

## ERE2.3 Marine renewable energy; resource characterisation, interactions and impacts

10:45 – 12:30 Central European Summer Time (CEST)

Welcome to the marine renewable energy session. Many thanks for submitting abstracts and display material, and for attending the chat session. So far we have 8 displays.

The session is broadly grouped into four themes: (1) Wave energy resource, (2) Tidal stream resource, layout and value, (3) Environmental impact of marine renewable energy, and (4) Offshore wind energy.

We intend to go through each abstract/display in turn, first inviting the author to say/type a few sentences to introduce their work and then open up for questions. We will concentrate on the work that has had display material submitted. We've added some rough timings below in order to make sure everyone has a chance to talk about their work, but we may change these depending on how things go and attendance etc.

Please use your full name in the chat session and add (auth) if you're an author, so that we all know who everyone is. The session won't be recorded and please feel free to ask questions or for specific feedback about your work.

Many thanks,




Rory, Michela and Matt

You can navigate to the session from sharing geosciences online, and the EGU programme. The link below will take you to the displays and a link will appear from the displays around 10:30 CEST:

<https://meetingorganizer.copernicus.org/EGU2020/displays/34704>



### 10:45 Introduction

### 10:50 Wave energy resource:




1. D935 | EGU2020-8135   
**Global wave resource classification and application to marine energy deployments** | Iain Fairley, Matthew Lewis, Bryson Robertson, Mark Hemer, Ian Masters, Jose Horrillo-Caraballo, Harshinie Karunaratna, and Dominic Reeve
2. D936 | EGU2020-8769   
**Rogue-wave-energy: wave-to-wire mathematical modelling** | Onno Bokhove
3. D937 | EGU2020-4058   
**Dynamical Downscaling of Wind Surface Forcing with Application to the Wave Potential Estimation in the Aegean Sea** | Georgios V. Kozyrakis, Katerina Spanoudaki, and Emmanouil A. Varouchakis

### 11:15 Tidal stream resource, layout and value

4. D938 | EGU2020-1604  
**Experimental study of the duct-effects of the tidal current turbines in multi-row-staggered layout** | Yaling Chen, Binliang Lin, and Jinxi Guo

5. D939 | EGU2020-2747   
**The value of tidal-stream energy resource to off-grid communities** | Matt Lewis, John Maskell, Daniel Coles, Michael Ridgill, and Simon Neill
6. D940 | EGU2020-19231   
**Bio-optimisation of a tidal channel** | Rory O'Hara Murray and Matthew Lewis

#### 11:40 Environmental impact of marine renewable energy

7. D941 | EGU2020-20649   
**The Rance tidal power station: a preliminary study of its impact on tidal patterns and sediments dynamics in the Rance estuary (France) from 1957 to 2018** | Rajae Rtimi, Aldo Sottolichio, and Pablo Tassi
8. D942 | EGU2020-11619   
**Effects on hydrodynamics and ecological costs of climate change and tidal stream energy extraction in a shelf sea** | Michela De Dominicis, Judith Wolf, Dina Sadykova, Beth Scott, Alexander Sadykov, and Rory O'Hara Murray
9. D943 | EGU2020-8658   
**Geological data incorporation into an opportunities model for Irish offshore wind energy to inform engineering considerations and habitat change potential** | Jared Peters, Ross O'Connell, Andrew Wheeler, Valerie Cummins, and Jimmy Murphy

#### 12:10 Offshore wind energy

10. D944 | EGU2020-21656  
**Off-Shore wind potential in Cyprus: Towards an integrated representative geospatial database** | Evangelos Akylas, Elias Gravanis, Andreas Nikolaidis, Constantinos F. Panagiotou, Christodoulos Mettas, Phaedon Kyriakidis, and Diofantos Hadjimitsis
11. D945 | EGU2020-10178  
**Numerical Analysis of Floating Offshore Structures Using Overset Method** | Sing-Ya Li and Shih-Chun Hsiao
12. D946 | EGU2020-10179  
**Experimental and numerical study of the stability of barge-type floating offshore wind turbine platform** | Wen-Hsuan Yang, Ray-Yeng Yang, and Tzu-Ching Chang
13. D947 | EGU2020-12098  
**The Dynamic Motion of the OC4 Floating Turbine with Different Incident Wave and Wind Directions in a Mooring System Failure Condition in Numerical Model** | Tzu-Ching Chuang, Wen-Hsuan Yang, Yi-Hong Chen, and Ray-Yeng Yang