Plan Overview

A Data Management Plan created using DMPonline

Title: Development of Marinised Direct-Drive Linear Generators for Wave Energy Convertors

Creator: Mohammed Ali Almuhamidh

Affiliation: Newcastle University

Template: DCC Template

Project abstract:

Ocean waves are a powerful and predictable source of renewable energy, but converting wave motion into electricity is challenging due to harsh marine conditions. Saltwater, corrosion, and constant movement can quickly damage electrical equipment.

This project focuses on developing robust linear generators that directly convert wave motion into electricity without complex mechanical systems. It investigates Switched Reluctance Machines (SRMs), which are simple, low-cost, and well suited to demanding environments because they do not rely on permanent magnets.

A key challenge is “marinisation” adapting generators to operate reliably in seawater over long periods. This research aims to design and model marinised direct-drive generators that improve durability and performance, supporting the development of reliable wave energy technology.

ID: 197556

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End date: 14-09-2029

Last modified: 16-02-2026

Development of Marinised Direct-Drive Linear Generators for Wave Energy Convertors

Data Collection

What data will you collect or create?

in the new design of this project the data collection is the simulated data or measured data from the simulation program such as Ansys and others

How will the data be collected or created?

the data will collected or created from the simulation program

Documentation and Metadata

What documentation and metadata will accompany the data?

no documentation needed for these data

Ethics and Legal Compliance

How will you manage any ethical issues?

No significant ethical issues are anticipated.

How will you manage copyright and Intellectual Property Rights (IPR) issues?

there is no copyright and Intellectual Property Rights (IPR) issues.

Storage and Backup

How will the data be stored and backed up during the research?

All research data (simulation models, design files, and analysis results) will be stored on secure Newcastle University network drives and OneDrive

How will you manage access and security?

All research data (simulation models, design files, and analysis results) will be stored on secure Newcastle University network drives and OneDrive, protected by institutional login and password control. Access will be limited to the researcher and supervisory team.

No data will be stored on unsecured personal devices. Any temporary local storage will be password-protected and encrypted in line with university IT policies.

Regular backups will be maintained through university systems to prevent data loss.

Selection and Preservation

Which data are of long-term value and should be retained, shared, and/or preserved?

Raw intermediate files, temporary simulations, and draft models that do not contribute to final results will not require long-term retention.

Final results will be preserved in accordance with university data retention and archiving policies.

What is the long-term preservation plan for the dataset?

only final results will be preserved in accordance with university data retention and archiving policies.

Data Sharing

How will you share the data?

Data supporting published results will be shared through peer-reviewed journal publications and, where appropriate, deposited in Newcastle University’s institutional research repository.

Are any restrictions on data sharing required?

there is no restrictions on data sharing

Responsibilities and Resources

Who will be responsible for data management?

Me and my supervisor

What resources will you require to deliver your plan?

The project will require access to university-supported storage systems