

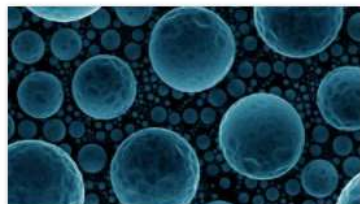


Data Innovation Research Institute

Welcome

Stephen Fairhurst
Director

University Research Institutes



Cardiff Catalysis Institute

We are improving the understanding of catalysis, developing new catalytic processes with industry and promoting the use of catalysis as a sustainable 21st century technology.



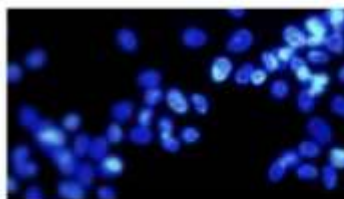
Crime and Security Research Institute

We conduct research that generates new evidence and insights to help reduce crime and increase security.



Energy Systems Research Institute

Tackling the global challenges that lie ahead in how we continue to generate, distribute and utilise energy.



European Cancer Stem Cell Research Institute

Our aim here is to improve our understanding of the role of cancer stem cells in a range of cancers, through world-leading research.



Neuroscience and Mental Health Research Institute

Taking new discoveries and translating them into greater understanding and diagnosis of mental illness.



Sustainable Places Research Institute

A meeting place for sustainability science, focussed on exploring innovative solutions for a more sustainable future.



Systems Immunity Research Institute

We deliver a comprehensive systems based approach to immunity research. We provide a holistic view of chronic disease progression, the control of infection and mechanisms that determine an effective immune response.

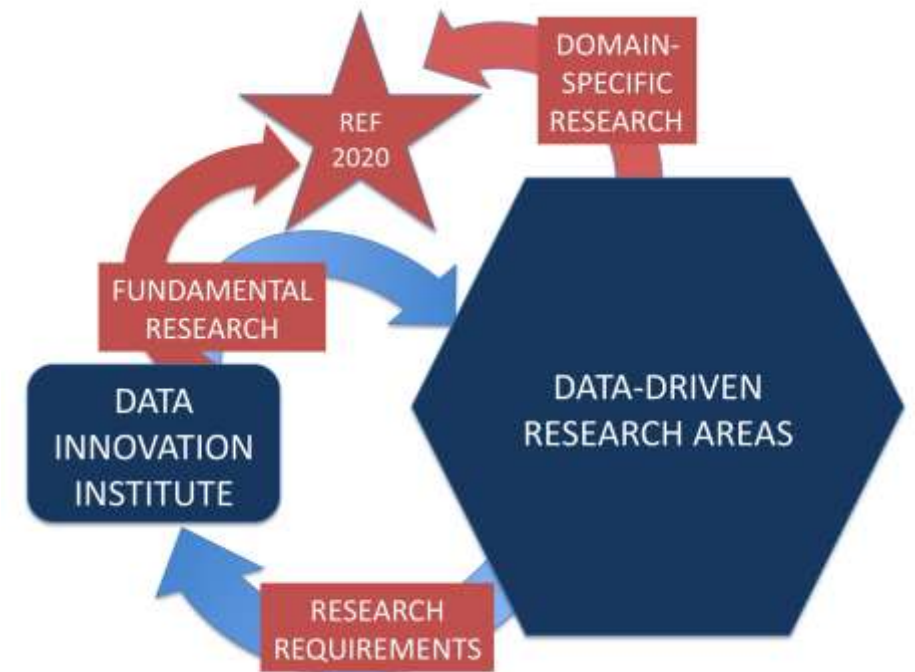


Water Research Institute

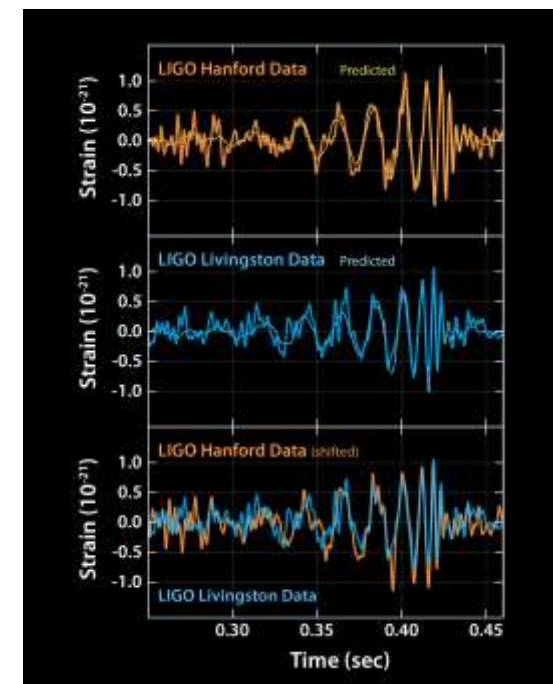
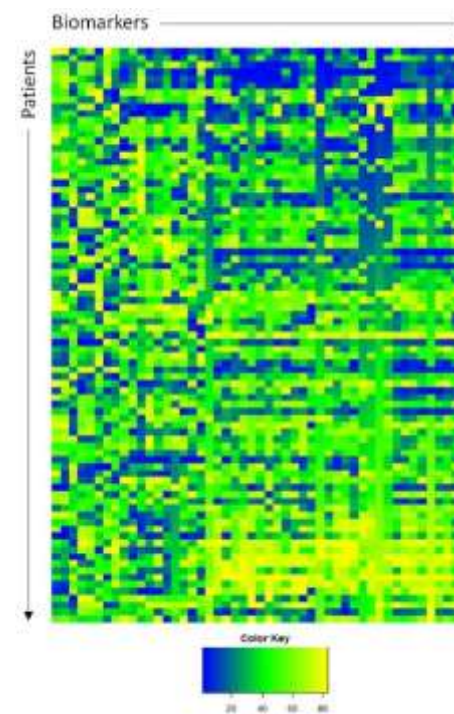
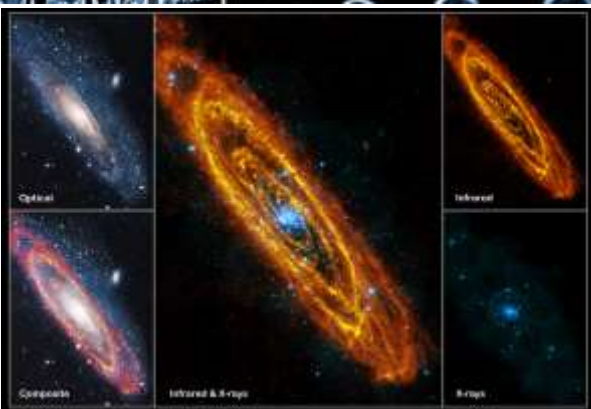
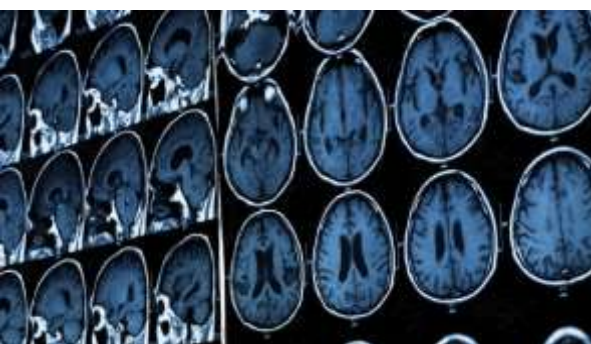
Our aim is to provide research-led solutions to the problem of the continual misuse and mismanagement of the world's precious water supplies.

DI Mission

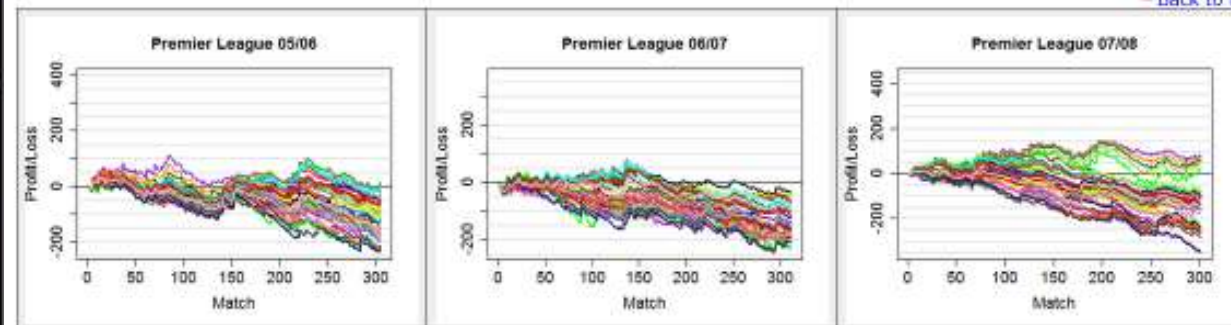
The mission of the Data Innovation Research Institute is to work with University research groups that have major data-intensive research projects, leading to new and better solutions to the data management and data analysis problems that the groups have and to new technologies for data science.



Data Intensive Research @ Cardiff



England Premier League



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DI Board



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DI Activities

- DI Day in November
- Funded “DI Seedcorn” projects for 2017
- DI Seminars
- New MSc courses, CDT in Data Intensive Science
- MRC bid for involvement in Biomedical Informatics Insititute
- GW4 Data Intensive Research Workshops
- Building international links with Georgia Tech



Data Innovation involvement

College of Arts, Humanities and Social Sciences

- Business
- English, Communication and Philosophy
- Geography and Planning
- History, Archaeology and Religion
- Journalism, Media and Cultural Studies
- Law and Politics
- Modern Languages
- Music
- Social Sciences
- Welsh

College of Biomedical and Life Sciences

- Biosciences
- Dentistry
- Healthcare Sciences
- Medicine
- Optometry and Vision Sciences
- Pharmacy and Pharmaceutical Sciences
- Psychology
- Wales Deanery (PGMDE)

College of Physical Sciences and Engineering

- Architecture
- Chemistry
- Computer Science and Informatics
- Earth and Ocean Sciences
- Engineering
- Mathematics
- Physics and Astronomy

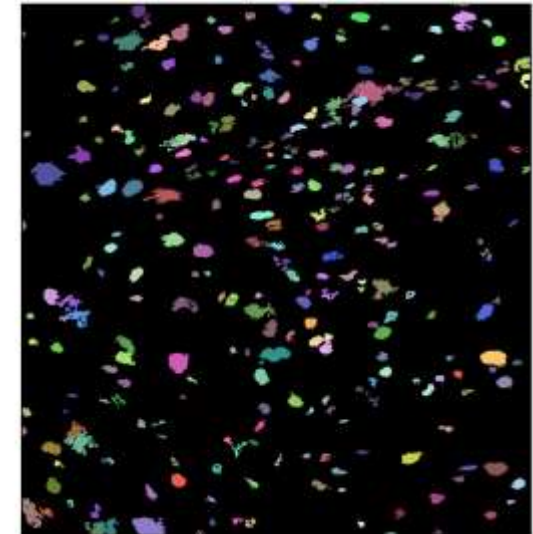
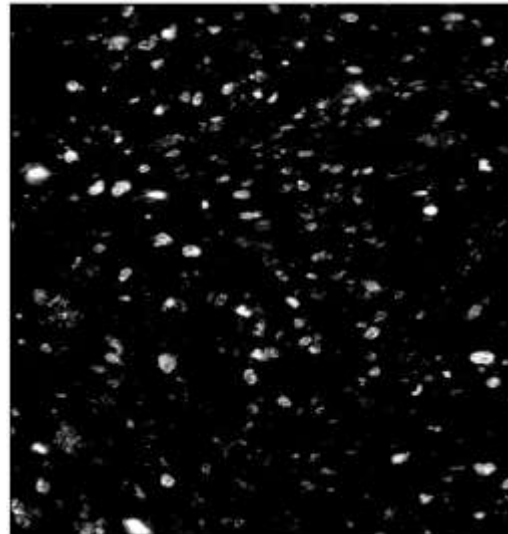
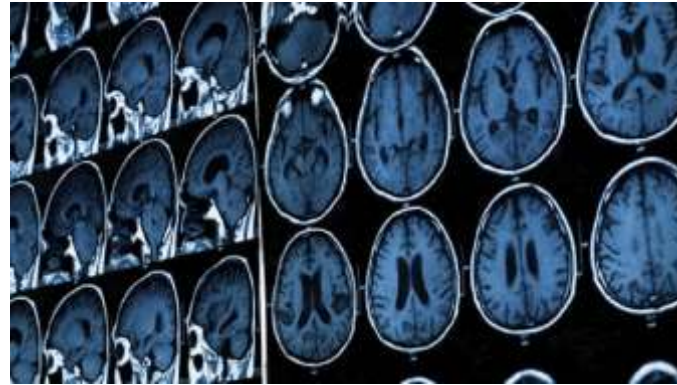
DI Seedcorn projects

- The World in Illustrations
 - Julia Thomas (ENCAP)
- Improving pedestrian data modelling for a more vibrant high street
 - Scott Orford and Crispin Cooper (GEOPL/WISERD)



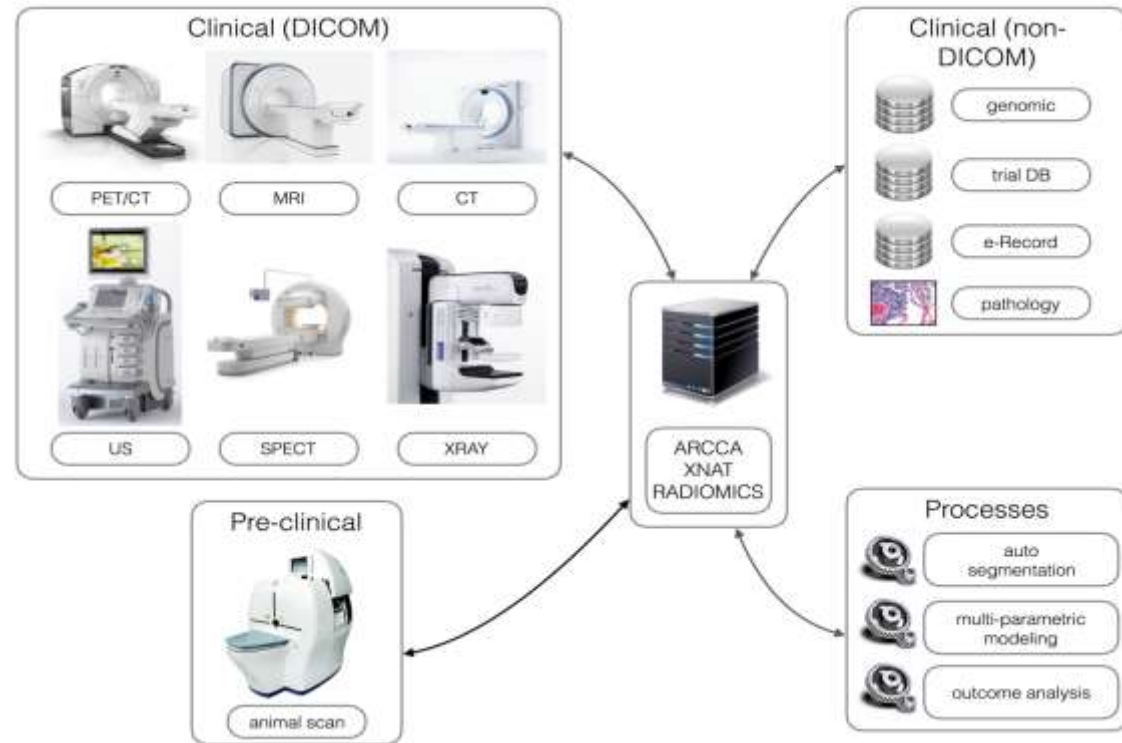
DI Seedcorn projects

- Design of an Open-Access Brain Imaging Data Centre
 - Leandro Beltrachini,
Andreas Papageorgiou (PHYSX),
Cyril Charron (CUBRIC)
- Astronomical Oncology – Using astronomical image analysis techniques to identify cancer cells
 - Chris Clark (PHYSX),
Liliana Ordonez (BIOSI)



DI Seedcorn projects

- Informatics Platform for Advanced Cancer Imaging Research
 - Ameliano Spezi (ENGIN)
 - Jon Staffurth (MEDIC)
- Unsupervised data compression and interpretation of fluorescence lifetime imaging
 - Wolfgang Langbein (PHYSX)
 - Paola Borri (BIOSI)
- Welsh Linked Administrative Data Family ID
 - Robert French (MEDIC)



Seedcorn Workshops

- Datafication and Society
 - Lina Dencik (JOMECE)
 - Madeline Carr (CLAWS)
 - Martin Chorley (COMSC)
- Isotropic Random Fields in Cosmology
 - Nikolai Leonenko (MATHS)
 - Peter Coles (PHYSX)
- Data-driven analytics in online advertising
 - Anatoly Zhigljavsky (MATHS)
 - Gordon Foxall (CARBS)
- Digital technologies for health promotion and disease management
 - Tapio Paljarvi (MEDIC)

DATA-DRIVEN DECISIONS IN ONLINE ADVERTISEMENT
June 8-10, 2017, London/Cardiff


Data-Driven Decisions in Online Advertisement

Schedule:
June 8, 2017: Industrial session on online advertisement. Venue: London
June 9, 2017: Decisions in online advertisement. Venue: Cardiff University Business School, Executive Lounge.
June 10, 2017: Buyer behaviour online. Venue: Cardiff University Business School, Executive Lounge.

Program committee: Anatoly Zhigljavsky, Gordon Foxall and Yuri Staroselskiy.
Local organizing committee: Joanna Emery (Head), Saeed Heravi, Andrey Pepelyshev and Pauline Hutchings.

For participation in the workshop, please register [here](#).
If you want to offer a presentation at the workshop on either June 9 or June 10 please contact the organizers.

The list of topics can be found [here](#). The list of invited speakers is given [here](#).



Sponsors of the conference are Data Innovation Research Institute and CrimTan.

Contact us: online_ads@cardiff.ac.uk

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ISOTROPIC RANDOM FIELDS IN ASTROPHYSICS
June 29-30, 2017, Cardiff

Isotropic Random Fields in Astrophysics

The purpose of the workshop is to bring to Cardiff world-leading scientists working particularly in the spectral theory of isotropic random fields, astrophysics and data analysis of Planck and Euclid missions. The invited talks will cover spectral theory of isotropic random fields, big data analysis of real cosmological data and related topics. The key general question to be addressed at the workshop are: statistical techniques for a big data analysis of spherical isotropic random fields (including tensor-valued random fields) and application to real and simulated cosmological data.

Program committee: Peter Coles and Nikolai Leonenko.
Local organizing committee: Joanna Emery and Nikolai Leonenko.

For participation in the workshop, please register [here](#).
If you want to offer a presentation at the workshop, please contact the organizers.

The list of topics can be found [here](#). The list of invited speakers is given [here](#).

The sponsor of the workshop is Data Innovation Research Institute.

Contact us: randomfields@cardiff.ac.uk

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Supercomputing Wales

- £9M investment by European Regional Development Fund through the Welsh Government.
- Supercomputing hubs in Cardiff and Swansea.
- Team of Research Software Engineers embedded in Data Intensive research groups in Welsh Universities.



Research Software Engineers



Ian Harvey (DIRI)



2nd DIRI RSE (Vacancy)



Duncan Macleod
(DIRI & PHYSX)

- 6 RSEs through Supercomputing Wales
- Bid for industry facing RSEs
- Will form a University-wide resource

National Software Academy

- Exciting initiative working in partnership with Welsh Government and industry
- Aims to address the national shortage of skilled programming and software engineering graduates
- Delivers an innovative degree with a focus on the skills, knowledge and hands-on experience required for a commercial software engineer



Postgraduate Student Training

- Four data-intensive MSc courses:
 - Data Science and Analytics
 - Data Intensive Physics
 - Data Intensive Astrophysics
 - Computational and Data Journalism
- STFC funded Centre for Doctoral Training in Data Intensive Science, joint with Bristol and Swansea.
 - Fourteen studentships to start in 2017
Four year PhD course
 - All students have a six-month industrial placement using their big data skills