

1 January 2021

The <u>*Tethys Engineering*</u> Team here at the Pacific Northwest National Laboratory would like to wish you a wonderful New Year! This special edition of the *Tethys Engineering* Blast features a few announcements, opportunities, and upcoming events, as well as a brief look at some 2020 *Tethys Engineering* statistics!

Announcements	Upcoming Events	2020 Tethys Eng. Stats

Announcements

Call for Abstracts

Abstract submissions for the <u>14th European Wave and Tidal Energy Conference (EWTEC 2021)</u> are now being accepted until 8 January 2021. EWTEC 2021 will be held as a hybrid conference in Plymouth, UK from 5-9 September 2021.

Funding/Testing Opportunities

The Supergen Offshore Renewable Energy (ORE) Hub has released its <u>Third Flexible Funding</u> <u>Call</u> and is seeking research proposals from universities or other institutions eligible to hold UK Research and Innovation awards to facilitate a programme of coordinated ORE research projects. Expressions of Interest are due by 5:00pm UTC on 11 January 2021.

Innovate UK has announced an upcoming <u>Smart Grants funding competition</u> for UK registered organizations to apply for a share of up to ± 25 million to deliver disruptive research and development innovations. The competition closes at 11:00am UTC on 20 January 2021.

Student/Employment Opportunities

France Énergies Marines is currently seeking a <u>Research Scientist</u> in offshore renewable energy mooring systems and foundations to join the DTOceanPlus team. The candidate will contribute to the development of advanced design tools for the selection, development, and deployment of ocean energy systems. Applications are due by 15 January 2021.

Pacific Northwest National Laboratory is currently seeking a <u>Coastal and Marine Sciences</u> <u>Technical Intern</u> to join projects within one of three focus areas: (1) understanding the national laboratories' role and the unique place they have to accelerate work in coastal and marine ecosystems; (2) research and development of technologies focused on monitoring coastal ecosystems; and (3) MRE technologies and powering the blue economy. Applications are due by 25 February 2021.

Upcoming Events

Upcoming Webinar

Sandia National Laboratories will be presenting a webinar on the development of the Design Load Case Generator at 11:00am EST (4:00pm UTC) on 14 January 2021. The web-based tool was designed to streamline MRE system technology design and certification following the International Electrotechnical Commission (IEC) 62600-2 technical specification requirements. Register for the webinar, and the opportunity to provide constructive feedback, <u>here</u>.

2020 Tethys Engineering Stats

Over the past year, the *Tethys Engineering* Team has added over 1,380 documents to the <u>*Tethys*</u> <u>*Engineering* Knowledge Base</u> and *Tethys Engineering* has been visited by over 7,300 users! The Team has also added over 200 new MRE photos to the <u>*Tethys Engineering* Photo Library</u>!

Top 10 Documents

- 1. <u>Wave and Tidal Energy</u> Greaves & Iglesias 2018
- 2. Lessons learnt from the design, installation and initial operations phases of the 6MW 4-turbine tidal array in Scotland's Pentland Firth Black & Veatch 2020
- 3. <u>A review of deep learning for renewable energy forecasting</u> Wang et al. 2019
- 4. Oscillating Wave Surge Converter-Type Attachment for Extracting Wave Energy While Reducing Hydroelastic Responses of Very Large Floating Structures – Nguyen & Wang 2020
- 5. <u>State of technology and design guidelines for the Archimedes screw turbine</u> Lashofer et al. 2012
- 6. <u>Hydrodynamic characteristics and flow structures of pitching hydrofoil with special</u> <u>emphasis on the added force effect</u> – Zhang et al. 2020
- 7. <u>Efficiency evaluation of a ductless Archimedes turbine: Laboratory experiments</u> <u>and numerical simulations</u> – Zitti et al. 2020

- 8. <u>Ocean Energy in Islands and Remote Coastal Areas: Opportunities and Challenges</u> – Ocean Energy Systems 2020
- 9. <u>Experimental and numerical investigations of a coupled pitching hydrofoil under</u> <u>the fully-activated mode</u> – Liu et al. 2020
- 10. <u>Numerical analysis of a new multi-body floating wave energy converter with a linear</u> <u>power take-off system</u> – Chandrasekaran & Sricharan 2020

Top 10 Visiting Countries

- 1. United States (2,769 users)
- 2. United Kingdom (565 users)
- 3. India (436 users)
- 4. China (262 users)
- 5. Canada (175 users)
- 6. France (169 users)
- 7. Australia (148 users)
- 8. Japan (146 users)
- 9. South Korea (143 users)
- 10. Netherlands (130 users)

Top 10 Visiting Cities

- 1. Santa Clara, CA, US (368 users)
- 2. London, UK (133 users)
- 3. Cheyenne, WY, US (91 users)
- 4. Vista, CA, US (83 users)
- 5. Quincy, WA, US (75 users)
- 6. Beijing, China (72 users)
- 7. Washington, D.C., US (65 users)
- 8. Irving, TX, US (61 users)
- 9. Temecula, CA, US (60 users)
- 10. Singapore (51 users)



Columbia Power (C·Power) – Power Take Off Testing

Top 3 Viewed Photos



OceanBased Perpetual Energy – Ocean Current Energy Converter



AMOG Consulting - AMOG Wave Energy Converter

The Tethys Engineering Team

Tethys Engineering is made possible by an amazing team of researchers at the Pacific Northwest National Laboratory. Thank you to Andrea Copping, Alicia Gorton, Jonathan Whiting, Mikaela Freeman, Amy Woodbury, Dori Overhus, Levy Tugade, Debbie Rose, Lysel Garavelli, Lenaïg Hemery, Annie Boek Peddicord, Cailene Gunn, Julie Indivero, Kailan Mackereth, and Heidi Stewart for all of your time and effort! And a special thank you to Hayley Farr for compiling *Tethys Engineering* Blasts!