How to apply

If you are interested in working on some of the most advanced Research and Development challenges in Data Intensive Science, then a PhD within LIV.INNO might be right for you.

We have a number of PhD studentships starting each year from 2022-2024, which include a 4-year stipend to support you during your studies.

Each project will give you access to LIV.INNO's comprehensive training in data science, consisting of lectures, seminars, international workshops and schools. You will also get opportunities to contribute to the centre's outreach activities. Each LIV.INNO student is required to undertake a 6-months placement in industry where you will work on a research challenge outside of your core PhD project. This exciting opportunity will help boost your wider skills and employability.

We welcome and encourage applications from the UK, EU and other parts of the world. We would like to encourage in particular applications from women and other STEM minority groups. LIV.INNO actively helps overcome barriers to access; qualifying students can receive additional funding for research-related travel costs. It is also possible to realize many of our PhD projects part-time, over a longer total period.

Details of available projects and the process for applications including deadlines are here:

Contact us

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LIV.INNO

Centre for Doctoral Training for Innovation in Data Intensive Science.

About LIV.INNO

The Liverpool Centre for Doctoral Training for Innovation in Data Intensive Science (LIV.INNO) is an inclusive hub for training diverse cohorts of excellent students in data intensive science. The focus of the centre is on addressing the data challenges presented by research in astronomy, nuclear, theoretical and particle physics, accelerator science, mathematical and computer science.

LIV.INNO offers three cohorts of PhD students comprehensive training in Data Intensive Science through cutting-edge interdisciplinary research projects and a targeted academic training programme, complemented by secondments to national and international research partners and strong industry contributions. This framework is an ideal basis for driving science and innovation, as well as boosting the employability of our students.

The training centre is supported by the Science and Technology Facilities Council (STFC) and hosted by the University of Liverpool and Liverpool John Moores University/Astrophysics Research Institute.

Research Projects

Research and development (R&D) is structured across three main Work Packages (WP):

WP1 - Monte Carlo and high performance computing

LIV.INNO students develop powerful tools for everything from modelling the birth and evolution of the universe to performing the numerical integrals needed to calculate cross sections for particle interactions.

WP2 - Artificial intelligence and machine learning

The centre's students apply machine learning techniques to extract new information from cutting-edge experiments across STFC science. They also use artificial intelligence to push our knowledge and understanding beyond current frontiers.

WP3 - Data analysis

Modern experiments produce significant amounts of data. LIV.INNO research focuses on managing and analysing this data in structured and optimised ways.

Training & Events

The LIV.INNO training programme is designed to address a wide range of employment skills, including research skills and techniques, project management, networking, communication and presentation skills, with the aim to provide all students with the skills set required for a future career in both, academia and industry.

The training involves schools, seminar series, secondments to industry partners of several months' duration, as well as outreach events.

Industry Collaboration

Partnership and collaboration with external organisations are a vital part of our commitment to cutting edge R&D in data intensive science. We work closely with industry, the public sector and other organisations on a wide range of activities including joint projects (large and small), skills development training, technology transfer and event organisation and sponsorship.

For example, all of our students are undertaking an industry placement as part of their PhD. This gives them an excellent opportunity to apply their data science skills to real world challenges, whilst gaining knowledge and experience of working outside of academia.

The R&D of a placement project is in an area outside of the student's core PhD research project to give them a new experience. Placements encourage mutually beneficial research collaboration between the CDT's academic researchers, students and partner organisations.