**Hydrodynamic Performance and Survivability of an Oscillating Water Column Wave Energy Converter Subjected to Steep and Breaking Waves**

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**ECR Research Fund Blog:**

I have completed my PhD with the defense of the thesis titled "Hydrodynamics of an Oscillating Water Column Device Integrated with Breakwaters" in 2019 from IIT Madras, India. Now, I am working as a Research Fellow at the University of Plymouth in the PORTOS research project, which aims to reduce the green gas emission and air pollution produced by the use of traditional fossil fuels in seaports by assessing the integrated use of marine renewable energy resources in Atlantic Area ports.

During my PhD, I have studied the wave force measurement on Oscillating Water Column (OWC) Wave Energy Converter (WEC) subjected to non-breaking wave conditions. It revealed that due to higher wave power absorption around the natural frequency of the system, the total shoreward horizontal wave force on the OWC device decreased about 50%. In order to further continue this research for studying the wave loads on the OWC WEC subjected to steep and breaking waves, I have applied for the ECR fund for meeting the needs of funds to buy two waterproof load cells. The awarding of the ECR fund helped to carry out the studies at the COAST lab. As part of this research work, I had the opportunity to supervise the MSc student along with my line manager. This helped me to enhance my supervising skills. Also, I have improved my understanding of the loading mechanism of OWC WEC. It helped to enlighten further research ideas that could be done to improve the OWC WEC system.