

Investigations on WEC performance at Ecole Centrale de Nantes

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In the first part of this talk, wave energy conversion related research at Ecole Centrale de Nantes will be presented. Recent developments in tools for the numerical and experimental modelling of wave energy converters (WECs) will be touched upon, including the full scale test site SEMREV.

In the second part, we will present a database for the hydrodynamic performance of (WECs). It results from the collection and analysis of data available in the literature. The availability and presentation of these data vary greatly between sources. Thus, extrapolations have been made in order to derive an annual average for the capture width ratio (CWR) of the different technologies. These CWR are synthetised in a table alongside information regarding dimension, wave resource and operational principle of the technologies. It is observed that CWR is correlated to operational principle and dimension. Statistical methods are used to derive relationships between CWR and dimension for the different WEC operational principles.