



Friday, 10 April

08:00 **Offshore Wind Standards Workshop -
Workshop on Floating Offshore Wind and Marine Energy:
Standards, Lifecycle and Converter Technologies**
Windsor Florida Hotel

14:00 **Environmental Effects Workshop -
Workshop on Environmental Effects of Remote Community
Marine Energy**
Windsor Florida Hotel
Chaired by: Dr. Andrea Copping (United States)

» Andrea Copping (United States) - Ocean Energy Systems –
Environmental and Pacific Northwest National Laboratory

Saturday, 11 April

09:00 **Marine Energy Standards Workshop -
Workshop on International Standards, Testing & Certification**
Windsor Florida Hotel
Chaired by: Dr. Winston D'Souza (United Kingdom) and Mr. Jonathan
Colby (United States) and Mr. Peter Scheijgrond (Netherlands)

14:00 **Test Center Workshop -
Workshop: From Research to Real-World Impact in Marine
Energy**
Windsor Florida Hotel
Chaired by: Dr. Dernis Mediavilla (United Kingdom) and Ray
Pieroway (Canada)

Sunday, 12 April

18:00 **Opening Reception**

Monday, 13 April

08:00 **Badge Pickup**

08:30 **Conference opening and welcome**

09:00 **Keynote**

09:15 **Panel - Global Perspectives on Offshore Renewable Energy**
Chaired by: Bruce Cameron (Canada)

10:15 **Coffee Break and Networking**



Continued from Monday, 13 April	
10:45	<p>Panel - From Innovation to Market: Bankability and Commercialization Chaired by: Mr. Jonathan Colby (United States)</p>
11:50	<p>Untitled Event Chaired by: Prof. Milad Shadman (Brazil)</p> <p>» Segen F. Estefen (Brazil) - National Institute for Ocean Research</p>
12:30	Lunch
13:45	<p>Social and Economic Chaired by: Craig Chandler (Canada)</p>
13:45	<p>Marine Energy Workforce Readiness: Findings and Emerging Solutions from a U.S. Workforce Assessment » <u>Ms. Arielle Cardinal</u> (United States)¹, Ms. Jennifer Daw (United States)¹, Ms. Betsy Stratton (United States)¹, Ms. Madeline Crouse (United States)¹ (1. National Renewable Energy Laboratory)</p>
14:00	<p>Advancing Offshore Renewable Energy skills in line with the EU Pact for Skills and the UN Ocean Decade: multilingual online training for a global Blue Workforce. » <u>Mr. Peter Scheijgrond</u> (Netherlands)¹, Ms. Sanne Moleman (Netherlands)², Mrs. Lina Laar (Netherlands)¹ (1. Bluespring/Campus@Sea, 2. Deftiq)</p>
14:15	<p>Marine Energy and Water Security in Colombia » <u>Dr. andres osorio</u> (Colombia)¹, Mr. Juan Sebastian Gonzalez (Colombia)¹, Ms. Juan David Guzman (Colombia)¹, Dr. Oscar Andres Alvarez Silva (Colombia)², Dr. Aymer Maturana-Cordoba (Colombia)², Dr. Juan David Osorio Cano (Colombia)³ (1. Universidad Nacional de Colombia - Sede Medellín, Colombia,, 2. Universidad del Norte, 3. Universidad Nacional de Colombia - Sede Caribe, San Andres)</p>
14:30	<p>Non-additive suitability assessment for offshore renewable energy siting: quantifying criteria interactions in Southern Chile » <u>Mr. Claudio Moscoloni</u> (Italy)¹, Dr. Natalia Aziares-Aguayo (Chile)², Dr. Emiliano Gorr-Pozzi (Italy)³, Dr. Manuel Corrales-Gonzalez (Italy)³, Mr. Jorge Perez Silva (Italy)³, Dr. Giuseppe Giorgi (Italy)³, Prof. Gonzalo Tampier (Chile)⁴, Prof. Giuliana Mattiazzo (Italy)³ (1. Istituto Universitario di Studi Superiori di Pavia, 2. Marine Energy Research and Innovation Center (MERIC), 3. Politecnico di Torino, 4. Universidad Austral de Chile)</p>
14:45	<p>Test Sites as Catalysts for Marine Energy Commercialisation: The Synergistic Role of Research and Development » <u>Dr. Darnis Mediavilla</u> (United Kingdom)¹ (1. The European Marine Energy Centre)</p>
13:45	<p>Offshore Wind 1 Chaired by: Dr. Daniel Hasselman (Canada)</p>
13:45	<p>Ranking areas for offshore wind energy in emerging markets: a methodology proposition applied to Brazil » <u>Mr. GUSTAVO PONTE</u> (Brazil)¹, Dr. Erik Rego (Brazil)¹, Dr. Miguel Udaeta (Brazil)¹, Dr. Viviane Nascimento (Brazil)¹, Dr. Vanessa Massara (Brazil)¹ (1. University of São Paulo (USP))</p>
14:00	<p>Assessing offshore wind potential in Brazil: from resource availability to capacity value » <u>Mr. GUSTAVO PONTE</u> (Brazil)¹, Mr. Lucas Silva (Brazil)¹, Dr. Erik Rego (Brazil)¹ (1. University of São Paulo (USP))</p>
14:15	<p>Challenges and future trends of Real-Time Hybrid Model Tests of Floating Offshore Wind Turbines » <u>Dr. Tania Marie Arispe Angulo</u> (Brazil)¹, Prof. Milad Shadman (Brazil)², Prof. Mojtaba Mali Amiri (Brazil)², Mr. Marcos Paulo Sevenini (Brazil)¹, Prof. Segen Farid Estefen (Brazil)² (1. Offshore Renewable Energy Group- GERO/ COPPE/ Federal University of Rio de Janeiro, 2. Federal University of Rio de Janeiro)</p>



Continued from Monday, 13 April

14:30

Integrated Ocean–Atmosphere–Wave Modeling and Innovative Observational Strategies Applied to Offshore Wind Resource Assessment near a Brazilian Port

» Dr. Luiz Paulo Assad (Brazil)¹, Dr. Raquel Toste (Brazil)¹, Mr. Anderson Soares (Brazil)¹, Dr. Carina Stefoni Böck (Brazil)¹, Mr. Douglas Nehme (Brazil)¹, Dr. Maurício Soares da Silva (Brazil)¹, Dr. Nilton Oliveira Moraes (Brazil)¹, Dr. Lívia Sancho (Brazil)¹, Ms. Larissa de Freitas (Brazil)¹, Ms. Rebeca Lyra (Brazil)¹, Dr. Jonas Takeo Carvalho (Brazil)¹, Mr. Yuri Corrêa (Brazil)¹, Mr. Luan Schimidel (Brazil)¹, Dr. Fabio Hochleitner (Brazil)¹, Dr. Luiz Landau (Brazil)¹ (1. Laboratory of Computational Methods in Engineering (LAMCE/UFRJ))

14:45

Advancing Offshore Wind Resource Assessment in a Data-Scarce South Atlantic Region through Meteoceanographic Modeling, SAR Remote Sensing, and AI

» Dr. Luiz Paulo Assad (Brazil)¹, Dr. Carina Stefoni Böck (Brazil)¹, Mr. Douglas Nehme (Brazil)¹, Dr. Raquel Toste (Brazil)¹, Mr. Anderson Soares (Brazil)¹, Dr. Maurício Soares da Silva (Brazil)¹, Dr. Nilton Oliveira Moraes (Brazil)¹, Dr. Lívia Sancho (Brazil)¹, Ms. Larissa de Freitas (Brazil)¹, Ms. Rebeca Lyra (Brazil)¹, Dr. Carlos Henrique Beisl (Brazil)¹, Dr. Adriano Vasconcelos (Brazil)¹, Dr. Alexandre Evsukoff (Brazil)¹, Dr. Luiz Landau (Brazil)¹ (1. Laboratory of Computational Methods in Engineering (LAMCE/UFRJ))

15:00

Development, Implementation and Testing of a Floating Wind Platform Prototype for Off-Grid Applications in southern Chile

» Prof. Gonzalo Tampier (Chile)¹, Dr. Natalia Aziaras-Aguayo (Chile)², Dr. Cristian Cifuentes (Chile)¹ (1. Universidad Austral de Chile, 2. Marine Energy Research and Innovation Center (MERIC))

15:30

International Standards, Testing & Certification

Chaired by: Mr. Peter Scheijgrond (Netherlands)

15:30

International, Consensus-Based Marine Energy Standards

» Mr. Jonathan Colby (United States)¹, Mr. Richard Williams (United States)², Dr. Eddie McCarthy (United Kingdom)³, Dr. Thomas Davey (United Kingdom)³, Mr. Peter Scheijgrond (Netherlands)⁴ (1. Streamwise Development, LLC, 2. Oregon Applied Research, 3. University of Edinburgh, 4. Bluespring)

15:45

Advancing Marine Energy Certification through IECRE

» Mr. Peter Scheijgrond (Netherlands)¹, Dr. Winston D'Souza (United Kingdom)² (1. Campus@Sea, 2. Lloyd's Register)

16:00

The Emergence of a Global Certification framework for the commercialisation of Marine Energy technologies

» Dr. Winston D'Souza (United Kingdom)¹ (1. Lloyd's Register)

15:30

Salinity Gradient

Chaired by: Dr. andres osorio (Colombia)

15:30

Extended assessment of the globally extractable salinity gradient energy from river mouths

» Dr. Oscar Andres Alvarez Silva (Colombia)¹, Mr. Mateo Roldan (United States)², Mr. Franklin Arévalo (Colombia)¹ (1. Universidad del Norte, 2. Purdue University)

15:45

Construction of a Project Feasibility Index (PFI) applied to Salinity Gradient Energy (SGE) generation projects in the Colombian Caribbean region.

» Mr. Tomas Garrido (Colombia)¹, Dr. Oscar Alvarez-Silva (Colombia)¹ (1. Universidad del Norte)

16:00

Analysis of the feasibility of Blue Energy implementation in the Bay of Cartagena

» Prof. Leidy Tatiana Ballesteros Rozo (Colombia)¹, Dr. William Lopez (Colombia)¹ (1. Universidad de América)



Continued from Monday, 13 April

16:15 **Unlocking constant ocean energy from river-sea mixing: Design and early insights from Colombia's 150°W SGE Pilot at Bocas de Ceniza**

» Dr. Aymer Maturana-Cordoba (Colombia)¹, Dr. Oscar Andres Alvarez Silva (Colombia)¹, Prof. Carlos Sánchez-Sáenz (Colombia)², Dr. andres osorio (Colombia)², Prof. Anggie Cala (Colombia)¹, Mr. Mateo Roldan (Colombia)², Mr. Mateo Arias (Colombia)², Ms. Maria Susana Perez (Colombia)² (1. Universidad del Norte, 2. Universidad Nacional de Colombia - Sede Medellín, Colombia.)

16:30 **Poster Reception**

Surface Intensity vs. Subsurface Stability: Hotspots of Current Energy in the Southwestern Tropical Atlantic

» Ms. Tarsila Lima (Brazil)¹, Dr. Syumara Queiroz (Brazil)¹, Prof. Moacyr Araujo (Brazil)¹ (1. Laboratory of Estuarine and Coastal Physical Oceanography (LOFEC), Department of Oceanography, Federal University of Pernambuco)

Impact of Varied Inflow Conditions on Tidal Turbine Blade Loading Dynamics

» Ms. Selina Brinkmann (United Kingdom)¹, Dr. Christopher Vogel (United Kingdom)¹, Dr. Richard Willden (United Kingdom)¹ (1. University of Oxford)

Characterization of a Flap Type Flume: The eWave Experimental Platform

» Mr. Gabriel Urruela Vargas (Costa Rica)¹, Mr. ANDRES ANTONIO JIMENEZ PIEDRA (Costa Rica)¹, Mr. DANIEL ESTEBAN QUESADA LOBO (Costa Rica)¹, Prof. Julio César Rojas Gómez (Costa Rica)¹, Dr. Juan Luis Guerrero-Fernandez (Costa Rica)¹, Dr. Christopher Vega Sánchez (Costa Rica)¹ (1. Costa Rica Institute of Technology)

Resilient Autonomous Nanogrid for Energy and Communication in Remote Wind and Ocean Energy Prospecting Units

» Mr. Nerval Junior (Brazil)¹, Dr. Shigeaki Lima (Brazil)², Dr. Denivaldo Lopes (Brazil)² (1. Institute of Electrical Energy - IEE/UFMA, 2. UFMA)

Estuarine Creeks for Tidal Energy Generation

» Mr. George Filho (Brazil)¹, Ms. Anna Dulce Espindola F Rocha (Brazil)¹, Dr. MARCIO SANTOS (Brazil)¹, Prof. Arcilan Trevenzoli Assireu (Brazil)², Prof. Osvaldo Ronald Saavedra (Brazil)³ (1. Institute of Electrical Energy - IEE/UFMA, 2. Federal University of Itajubá, 3. Federal University of Maranhão)

LABORATORY TESTS ON A FIXED OWC UNDER URUGUAYAN ATLANTIC COAST WAVE CLIMATE

» Mr. Juan Villemur (Uruguay)¹, Dr. Rodrigo Alonso Hauser (Uruguay)¹, Dr. Rodolfo Pienika (Uruguay)¹ (1. Instituto de Mecánica de los Fluidos e Ingeniería Ambiental (IMFIA) - FING - UDELAR)

Spatial complementarity and its implications for tidal energy generation in São Marcos Bay

» Ms. Anna Dulce Espindola F Rocha (Brazil)¹, Mr. George Filho (Brazil)¹, Dr. MARCIO SANTOS (Brazil)¹, Prof. Arcilan Trevenzoli Assireu (Brazil)², Prof. Osvaldo Ronald Saavedra (Brazil)³ (1. Institute of Electrical Energy - IEE/UFMA, 2. Federal University of Itajubá, 3. Federal University of Maranhão)

ASSESSMENT OF TIDAL CURRENT POTENTIAL IN THE GUAMÁ RIVER ESTUARY (EASTERN AMAZON/BRAZIL)

» Dr. Maamar El Robrini (Brazil)¹, Mr. José Rodrigo Cristo Cunha (Brazil)¹, Prof. Osvaldo Ronald Saavedra (Brazil)² (1. Federal University of Pará, 2. Federal University of Maranhão)

HYDRODYNAMIC MODELING OF ENERGY POTENTIAL ON THE INNER CONTINENTAL SHELF OF AMAPÁ (AMAZON REGION - BRAZIL)

» Dr. Maamar El Robrini (Brazil)¹, Mr. Robert William Queiroz Farias (Brazil)¹, Prof. Osvaldo Ronald Saavedra (Brazil)² (1. Federal University of Pará, 2. Federal University of Maranhão)

Challenges in the Secure Acquisition of Field Data for Renewable Energy Prospecting

» Mr. Juan Ibanez (Brazil)¹, Ms. Isabelle Oliveira (Brazil)¹, Dr. Denivaldo Lopes (Brazil)¹, Dr. Shigeaki Lima (Brazil)¹, Dr. Osvaldo Saavedra (Brazil)¹ (1. UFMA)



Continued from Monday, 13 April

A review on the development of Marine Renewable Energies (MRE) in Colombia

» Mr. Andres Hernandez Rivera (Colombia)¹, Mr. Remberto Gloria (Colombia)¹, Mr. Carlos Lopez (Colombia)¹, Mr. Tomas Garrido (Colombia)¹, Dr. Oscar Alvarez-Silva (Colombia)¹ (1. Universidad del Norte)

The Neowave wave energy converter: Simulations and testing.

» Mr. Jose Montoya (Colombia)¹, Ms. Shalom Scott Obregón (Colombia)¹ (1. Neowave Energy)

Assessing R&D-related mechanisms in Brazil's offshore wind sector

» Mr. Gabriel Ralile de Figueiredo Magalhães (Brazil)¹, Prof. Thauan Santos (Brazil)², Prof. Jorcelino Rinalde de Paulo (Brazil)², Mr. Diogo Grion (Brazil)¹ (1. Graduate Program in Maritime Studies at the Naval War College (EGN), Brazilian Navy (MB)., 2. Graduate Program in Maritime Studies at the Naval War College (EGN) - Brazilian Navy (MB).)

Advancing Marine Energy Through Numerical Modeling: An Update from the U.S. DOE Water Power Technologies Office

» Mr. William McShane (United States)¹, Dr. Kelsey Elfering (United States)¹ (1. U.S. Department of Energy)

Hybrid Offshore H₂S-to-H₂ Conversion: COMSOL Modelling and Proof-of-Concept Simulation of Photocatalysis Coupled with Sulfur-Reducing Bacteria under Low-Frequency Electromagnetic Fields

» Dr. John Gomez (Brazil)¹, Dr. Luiz Henrique Jesus (Brazil)² (1. CalipYuk Enterprises, 2. Laboratory for Applied Superconductivity (LASUP, UFRJ))

Multicriteria analysis for the installation of offshore wind farms on the Uruguayan coast

» Prof. Romina Suárez (Uruguay)¹, Prof. Victor Silvera (Uruguay)¹ (1. Universidad de la República, Facultad de Ingeniería, Uruguay)

Understanding interactions within the offshore wind energy-climate change nexus: a literature review

» Ms. Misty Rizzo (Brazil)¹, Prof. Alexander Turra (Brazil)¹, Dr. Fernanda Veronez (Brazil)², Prof. Luis Enrique Sánchez (Brazil)¹ (1. University of São Paulo (USP), 2. Federal Institute of Espirito Santo (IFES))

EVALUATION OF A BULB-TYPE TURBINE IN A RESERVOIR-TYPE TIDAL DAM FOR TIDAL POWER GENERATION

» Mr. Juan Cardenas (Colombia)¹, Dr. Juan Gabriel Rueda Bayona (Colombia)¹ (1. Universidad del Valle)

Review: Change in the Energy Matrix of Ships

» Prof. Romina Alanis (Uruguay)¹, Prof. Romina Suárez (Uruguay)¹ (1. Universidad de la República, Facultad de Ingeniería, Uruguay)

Colombian Ocean Activity and Susceptibility Tool - Wind (COAST-Wind): A Decision-Support Tool for Sustainable Offshore Wind Development

» Mrs. Lucia Licero Villanueva (Colombia)¹, Dr. Sebastian Palomino (Colombia)¹, Mr. Jose Vega (Colombia)¹, Ms. Lisandra Matos (Colombia)¹ (1. Stockholm Environment Institute)

The Role of Brazilian Metrology in Unlocking Offshore Wind Potential

» Ms. Ana Teresa Caldas Araripe (Brazil)¹, Dr. Luiz Soares Jr (Brazil)², Mrs. Ana Nascimento (Brazil)³ (1. Casa dos Ventos, 2. Universidade Federal do Ceará, 3. Universidade Estadual do Ceará)

ASSESSMENT OF WATER QUALITY IMPACTS FROM A TIDAL ENERGY PLANT IN BUENAVENTURA BAY, COLOMBIA

» Mrs. Valery Franco (Colombia)¹, Dr. Juan Gabriel Rueda Bayona (Colombia)¹ (1. Universidad del Valle)

Initial observations on the potential effects of offshore wind farms on the coast of northeastern Brazil

» Dr. Mainara Gouveia (Bulgaria)¹, Prof. Elisaveta Peneva (Bulgaria)², Prof. Carlos Lentini (Brazil)³, Dr. Douglas Gherardi (Brazil)⁴ (1. Sofia University "St. Kliment Ohridski", 2. Meteorology and Geophysics Department, Faculty of Physics, Sofia University "St. Kliment Ohridski", 3. Federal University of Bahia, 4. National Institute for Space Research)



Tuesday, 14 April

08:00 Plenary - Regional Progress on Offshore Renewable Energy in the Americas - Part I

Chaired by: Diego Acevedo (Aruba)

10:30 Coffee Break and Networking

11:00 Plenary - Regional Progress on Offshore Renewable Energy in the Americas - Part II

12:00 Lunch

13:15 Environmental Effects

Chaired by: Luis Alfaro (Costa Rica)

13:15

Socio-Environmental Impacts of Offshore Wind Energy: A Review with Emphasis on the Brazilian Context

» Mr. GUSTAVO PONTE (Brazil)¹, Dr. Erik Rego (Brazil)¹ (1. University of São Paulo (USP))

13:30

Ensuring Sustainable Growth of the Offshore Wind Sector in Nova Scotia, Canada: Identifying and Prioritizing Research and Development Initiatives

» Dr. Daniel Hasselman (Canada)¹, Ms. Shannon Wood (Canada)², Mr. Sven Scholtysik (Canada)², Mr. Alisdair McLean (Canada)² (1. AquaVeritas Research, 2. Net Zero Atlantic)

13:45

Decarbonisation study through the implementation of wave, wind and floating photovoltaic energies in Río de la Plata estuary.

» Dr. Manuel Corrales-Gonzalez (Italy)¹, Mr. Claudio Moscoloni (Italy)², Dr. Emiliano Gorr-Pozzi (Italy)³, Dr. Viola De Clerck (Italy)¹, Dr. Anahí Brun (Argentina)⁴, Dr. Carolina Kahl (Argentina)⁵, Dr. Diego Selman-Caro (Mexico)⁶, Dr. Giuseppe Giorgi (Italy)¹ (1. Politecnico di Torino, 2. Istituto Universitario di Studi Superiori di Pavia, 3. Politecnico di Torino, 4. Universidad Nacional de Mar del Plata, 5. Departamento Oceanografía, Servicio de Hidrografía Naval (SHN), 6. Universidad Nacional Autónoma de México)

14:00

Supporting marine renewable energy development through the understanding of environmental effects.

» Dr. Lysel Garavelli (United States)¹, Dr. Andrea Copping (United States)¹, Dr. Lenaig Hemery (United States)¹, Mrs. Mikaela Freeman (United States)¹, Ms. Hayley Farr (United States)¹, Mrs. Debbie Rose (United States)¹, Ms. Kristin Jones (United States)¹, Mr. Jacob McGrath (United States)¹ (1. Pacific Northwest National Laboratory)

14:15

Modeling Wind Stress Heterogeneity from Offshore Wind Farms and Its Impact on Tropical Ocean Circulation

» Mr. José Amell (Puerto Rico)¹, Prof. Umberto Ciri (Puerto Rico)² (1. Graduate Student, 2. Professor)

14:30

Challenges and opportunities for offshore wind development in Costa Rica: A foresight analysis of regulatory barriers and the legal framework

» Dr. José Rodrigo Rojas Morales (Costa Rica)¹, Ms. Michelle Chavarria (Türkiye)² (1. Universidad Nacional, UNA, Costa Rica, 2. University of Ankara)

14:45

Thermomorphometric effects of cold-water farming technology on the growth of cabbage (*Brassica oleracea* var. *capitata* L.)

» Dr. ALEJANDRO GARCÍA HUANTE (Mexico)¹, Dr. Amelia López Herrera (Mexico)² (1. Centro Mexicano de Innovación en Energía del Océano, 2. Colegio de Postgraduados campus Montecillo)



Continued from **Tuesday, 14 April**

15:00 **Experimental and Numerical Assessment of the Hydrodynamic Performance of an Oscillating Buoy-Type Wave Energy Converter**
 » [Dr. Yeison Berrio](#) (Colombia)¹, Dr. German Rivillas-Ospina (Colombia)², Dr. Adriana Arango (Colombia)² (1. Universidad de La Guajira, 2. Universidad del Norte)

13:15 **Wave Energy 1 (8)**
 Chaired by: Prof. Gonzalo Tampier (Chile)

13:15 **Smart Wave Energy Conversion Using Artificial Intelligence and IoT: Bridging Efficiency and Sustainability**
 » [Dr. Ammar Ahmed](#) (China)¹, Dr. Ali Azam (China)², Ms. Ayesha Asghar (China)³, Dr. Attia Qammar (China)⁴ (1. School of Mechanical Engineering, Southwest Jiaotong University, P. R. China, 2. School of Marine Science and Engineering, South China University of Technology, Guangzhou, 511442, China, 3. Lahore College for Women University, Jinnah Town, Lahore, Punjab 44444, Pakistan, 4. School of Computing & Artificial Intelligence, Southwest Jiaotong University, P. R. China)

13:30 **Impedance matching for wave powered reverse osmosis desalination**
 » [Dr. Antonio Jarquin Laguna](#) (Netherlands)¹, Dr. Jian Tan (Netherlands)¹ (1. Delft University of Technology)

13:45 **Reinforcement Learning-Based Control for Wave Energy Conversion In Uncertain Environment**
 » Dr. Yao Zhang (United Kingdom)¹, Dr. Tianyi Zeng (United Kingdom)², Prof. Richard Bucknall (United Kingdom)¹, [Mr. Vincentius Versandy Wijaya](#) (United Kingdom)³ (1. University college london, 2. Rolls-Royce UTC at University of Nottingham, 3. University of Southampton)

14:00 **Leveraging Wave Energy for Stabilization of Floating Offshore Wind Turbine**
 » [Prof. Ossama Abdelkhalik](#) (United States)¹ (1. Iowa State University)

14:15 **Experimental validation of a Deep Reinforcement Learning-based control to improve energy harvesting in a WEC**
 » [Mr. Danilo Pastrana Mendoza](#) (Chile)¹, Dr. Fabian Pierart (Chile)¹ (1. Universidad del Bío Bío)

14:30 **Optimal Control Strategy based on Real-Time Iteration Nonlinear Model Predictive Control for Wave Energy Converters**
 » Dr. Christopher Vega Sánchez (Costa Rica)¹, [Dr. Juan Luis Guerrero-Fernandez](#) (Costa Rica)¹, Prof. Julio César Rojas Gómez (Costa Rica)¹ (1. Costa Rica Institute of Technology)

14:45 **Present and Future of Power Take-off (PTO) in Wave Energy Converters**
 » [Dr. Marcos Lafoz](#) (Spain)¹, Dr. Marcos Blanco (Spain)¹, Mr. Eduardo Rausell (Spain)¹, Dr. Jorge Nájera (Spain)¹, Dr. Luis García-Tabarés (Spain)¹ (1. Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT))

15:15 **Coffee Break and Networking**

15:45 **Tidal Energy**
 Chaired by: Ray Pieroway (Canada)

15:45 **Numerical Study of the Impact of Bay of Fundy Representative Turbulent Tidal Flow on a Tidal Turbine using Detached Eddy Simulation**
 » [Mr. Abiola Akinnibosun](#) (Canada)¹, Dr. Dominic Groulx (Canada)¹ (1. Mechanical Engineering / Dalhousie University)

16:00 **Numerical Modelling of Wake Behaviour and Performance of a Horizontal Axis Tidal Turbine Under Seabed Effects**
 » [Ms. Kenzie Lewis](#) (Canada)¹, Dr. Dominic Groulx (Canada)¹, Dr. Benjamin Williamson (United Kingdom)² (1. Mechanical Engineering / Dalhousie University, 2. Environmental Research Institute, University of the Highlands and Islands)

16:15 **Modeling and Predicting the Energy Harvesting in Oscillating Foil Arrays**
 » [Dr. Bernardo Luiz Rocha Ribeiro](#) (Brazil)¹, Dr. Jennifer Franck (United States)² (1. University of Campinas, 2. University of Wisconsin-Madison)



Continued from **Tuesday, 14 April**

- 16:30 **Evaluation of Turbulence Modelling Approaches for Tidal Turbine Wake Predictions**
 » Dr. Song Fu (United Kingdom)¹, Mr. Richard Sey (United Kingdom)², Dr. Dernis Mediavilla (United Kingdom)³, Mrs. Stephanie Ordóñez Sanchez (United Kingdom)⁴ (1. ESRU, Department of Mechanical and Aerospace Engineering, University of Strathclyde, 2. European Marine Energy Centre, 3. The European Marine Energy Centre, 4. University of Strathclyde)
- 16:45 **Assessment of Tidal Energy Generation Potential: Feasibility Studies in São Marcos Bay**
 » Dr. Diego Leonardo Santos Cosme (Brazil)¹, Prof. Osvaldo Ronald Saavedra (Brazil)¹, Prof. Ramiro Gustavo Ramirez Camacho (Brazil)², Prof. Felipe Mendonça Pimenta (Brazil)³, Prof. Arcilan Trevenzoli Assireu (Brazil)² (1. Federal University of Maranhão, 2. Federal University of Itajubá, 3. Federal University of Santa Catarina)
- 15:45 **Multi-Resource 1**
 Chaired by: Dana Morin
- 15:45 **RENEWABLE ENERGY GENERATION FOR CAIÇARA COMMUNITIES THROUGH RIP CURRENTS**
 » Mr. Rafael Apolinário (Brazil)¹ (1. Universidade Católica de Petropolis)
- 16:00 **Hydrodynamic Analysis of a Multi-Column Semi-Submersible Platform for Floating Photovoltaic Systems**
 » Mr. XUGUANG YANG (Brazil)¹, Mr. Vagner Luiz de Jesus Marques (Brazil)¹, Dr. Lucas Do Vale Machado (Brazil)¹, Prof. Milad Shadman (Brazil)², Prof. Segen Farid Estefen (Brazil)¹ (1. Offshore Renewable Energy Group- GERO - Ocean Engineering Department- COPPE, Federal University of Rio de Janeiro, 2. Federal University of Rio de Janeiro)
- 16:15 **Probabilistic modeling of logarithmic wind profiles in coastal plains for improving the assessment of wind energy resources**
 » Mr. Luis Pérez (Colombia)¹, Dr. Oscar Andres Alvarez Silva (Colombia)¹ (1. Universidad del Norte)

- 16:30 **Integrated Multi-Criteria Assessment of Marine Renewable Energy Suitability in Mexican Seas**
 » Dr. Hector Garcia Nava (Mexico)¹, Dr. Emiliano Gorr-Pozzi (Italy)², Dr. Paola Garduño (Mexico)³, Dr. Manuel Corrales-Gonzalez (Italy)⁴ (1. Instituto de Investigaciones Oceanológicas, UABC, 2. Politecnico di Torino, 3. Instituto de Ciencias del Mar y Limnología, 4. Politecnico di Torino)
- 16:45 **Resource Potential and Technical Feasibility of Offshore Wind and Tidal Stream Energy**
 » Mrs. Marianella Carbonell (United Kingdom)¹, Mrs. Stephanie Ordóñez Sanchez (United Kingdom)¹ (1. University of Strathclyde)
- 17:00 **Assessing the Operational Viability of Marine Renewable Energy Portfolios: A Predictive Framework for Pricing Climate Risk in OPEX**
 » Prof. Jorcelino Rinalde de Paulo (Brazil)¹, Prof. Thauan Santos (Brazil)² (1. Graduate Program in Maritime Studies at the Naval War College (EGN), Brazilian Navy (MB), 2. Graduate Program in Maritime Studies at the Naval War College (EGN) - Brazilian Navy (MB).)

19:30 **Gala Dinner**

Wednesday, 15 April

- 08:30 **Keynote - Joint Session with the Environmental Interactions of Marine Energy (EIMR) Conference**
- 09:30 **Coffee Break and Networking**
- 10:00 **OTEC**
 Chaired by: Diego Acevedo (Aruba)



Continued from **Wednesday, 15 April**

10:00 **Prospective analysis of the potential for harnessing energy through ocean thermal gradients in Costa Rica.**

» Mr. Pablo Mora Cespedes (Costa Rica)¹, Dr. José Rodrigo Rojas Morales (Costa Rica)², Dr. Alberto Díaz Tey (Costa Rica)¹, Dr. Rodney Mora Escalante (Costa Rica)¹ (1. University of Costa Rica, 2. Universidad Nacional, UNA, Costa Rica)

10:15 **Comparing Ocean Thermal Energy Conversion to Conventional Renewable Energy Technologies for Offshore Applications**

» Mr. Dan Grech (United Kingdom)¹, Mr. Ben Martin (Japan)¹, Mr. Peter Simpson (Brazil)², Mr. Bulent Mercan (United States)², Mr. Paul Jukes (United States)², Prof. Joel Sales Junior (Brazil)³ (1. Global OTEC, 2. 2H Offshore, 3. LOC/COPPE/UFRJ)

10:30 **ASSESSMENT OF THERMAL RESOURCES FOR OCEAN THERMAL ENERGY CONVERSION (OTEC) SYSTEMS IN THE CARIBBEAN SEA**

» Dr. Paola Garduño (Mexico)¹, Mr. Jesús Florido-Ortega (Mexico)², Dr. Yandy Rodríguez-Cueto (Mexico)³, Dr. Rodolfo Silva (Mexico)² (1. Instituto de Ciencias del Mar y Limnología-UNAM, 2. Instituto de Ingeniería-UNAM, 3. ProsperIA)

10:45 **Evaluation of the electrical power available for the OTEC (Ocean Thermal Energy Conversion) system in the Mexican Pacific Ocean**

» Dr. ALEJANDRO GARCÍA HUANTE (Mexico)¹, Dr. Yandy Rodríguez-Cueto (Mexico)², Dr. Paola Garduño Ruíz (Mexico)³, Dr. Juan Francisco Bárcenas Graniel (Mexico)⁴, Dr. Rodolfo Silva (Mexico)⁵ (1. Centro Mexicano de Innovación en Energía del Océano, 2. ProsperIA, 3. Instituto de Ciencias del Mar y Limnología-UNAM, 4. Universidad del Caribe, 5. Instituto de Ingeniería-UNAM)

11:00 **Estimation of drinking water through the OTEC (Ocean Thermal Energy Conversion) system for its use in coastal communities of the Mexican Pacific Ocean**

» Dr. ALEJANDRO GARCÍA HUANTE (Mexico)¹, Dr. Rodolfo Silva (Mexico)², Dr. Edgar Gerardo Mendoza Baldwin (Mexico)², Dr. Efraín Mateos Farfán (Mexico)³ (1. Centro Mexicano de Innovación en Energía del Océano, 2. Instituto de Ingeniería-UNAM, 3. Instituto Mexicano de Tecnología del Agua-IMTA)

11:15 **Multivariable Assessment of OTEC Cycles for Implementation as an Energy Alternative in Panama**

» Mr. Joaquin Ortega (Panama)¹, Prof. Guillermo López (Panama)¹ (1. Technological University of Panama)

11:30 **Opportunities and Challenges of Developing OTEC and SWAC for a Pacific Island**

» Dr. Andrea Copping (United States)¹, Mr. Charles Gunzel (United States)², Ms. Hayley Farr (United States)², Ms. Fleur De Peralta (United States)² (1. PNNL, 2. Pacific Northwest National Laboratory)

10:00 **Wave Energy 2**

Chaired by: Dr. Fabian Pierart (Chile)

10:00 **Numerical Investigation of Coupled Dynamics and Energy Performance in Hybrid Floating Offshore Wind Turbines with Integrated Oscillating Water Columns**

» Mr. Gabriel Machado (Brazil)¹, Dr. Ehsan Nikkhah (Brazil)¹, Prof. Milad Shadman (Brazil)², Prof. Carlos Levi (Brazil)², Prof. Segen Farid Estefen (Brazil)¹ (1. Offshore Renewable Energy Group-GERO - Ocean Engineering Department- COPPE, Federal University of Rio de Janeiro, 2. Federal University of Rio de Janeiro)

10:15 **Numerical Analysis of Waterline Effects on the Hydrodynamic Performance of an Articulated Attenuator-Type Wave Energy Converter**

» Mr. Brayan Bravo (Chile)¹, Dr. Fabian Pierart (Chile)², Dr. Alfred Cotten (United Kingdom)³ (1. Doctoral Program in Engineering, Macrofaculty UFRO-UBB-UTAL, University of Bío-Bío, Concepción Campus, Avenida Collao 1202, Concepción, Chile., 2. Universidad del Bío Bío, 3. Mocean Energy Ltd., Edinburgh, Scotland, United Kingdom)

10:30 **Analysis of Wave Energy Harvest for the System Integrating a Caisson with Side Opening and a WEC**

» Mr. Kuanting Yang (Taiwan, Province of China)¹, Prof. Wen-Yang Hsu (Taiwan, Province of China)¹, Prof. Jiahn-Horng Chen (Taiwan, Province of China)¹ (1. National Taiwan Ocean University)



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- 10:45 **Results from CorPower Ocean's Full Scale C4 Wave Energy Converter First Deployment and Opportunities in the Americas**
 » [Mr. Matthew Dickson](#) (Sweden)¹, Mrs. Shona Pennock (United Kingdom)¹ (1. CorPower Ocean)
- 11:00 **Spectral analysis of ocean waves across the Atlantic-Caribbean region**
 » [Dr. Kevin Lemessy](#) (Trinidad and Tobago)¹ (1. Antillia MRE)
- 11:15 **Experimental investigation on wave powered ferro-fluid sloshing power take-off using dual hydrofoil floating body in front of seawall**
 » Mr. Appandairaj R (India)¹, [Dr. Vijay KG](#) (India)¹ (1. Indian institute of technology madras)
- 11:30 **Mitigating Frequency Variations from Wave Energy Converters (WEC) through Battery Energy Storage Systems (BESS) in Isolated Power Plants**
 » [Prof. Thiago Americano](#) (Brazil)¹, Mr. Paolo Erazo (Brazil)², Mr. Vinicius Fernandes Sant'anna (Brazil)², Dr. Emanuel Leonardus van Emmerik (Brazil)², Prof. Walter Issamu Suemitsu (Brazil)², Prof. Robson Francisco da Silva Dias (Brazil)² (1. CEFET/RJ and COPPE/UFRJ, 2. COPPE/UFRJ)
- 12:15 **Lunch**
- 13:30 **Offshore Wind**
 Chaired by: Prof. Milad Shadman (Brazil)
- 13:30 **Comparative performance and fatigue analysis of a 15 MW floating offshore wind turbine in Mexico's Gulf of Tehuantepec and the North Sea**
 » [Dr. Diego Canul-Reyes](#) (Mexico)¹, Dr. Antonio Jarquin Laguna (Netherlands)², Dr. Abbas Kazemi Amiri (United Kingdom)³, Dr. Osvaldo Rodríguez Hernández (Mexico)¹ (1. Universidad Nacional Autónoma de México, 2. Delft University of Technology, 3. University of Strathclyde)

- 13:45 **Overcoming The Challenges of Offshore Wind Development with an innovative, large capacity installation and maintenance method**
 » [Mr. Kent Johnson](#) (United States)¹, Dr. Andres Garcia (United States)¹ (1. CLS Wind)
- 14:00 **The Effect of Heave Plate Configuration on Hydrodynamic Performance of Floating Offshore Wind Turbine Platform**
 » [Dr. Ehsan Nikkhah](#) (Brazil)¹, Prof. Milad Shadman (Brazil)², Prof. John H. Chujutalli (Brazil)¹, Prof. Mojtaba Mali Amiri (Brazil)¹, Prof. Segen Farid Estefen (Brazil)¹ (1. Offshore Renewable Energy Group- GERO - Ocean Engineering Department- COPPE, Federal University of Rio de Janeiro, 2. Federal University of Rio de Janeiro)
- 14:15 **FROM DATA TO CLIMATE ACTION: A DATA-DRIVEN ANALYTICAL APPROACH FOR DECISION-MAKING IN OFFSHORE WIND PROJECTS ADAPTED TO THE COLOMBIAN CARIBBEAN**
 » [Ms. Martha Bastidas-Salamanca](#) (Colombia)¹, Dr. Carlos Robles-Algarin (Colombia)¹ (1. Universidad del Magdalena)
- 14:30 **Offshore Wind Energy: Site Assessment and Selection in the Baja California Peninsula**
 » [Ms. Mayra Guadalupe Arredondo Gámez](#) (Mexico)¹, Dr. Hector García Nava (Mexico)¹, Dr. Osvaldo Rodríguez Hernández (Mexico)², Dr. Alejandro Lambert Arista (Mexico)³ (1. Instituto de Investigaciones Oceanológicas, UABC, 2. Universidad Nacional Autónoma de México, 3. Universidad Autónoma de Baja California)
- 14:45 **Numerical and experimental análisis of hydrodynamic response of a floating wind platform designed for the Chilean coast**
 » Mr. Vicente Barrientos (Chile)¹, [Dr. Cristian Cifuentes](#) (Chile)¹, Prof. Gonzalo Tampier (Chile)¹, Dr. Federico Zilic de Arcos (United Kingdom)² (1. Universidad Austral de Chile, 2. University of Oxford)
- 15:00 **An Integrated Parametric Optimization Framework for Early-Stage Design of FOWT Substructures and Mooring Systems**
 » [Dr. Lariuss Zago](#) (Brazil)¹, Dr. Jordi Mas-Soler (Brazil)¹, Dr. Pedro Cardoso de Mello (Brazil)¹, Dr. João Vicente Sparano (Brazil)¹, Dr. Alexandre Nicolaos Simos (Brazil)¹ (1. University of São Paulo (USP))



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15:15 **Comprehensive Metocean Dataset for Offshore Wind Projects over Brazil and Uruguay**

» [Mr. Gabriel de Carvalho](#) (Brazil)¹, Dr. Renan Ribeiro (Brazil)¹, Mr. Pedro Santos (Denmark)², Mr. Palle Martin Jensen (Denmark)², Mrs. Sara Jackson (Denmark)² (1. DHI Water & Environment Inc, 2. DHI A/S)

13:30 **Multi-Resource 2**

Chaired by: Arielle Cardinal (United States)

13:30 **PRIMRE: Improving Access to Marine Energy Data and Information Internationally**

» Ms. Hayley Farr (United States)¹, Mr. Jonathan Weers (United States)², Mr. Jonathan Whiting (United States)¹, Dr. Cesar Castillo (United States)³, [Dr. Andrea Copping](#) (United States)¹, Dr. Lysel Garavelli (United States)¹ (1. Pacific Northwest National Laboratory, 2. National Laboratory of the Rockies, 3. Sandia National Laboratories)

13:45 **Evaluation of a Bulb Turbine for a Barrage-Type Tidal Power Plant in Buenaventura, Colombia**

» [Mr. Alvaro Salazar](#) (Colombia)¹, Dr. Juan Gabriel Rueda Bayona (Colombia)¹ (1. Universidad del Valle)

14:00 **Optimal Design and Operation of Gates for a Tidal Power Plant in Buenaventura, Colombia**

» [Ms. FAIVER ESTIVEN MINGAN BRAVO](#) (Colombia)¹, Dr. Juan Gabriel Rueda Bayona (Colombia)² (1. UNIVALLE, 2. Universidad del Valle)

14:15 **Wind Predictability Using Physics-Informed Neural Networks (PINNs) in the Búzios Field, Santos Basin**

» [Ms. Daniela Correa](#) (Brazil)¹, Prof. Milad Shadman (Brazil)¹ (1. Federal University of Rio de Janeiro)

14:30 **Wind-BESS sizing methodology with seasonal SoC management to minimize subsea injection pump shutdowns**

» [Dr. Luciane Agnoletti dos Santos Pedotti](#) (Brazil)¹, Dr. Renato Machado Monaro (Brazil)¹, Dr. Mauricio Barbosa de Camargo Salles (Brazil)¹, Dr. Alexandre Nicolaos Simos (Brazil)¹, Dr. Jordi Mas-Soler (Brazil)¹ (1. University of São Paulo (USP))

14:45 **Shared Mooring System Anomaly Detection Using Artificial Neural Network Based Autoencoder**

» [Dr. Ehsan Nikkhah](#) (Brazil)¹, Prof. Milad Shadman (Brazil)², Prof. Segen Farid Estefen (Brazil)¹ (1. Offshore Renewable Energy Group- GERO - Ocean Engineering Department- COPPE, Federal University of Rio de Janeiro, 2. Federal University of Rio de Janeiro)

15:00 **Multicriteria decision analysis for the implementation of ocean energy in Panama considering: energy potential, efficiency,**

» [Prof. Guillermo López](#) (Panama)¹, Prof. Jorge Chen (Panama)², Mr. Joaquin Ortega (Panama)¹ (1. Technological University of Panama, 2. Universidad Tecnológica de Panamá)

15:30 **Coffee Break and Networking**

16:00 **Closing Plenary**