Lero, The SFI Research Centre for Software

Lero brings together leading software teams from universities and institutes of technology in a co-ordinated centre of research excellence with a strong industry focus.

As the world’s second largest software exporter, Ireland is recognised internationally as a leading location for companies in the software sector. Fifteen out of the top 20 global technology firms have strategic operations in Ireland. Lero is a key pillar in that sector partnering with four of the top technology companies worldwide. Since it was founded in 2005, Lero has become one of the best-known, and most highly regarded, software research centres in the world.

Research Programmes

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Research Areas

Lero has expertise across multiple disciplines from deep theoretical computer science and formal methods through to participatory design, human-computer interaction, ethics and values. Lero works collaboratively with industry partners to identify and solve specific problems.

Lero’s research programme comprises systems (what we build), methods (how we build) and context (for the world we want) in six key application domains:

› Connected autonomous vehicles
› Health, wellbeing & human performance
› Smart communities/cities
› GovTech
› FinTech
› AgriTech & food

Industry and Commercialisation

Lero works with a wide range of industry sectors, State agencies, educational bodies and international collaborators to deliver on its twin goals of research excellence and social and economic relevance.
Industry partners include:

- ACI Worldwide
- Allstate Insurance
- Analog Devices
- ARM
- Bon Secour Hospital Group
- Dell
- Dairymaster
- European Space Agency
- Fidelity Investments
- Horizon Globex
- Hertz
- IBM
- Information Mosaic
- Intel
- Jaguar Land Rover
- KOSTAL Automotive Electrical Systems
- Logitech
- Liebherr Container Cranes
- Microsoft
- McHale Farm Machinery
- Portable Medical Technology
- S3 Group
- SalasO Group
- Stryker Medical
- Software Quality Systems
- STATSports
- Toyota
- Tullow Oil
- United Technologies Research Centre
- Valeo Vision Systems

Education and Public Engagement:
Lero, in collaboration with Science Foundation Ireland, is involved in many local and national events including Science Week, Coder Dojo, EU Code Week, Pint of Science, the Scratch Competition, and Techweek. Lero has significant involvement in introducing computer programming into the primary and post-primary school curriculum.

Lero promotes awareness in technology through initiatives such as:
- Scratch Programming in primary schools
- The Junior Cycle Short Course in Coding
- Summer Computing Camps

Lero is also involved in computer science at Leaving Certificate and was commissioned by the National Council for Curriculum and Assessment to conduct research around the provision of computer science in upper second level education internationally (Report on the Provision of Courses in Computer Science in Upper Second Level Education Internationally) and on Leaving Certificate Computer Science Professional Development (Exploring Teachers’ Professional Development to Support the Roll-Out of Computer Science in Irish Second-Level Schools). Lero develops and researches Professional Development (PD) for teachers in computer science, in collaboration with Professional Development Service for Teachers (PDST) and Junior Cycle for Teachers (JCT).

Key Contacts

**Professor Brian Fitzgerald**
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Professor Brian Fitzgerald has been a Science Foundation Ireland Principal Investigator (PI) since 2002. He was one of the pioneers of research into Open Source software and is widely recognised as a global leader in the study of software development processes and methods. He was one of the founding PIs in Lero where he has been a researcher since its inception, apart from a period from 2008-2011, when he served as Vice-President for Research at the University of Limerick. Currently, Director of Lero, he previously held the role of Chief Scientist. He also holds an endowed professorship, the Frederick A. Krebbiel Chair in Innovation and Business Technology, at the University of Limerick. He was recently elected as President of the Association for Information Systems, the global body for information systems worldwide.

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