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Employment

Lecturer

School of Natural and Built Environment
Queen's University Belfast
United Kingdom
01 Mar 2022 → present

Environmental Change (EC)

Queen's University Belfast
01 Mar 2022 → present

Research outputs

Horne, N, Schmitt, P, Culloch, R, Wilson, B, Houghton, JDR, Dale, A & Kregting, L 2023, 'Comparability of outputs between traditional and simulation-based approaches to collision risk modelling', *Journal of Marine Science and Engineering*, vol. 11, no. 12, 2359. <https://doi.org/10.3390/jmse11122359>

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(EWTEC), 14th European Wave and Tidal Energy Conference 2021, Plymouth, United Kingdom, 05/09/2021. <<https://proceedings.ewtec.org/product/ewtec-2021-plymouth-uk/>>

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Activities

ETIP Ocean webinar: Analysis and modelling tools for ocean energy

Period 12 Dec 2024

Description

Ocean energy developers and investors require robust analysis and modelling tools to predict array performance, optimise farm design, and plan and manage construction and operation. The accuracy and affordability of these tools has a direct impact on the innovation and development process of ocean energy.

In this webinar, you will hear about the latest research on innovative analysis and modelling tools for ocean energy. Speakers will also present tools that are being developed within ongoing European projects: the array interaction modelling using numerical methods and experimental testing under the ONDEP wave farm project, and the maintenance tool being developed within the MaxBlade tidal energy project.

Degree of recognition International

Documents Presentation

Related external organisation

ETIP Ocean
Belgium

Ocean Energy Systems (External organisation)

Period 01 Dec 2024 → ...

Description

OES -- Wave Energy Converters Modelling Verification and Validation

The intention of this task is to assess the codes currently in use globally for analysis of wave energy devices. This effort will focus on assessing the accuracy and validation process of the codes by comparing codes to codes and codes to experiments.

The validation will focus on performance, loads, and related responses for a single devices and arrays of devices operating in defined wave conditions

The objectives are the following:

To assess the accuracy and establish confidence in the use of numerical models.

To validate a ranges of existing computational modeling tools

Identify simulation methodologies leading to:
Reduce risk in technology development

Improved device energy capture estimates (IEC TC 102)
Improved loads estimates
Reducing uncertainty in LCOE models

Future research and development needed to improve the computational tools and methods

Degree of recognition International

Links <https://www.ocean-energy-systems.org/oes-projects/wave-energy-converters-modelling-verification-and-validation/>

Related external organisation

Ocean Energy Systems

OceanFOAM Hackathon

Period 09 Sept 2024 → 13 Sept 2024

Description

The OceanFOAM Hackathon 2024 is an informal gathering of up to 30 people using and developing OpenFOAM for ocean/coastal/marine/naval applications.

The main purpose of the event is to build and consolidate a network within the "ocean" part of the OpenFOAM community. The event will consist of a limited number of presentations, extended time slots for code collaboration and social activities. We aim for a safe and relaxed atmosphere where everyone feels comfortable sharing ideas and asking "stupid" questions. We anticipate a number of ocean engineering related tools and applications to be developed during the event all of which will be shared as open source.

Degree of recognition International

Related event

OceanFOAM Hackathon

09/09/2024 → 13/09/2024

Kalundborg, Denmark

Wellenenergie – Traum oder realistische Herausforderung

Period 31 Jan 2024

Description

Seminar Leichtweiß-Institut

Related external organisation

Braunschweig University of Technology

Pockelsstraße 14, 38106, Braunschweig, Germany

Netherlands Organisation for Scientific Research (External organisation)

Period 2024

Related external organisation

Netherlands Organisation for Scientific Research

PO Box 93138, NL-2509 AC, The Hague, Netherlands

Challenges and progress around the experimental tank testing of Wave Energy converters

Period 02 Nov 2023

Related external organisation

Maynooth University

Maynooth, Co. Kildare, Ireland

EPSRC Peer Review College (External organisation)

Period 2023

Description

EPSRC Peer Review College

Degree of recognition International

Related external organisation

EPSRC Peer Review College

United Kingdom

Frontiers in Marine Science (Journal)

Period 2023

Description

Review Editor Frontiers in Marine Science

Related journal

Frontiers in Marine Science

2296-7745

Scopus rating (2021): CiteScore 5.2 SJR 1.355 SNIP 1.435

Indexed in DOAJ

The Royal Society (External organisation)

Period 2023 → ...

Description

The Royal Society

6-9 Carlton House Terrace

London SW1Y 5AG

Related external organisation

The Royal Society

6-9 Carlton House Terrace, SW1Y 5AG, London, United Kingdom

Marine Engineering on Kelvin

Period 10 Nov 2022

Degree of recognition National

Related event

NI-HPC User Conference

10/11/2022 → ...

Derry, United Kingdom

Department of the Environment, Climate and Communications (External organisation)

Period

Jan 2022 → ...

Description

Offshore Renewable Energy Development Plan Advisory Group OREDP II

Degree of recognition National

Related external organisation

Department of the Environment, Climate and Communications

Ireland

Lean Launch Programme

Period

Jan 2022 → Mar 2022

Description

Commercialisation Program

Related event

Lean Launch Programme

09/11/2020 → 28/01/2021

Applied Energy (Journal)

Period

2022

Description

Peer Review

Degree of recognition International

Related journal

Applied Energy

0306-2619

Scopus rating (2023): CiteScore 21.2 SJR 2.82 SNIP 2.411

Archive of Applied Mechanics (Journal)

Period

2022

Description

Peer Review

Related journal

Archive of Applied Mechanics

0939-1533

Scopus rating (2023): CiteScore 4.4 SJR 0.52 SNIP 0.987

Computer Physics Communications (Journal)

Period

2022 → 2023

Description

Peer review

Degree of recognition International

Related journal**Computer Physics Communications**

0010-4655

Scopus rating (2023): CiteScore 12.1 SJR 1.79 SNIP 2.749

Engineering and Physical Sciences Research Council (External organisation)

Period 2022

Description

EPSRC Peer Review

Related external organisation**Engineering and Physical Sciences Research Council**

Polaris House, North Star Avenue, SN2 1ET, Swindon, United Kingdom

Journal of Marine Science and Application (Journal)

Period 2022

Description

Peer Review

Related journal**Journal of Marine Science and Application**

1671-9433

Scopus rating (2023): CiteScore 3.6 SJR 0.468 SNIP 0.879

Keystone Waster Water Heat Recovery System

Period 2022 → ...

Related external organisation**Keystone Group****Ocean Engineering (Journal)**

Period 2022

Description

Peer Review

Degree of recognition International

Related journal**Ocean Engineering**

0029-8018

Scopus rating (2023): CiteScore 7.3 SJR 1.214 SNIP 1.732

Knowledge gaps in marine engineering -- can traditional methods still help offshore renewable energy?

Period 28 Feb 2020

Degree of recognition International

Related event

Engineering the Energy Transition

27/02/2020 → 28/02/2020

Belfast, United Kingdom

Journal of Marine Science and Engineering (Journal)

Period 2020

Description

Topic Editor

Degree of recognition International

Related journal

Journal of Marine Science and Engineering

2077-1312

Scopus rating (2023): CiteScore 4.4 SJR 0.532 SNIP 0.955

Indexed in DOAJ

Hydrodynamic modelling of wave energy converter arrays

Period 20 Jun 2018

Degree of recognition International

Extreme Waves and Boulder Deposits

Period 2018

Degree of recognition International

Related event

Extreme Waves and Boulder Deposits

22/10/2018 → 26/10/2018

Les Treilles, France

Investigation on the Use of Wall Reflections to Simulate Wave Energy Converter Array Effects

Period 2018

Description

University of Tasmania/ Australian Maritime College

IET Renewable Power Generation (Journal)

Period 2017

Related journal

IET Renewable Power Generation

1752-1416

Scopus rating (2023): CiteScore 6.8 SJR 0.859 SNIP 0.879

Indexed in DOAJ

Institution of Mechanical Engineers. Proceedings. Part M: Journal of Engineering for the Maritime Environment (Journal)

Period 2017

Related journal

Institution of Mechanical Engineers. Proceedings. Part M: Journal of Engineering for the Maritime Environment
2041-3084

Scopus rating (2023): CiteScore 3.9 SJR 0.417 SNIP 0.693

International Journal of Marine Energy (Journal)

Period 2017

Related journal

International Journal of Marine Energy

2214-1669

Scopus rating (2018): CiteScore 4.9 SJR 0.766 SNIP 1.477

Applied Energy (Journal)

Period 2016

Related journal

Applied Energy

0306-2619

Scopus rating (2023): CiteScore 21.2 SJR 2.82 SNIP 2.411

Computers and Mathematics with Applications (Journal)

Period 2016

Related journal

Computers and Mathematics with Applications

0898-1221

Scopus rating (2023): CiteScore 5.1 SJR 0.949 SNIP 1.312

Ocean Engineering (Journal)

Period 2016

Related journal

Ocean Engineering

0029-8018

Scopus rating (2023): CiteScore 7.3 SJR 1.214 SNIP 1.732

Tidenkraftwerke -- Theoretische und Praktische Herausforderungen

Period 31 Dec 2015

Degree of recognition National

Related external organisation

Braunschweig University of Technology

Pockelsstraße 14, 38106, Braunschweig, Germany

European Journal of Mechanics B - Fluids (Journal)

Period

23 Jul 2014

Related journal

European Journal of Mechanics B - Fluids

0997-7546

Scopus rating (2023): CiteScore 5.9 SJR 0.638 SNIP 1.233

Prizes

Baker Medal

Schmitt, P. (Recipient), Brown, S. (Recipient), Hann, M. (Recipient), Greaves, D. (Recipient), Windt, C. (Recipient), Davidson, J. (Recipient), Ringwood, J. (Recipient), Giorgi, G. (Recipient), Williams, A. (Recipient) & Masters, I. (Recipient), 14 Oct 2022

William J. Clinton Leadership Institute Mini MBA

Schmitt, P. (Recipient), 05 May 2022

Projects

R3345NBE: CASE - BFRP concrete for Marine renewables

Schmitt, P. (PI), School of Natural and Built Environment
Sonebi, M. (Col), School of Natural and Built Environment
Taylor, S. (Col), School of Natural and Built Environment
30/11/2021 → ...

R3293NBE: Control Co-Design of Heterogeneous Arrays of Wave Energy Converters

Schmitt, P. (PI), School of Natural and Built Environment
Folley, M. (Col), School of Natural and Built Environment
Kregting, L. (Col), School of Natural and Built Environment
19/05/2021 → ...

R5152NBE: Flex Marine Power

Flex Marine Power are excited to be working with Queens University Belfast (QUB) to carry out tidal energy research in the Narrows tidal channel, Strangford Lough. Based in Scotland, Flex Marine have been developing their community-oriented tidal energy technology since 2015. Marine operations have now commenced at QUB's test site, being delivered by local outfit Strangford Moorings. Activities in the Narrows are scheduled to be completed before Christmas and the work aims to demonstrate the ability of Flex Marine's technology (a floating buoy with a horizontal axis turbine mounted underwater) to generate clean, predictable energy from our oceans.

Frost, C. (PI), School of Natural and Built Environment
Kregting, L. (Col), School of Natural and Built Environment
Schmitt, P. (Col), School of Natural and Built Environment
28/10/2020 → ...

R1556NBE: High Resolution Field Assessment of Tidal Turbine Inflow and Wake Fields

Schmitt, P. (PI), School of Natural and Built Environment
Frost, C. (Col), School of Natural and Built Environment
14/05/2024 → ...

Collaborators

University of Bath

R6479NBE: ONdas DE Peniche

Schmitt, P. (PI), School of Natural and Built Environment
Sonebi, M. (Col), School of Natural and Built Environment
Taylor, S. (Col), School of Natural and Built Environment

29/08/2024 → ...

Collaborators European Marine Energy Centre, AW-Energy OY, THE EUROPEAN MARINE ENERGY CENTRE LIMITED, FUNDACION TECNALIA RESEARCH & INNOVATION, Ocean Energy Europe

R3527NBE: X-Flow

Frost, C. (PI), School of Natural and Built Environment

Liu, X. A. (CoI), School of Electronics, Electrical Engineering and Computer Science

Schmitt, P. (CoI), School of Natural and Built Environment

28/09/2023 → ...