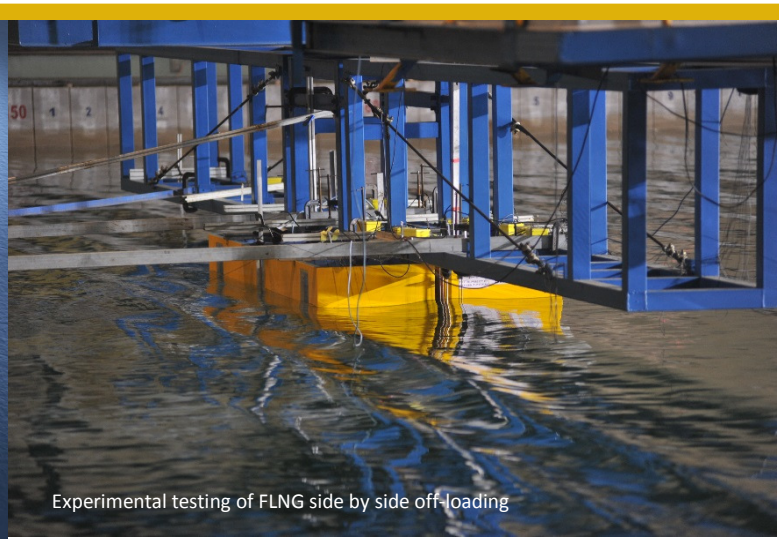
The ARC Industrial Transformation Research Hub for Offshore Floating Facilities at UWA

THE UNIVERSITY OF WESTERN AUSTRALIA

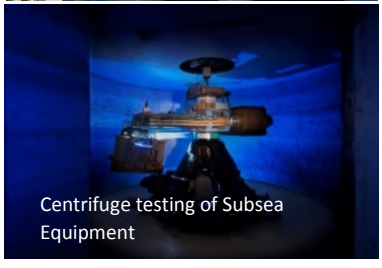
FLNG vessel


Experimental testing of FLNG side by side off-loading

About

The Industrial Transformation Research Hub for Offshore Floating Facilities (OFFshore ITRH) is a multi-disciplinary research group jointly funded by industry and the Australian Research Council. The OFFshore ITRH launched in Q2 2016 with an aim to tackle the critical engineering challenges for the next generation of offshore oil and gas projects by creating novel designs, new technologies and new operating procedures in a collaborative manner. The clear focus of the OFFshore ITRH is on having an impact rather than just creating output.


Deployment of On-bottom Sensor


Centrifuge testing of Subsea Equipment

Research

The OFFshore ITRH involves five interlinked multi-disciplinary projects in the areas of ocean forecasting, vessel motion and offloading, riser and mooring design, novel anchors and subsea foundations, and data analytics for response prediction and facility longevity. Each project team is working to develop new technologies for the design of safe and efficient offshore projects. The research program involves a blend of physical and numerical modelling supported by fieldwork and analysis of observations from existing facilities.

Structure

The OFFshore ITRH is led by Professor Phil Watson and managed by Dr Andrew Grime who work with a team of over 40 academic staff and PhD students principally based in the Indian Ocean Marine Research Centre at UWA. This team bring a wealth of technical experience to the activities of the OFFshore ITRH, and are integrated within the larger ocean science and engineering community at UWA.

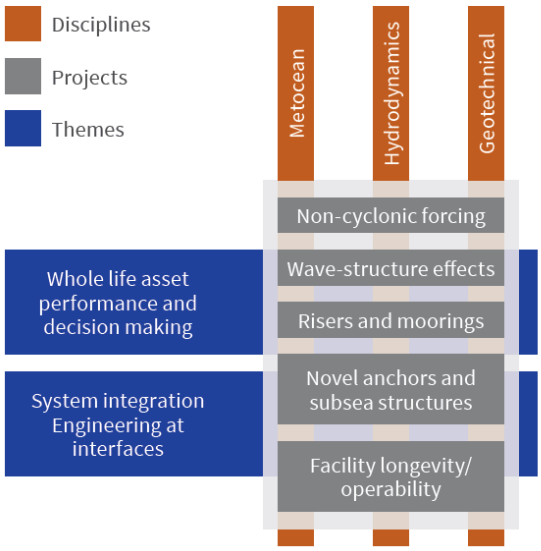
ARC Research Hub for Offshore Floating Facilities

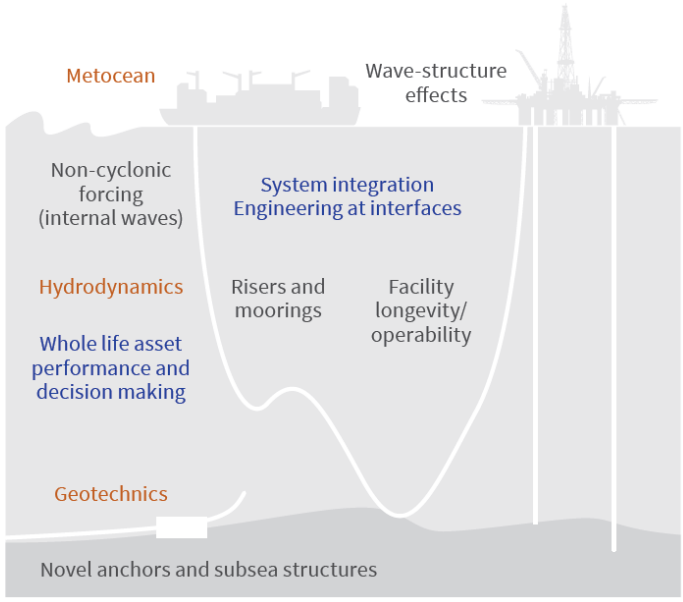
Industry Partners

The OFFshore ITRH industry partners are Shell, Woodside Energy, Bureau Veritas and Lloyds Register. Each partner organization is actively involved in shaping the research direction of each project stream, committed to driving the technology transfer within their company, and assisting with the mentorship of both researchers and PhD students.

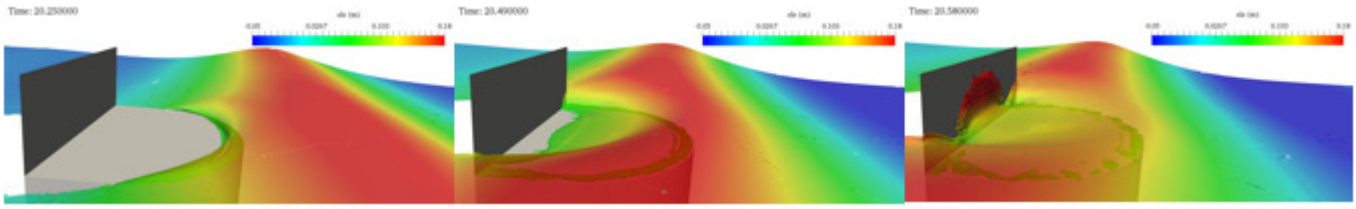
Capabilities

The OFFshore ITRH is hosted at UWA by the Centre for Offshore Foundation Systems (COFS), which is part of the Oceans Institute and the Oceans Graduate School. The Offshore ITRH is expanding UWA's existing world-leading facilities in order to deliver successful outcomes for the wide-ranging research program. These facilities include the National Geotechnical Centrifuge Facility (NGCF), UWA's unique O-tube cyclone simulation flume facilities, the ocean data collection and analysis equipment, the numerical modelling facilities, as well as a new collaboration space at UWA – the Woodside FutureLab Ocean Works.





OFFshore ITRH projects, themes and disciplines



Simulating greenwater over-topping of an FPSO bow

Track record

The Faculty of Engineering, and Mathematical Sciences (EMS) at UWA has a long track record of distinction in research, and in serving the needs of both the local and international community. EMS provides a research environment that breeds excellence and fosters ingenuity, with impact to change the world. The OFFshore ITRH draws upon this track record in order to deliver outcomes that will meet the future needs of industry.

Contact

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"*The Hub provides resources and industry partnerships which allow us to make new research contributions that serve vital industry needs.*"

Mike Efthymiou, Shell Professor of Offshore Structures

Australian Government
Australian Research Council

woodside

WESTERN SYDNEY UNIVERSITY

Lloyd's Register Foundation

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