

Centre for Computational Science & Mathematical Modelling

Postgraduate Researchers Handbook

Academic Year 2022-2023

Introduction and welcome

As Acting Centre Director it is my pleasure to welcome you to the Research Centre for Computational Science and Mathematical Modelling. We are a young and dynamic research centre, with a vision to link cutting edge fundamental research to real-world problems, and to use real-world problems to inform fundamental research.

You are joining our research centre at a very exciting time, as we grow our research activities, pushing research boundaries and delivering real-world solutions to some of the most complex external challenges.

Dr Matthew England, (Acting) Centre Director, Research Centre for Computational Science and Mathematical Modelling

Research overview

The Centre for Computational Science and Mathematical Modelling is loosely divided into three themes:

- Machine Learning for Computer Vision and Natural Language Processing
- AI for Cyber-Physical Systems
- Fundamental Algorithms for Artificial Intelligence

These three themes combine to address some of the current important real-life challenges, where artificial intelligence, data science and modelling in general are required to find efficient and lasting solutions. The centre addresses these challenges via the development of transversal competencies that serve to inform differing areas of Science, Technology, Engineering and Social Sciences. This structure allows for researchers of different experiences but common interests to be brought together, creating a supportive research environment within which these varied disciplines can further the progress of each other. This is achieved not only through collaboration within the centre, but also with researchers outside the centre.

Key staff and contacts

The Research Centre has a strong support team who help to deliver our ground-breaking research.

Professor Vasile Palade, Postgraduate Research Lead (ab9797@coventry.ac.uk)

Vasile is the academic lead supporting all of the postgraduate researcher's within the centre. He oversees the centre's research student admissions and enrolment processes and supports students throughout their research journey.

Phil Costen, Research Funding and Development Manager (ac3263@coventry.ac.uk) and **Jonathan Godsall, Research Funding and Development Coordinator** (ad7234@coventry.ac.uk)

Phil and Jonathan help identify research funding opportunities and reviews funding proposals. Both have an outstanding knowledge of the current research funding landscape.

Lorna Everall, Operations Manager (cdu181@coventry.ac.uk)

Lorna manages the overall operation of the centre can respond to general enquiries. Having previously supported research students across the entire institution she has an excellent working knowledge of Coventry University research student processes and systems.

Emilie Quinn, Research Delivery Support Officer (ab3696@coventry.ac.uk)

Emilie provides project delivery support for our diverse portfolio of research projects. She ensures that research deliverables are met and projects delivered on time. Emilie is a project management expert and very knowledgeable with regards to research impact.

Joel Gibbs, Operations Support Manager (ab5587@coventry.ac.uk)

Joel provides operational support to the research centre and is hugely knowledgeable about the support systems and processes for research students.

Amanvir Kalkat, Research Operations Administrator (ad7440@coventry.ac.uk)

Amanvir provides administrative support to the research centre and can advise on research student expense claims.

Buildings and facilities

Our research centre brings together both expertise and facilities from Coventry University. Our centre is based in the newly refurbished Futures Institute (IV.10), on the Coventry University Technology Park, in the city centre of Coventry, UK. Within the Futures Institute there are high-class high-performance computing facilities which are regularly updated, and the University invests in high-quality Internet of Things development and demonstration facilities, as well as a collaborative environment for researchers.

Our address is IV.10 Coventry University, Cheetah Road, Coventry, CV1 2TL.

The building is open Monday to Friday 7:30 – 22:00, and can be accessed by swiping your student ID card at the entrance. The building can also be accessed from 7:00 until 19:00 at the weekend.

Tea and coffee facilities are available in the building. We also have a stationery supply that you can use, including basic items such as pens, folders etc. If you need anything specific, please ask research.mpcs@coventry.ac.uk. Lockers are also available on a first come first serve basis.

Claiming student allowance and entitlements

As you will be aware, all research students have a number of entitlements from the University, including £250 for materials and equipment per year (£150 for part time), as well as £350 for conference attendance. When deciding how best to use these entitlements you should first discuss your ideas with your Director of Studies and get approval as to how you will use them.

Following this you must get approval from the centre. In order to do this you must contact the Research Operations Team (research.mpcs@coventry.ac.uk) and provide the following information:

- Your year of study and whether you are full or part-time
- A brief explanation as to reason for the purchase
- The email chain with approval from your Director of Studies

In addition, for conference costs:

- You must be the principle author on the accepted paper
- The conference must have a good track record
- We can collate the due equipment and travel grants into one bundle, provided equipment was not claimed previously
- We will support student conference travel in all years of your research programme, provided the conference is of good standing and you are presenting your paper
- If you wish for the Research Operations Team to book the conference for you (the conference has to be fully funded by the university) you will need to provide all details required for the booking

In addition, for equipment costs:

- A brief justification for the purchase should be provided
- A full quote of the cost, dated within the last 3 months is required
- An explanation of what will happen to the equipment once the research is complete (i.e. plans for disposal, potential for further use or recycling)

You will receive an email confirming whether these costs have been approved or whether more information is required. Once centre approval has been given you can make the relevant purchases. You will then need to claim the money back from the University – please contact the Research Operations Team (research.mpcs@coventry.ac.uk) with the receipts of the purchase. Please note that it can take 4-6 weeks for the funds to be transferred into your account. Please also be aware that if this is the first time that the University has paid you then you will need to be set up on our finance system and this will take additional time.

If, during your research programme, you have papers accepted at more than one conference then the research centre can also provide some financial support to enable you to attend. Please speak to your Director of Studies about this opportunity in the first instance.

Activities and opportunities

The research centre considers its PhD candidates to be full members of the centre and encourage them to take an active role in the various activities of the centre. The centre's research activity covers a range of scientific methods and application areas, and the postgraduate researcher is at the centre of this activity and can benefit through their interactions with the other members of the centre.

Research Seminar Series

The research centre runs a research seminar series. Doctoral students are encouraged to present and showcase their research. This is a great opportunity to learn about what others in the centre are doing and to share ideas and build research collaborations.

Internationalisation

The centre is active in collaboration with international partners in order to further its research agenda and to provide opportunities to its members.

Doctoral Training Alliance

Our Research Centre is part of the Doctoral Training Alliance (DTA) in Energy and Applied Biosciences for Health, a postgraduate training initiative from University Alliance – Britain's universities for cities and regions (see <http://www.unialliance.ac.uk> for more details).

The Doctoral Training Alliance, developed by a group of Alliance universities, builds on our research strengths and industry focused ethos. The training provided as part of the DTA will produce independent, highly-employable researchers with knowledge, expertise and skills in strategically-important research areas. The Doctoral Training Alliance is the largest multi-partner and only nationwide initiative of its kind.

This Doctoral Training Alliance offers a fully-funded postgraduate programme in Energy. Doctoral students gain access to excellent research, an expert support network, cohort development training and improved employment opportunities.

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<https://www.coventry.ac.uk/research/areas-of-research/computational-science-mathematical-modelling/>