University of BRISTOL

SOUTH WEST NUCLEAR HUB

Applied Research Membership

southwestnuclearhub.ac.uk

Engineering research facilities at the University of Bristol

Applied Research Membership Benefits

APPLIED RESEARCH

The South West Nuclear Hub is helping to realise the zero-carbon economy of the future. Our alliance of academic, industrial and governmental institutions in the South West is pursuing research, innovation and skills in support of nuclear energy for electricity and other high-value products such as heat and hydrogen.

Benefits are aligned to our four strategic pillars:

Research

ENHANCED FUNDING

- Identification & leverage of research investment (inc. access to new sources in public sector, industrial, international)
- Galvanising consortia behind 'common interest' subjects to increase success

INCREASED IMPACT

- Strategic programme management to ensure outputs linked to specific industry challenges and hub regional technology development pipeline
- Effective consortia curation, including new and established capability from academic, industrial, government and SME partners

EXPERT ACCESS

- Dedicated liason and expert coordination of funding proposals/research projects
- Intelligence and facilitated access to academic subject matter expertise and research facilities

INFLUENCE

- Propose and participate in projects and workshops on specific challenges

Innovation

ACCESS TO EXPERTISE

- Introductions to associate members - early engagement in innovation, R&D
- Introductions to Innovation network members - to facilitate innovation and technology transfer

INCREASED IMPACT

- Increase the number of successful projects delivering innovation into the nuclear sector
- Safe space for experimentation and challenge between industry and regulators

Engagement

INCREASED IMPACT

- Communications and outreach expertise to promote research outcomes and impact

HUB ALLIANCE ACCESS

- Portal to academic expertise, the nuclear sector and beyond e.g. SMEs & innovative players
- David Smith Building provides a focal point for nuclear research and teaching, possibility for collaboration, co-location, seminars and conferences

PROMOTION

- Collaborative communications programme - co-ordinated activities to increase public awareness of STEM and nuclear issues

INFLUENCE

- Government nuclear sector policy - industrial strategy

People

FELLOWSHIPS

- Influence direction and increase impact of research through targeted support for fellowships

SKILLS DEVELOPMENT

- Help to secure visiting status, joint appointments and knowledge exchange secondments into and out of academia

TALENT POOL ACCESS

- Engage UG/PG students from a nationally recognised region for nuclear skills provision (e.g. projects, bursaries, careers day)

INCREASED DIVERSITY

- Proactive awareness raising of nuclear as an inspirational career destination for diverse new talent

Membership of the South West Nuclear Hub

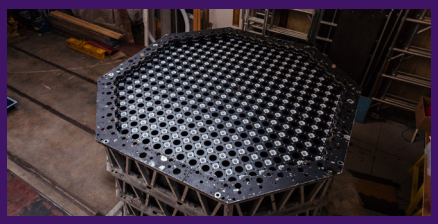
Case study

Plant-Life Extension of AGR graphite cores

Since 2008 the University of Bristol, EDF and Atkins have collaborated to understand an aged graphite core's seismic behaviour and integrity.

They built a quarter size model of an AGR core, containing over 40,000 components and 3000 sensors, and conducted an experimental testing programme on the university's shaking table.

This research feeds into safety case justifications and the project continues to validate EDF's numerical modelling systems.



"With an important footprint in the South West and as builder of the first UK nuclear power station in a generation at Hinkley Point C, naturally EDF joined the South West Nuclear Hub to strengthen the collaboration with our academic and industrial partners in this region. We take important value from the opportunities of collaboration enabled by the Hub, either on externally funded projects or on the synergies around the skills needed to develop future nuclear technologies in the UK."

Ionel Nistor, Head of R&D Nuclear, EDF

Research Themes

We have ten themes organised around industrially focused challenges, reflecting the interdisciplinary nature of our research.

Our themes are:

- Nuclear materials and modelling
- Structural Integrity
- Robotics
- Structural Engineering
- Monitoring
- Systems Risk, Reliability, Security and Resilience
- New Materials Development
- Nuclear Hazards and Risks
- Waste and Fuel Management
- Digital Engineering

Fee Structure

There are two options for Applied Research membership:

£20,000 maximum per year 'Programme Management Fees' attached incrementally to research projects

or

Discounted to a £10,000 flat rate annual membership fee, if agreed to pay yearly upfront.

Join our research network

"We are accelerating and growing nuclear research and teaching activities in the South West region. Joining our alliance will help to secure a long-term research and innovation pipeline for the good of the industry."

Professor Tom Scott, Director (Science) of the South West Nuclear Hub

"The Hub brings together a unique pool of specialist talent and expertise that can be tapped into by industry; in turn industry helps us to ensure that our education and research stays at the cutting edge and has a positive impact on society."

Professor Mahmoud Mostafavi, Director (Engineering) of the South West Nuclear Hub

Key contacts for further information

The Hub provides an efficient point of connectivity to the nuclear academic capability across the South West region. Please contact the South West Nuclear Hub Engagement Team for further information

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@SWNuclearHub
South West Nuclear Hub

For case studies of our applied research and innovation see:
southwestnuclearhub.ac.uk/category/case-studies

Current Applied Research Members

The South West nuclear industry is a premier destination for investment, innovation and growth. By joining our network your organisation can engage in active research, innovation, teaching or engagement projects with us.

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Current Academic Members

Together this alliance of Universities is actively pursuing collaborative opportunities in the UK and internationally and securing a long-term research and innovation pipeline by continuing to grow its strategic relationships. Current members include:

University of OXFORD · University of Southampton · UWE Bristol University of the West of England · University of PLYMOUTH

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