

| Thursday September 7  |  |                       |   |  |                                    |             |             |
|---|--|-----------------------|---|--|------------------------------------|-------------|-------------|
| Registration<br>(Main Hall)   |  |                       |   |  |                                    |             |             |
| 08:00-09:00   |  |                       |   |  |                                    |             |             |
| Oral presentations  | Room /Track  | Chairman              | Paper ID  | Title  | Presenter                          |             |             |
|   | Laboa/<br>Grid integration, power take-off and control   | Joao Henriques        | 472   | A time domain approach for the optimal control of wave energy converter arrays   | Mohamed Shabara                    | 09:00-09:15 |             |
|   |  |                       | 493   | Optimisation of Air turbines for OWC Wave Energy Converters: Sensitivity of Realistic Wave Climates  | Andar Zarketa-Astigarra            | 09:15-09:30 |             |
|   |  |                       | 500   | Integrated hydrodynamic-electrical hardware model for wave energy conversion with M4 ocean demonstrator  | Judith Apsley                      | 09:30-09:45 |             |
|   |  |                       | 409   | On data-based control-oriented modelling applications in wave energy systems   | Edoardo Pasta                      | 09:45-10:00 |             |
|   |  |                       | 592   | The Performance evaluation of 30kW class OWC wave power plant integrated with breakerwater   | Kilwom Kim                         | 10:00-10:15 |             |
|   |  |                       | 161   | Investigation on the extreme peak mooring force distribution of a point absorber wave energy converter with and without a survivability control system | Zahra Shahrooz                     | 10:15-10:30 |             |
|   | Arriaga/<br>Wave resource characterization   | Pasquale Contestabile | 140   | Analysis of the North Atlantic offshore energy flux from different reanalysis and hindcasts  | Matias Alday                       | 09:00-09:15 |             |
|   |  |                       | 175   | Wave Spectral Analysis for designing Wave Energy Converters  | Jesus Portilla-Yandun              | 09:15-09:30 |             |
|   |  |                       | 275   | Long term wave load trends against offshore monopile structures: A case study in the Bay of Biscay   | Nahia Martinez-Irujo               | 09:30-09:45 |             |
|   |  |                       | 279   | Numerical modelling of wave and tidal current interactions and their impact on wave converters   | Tian Tan                           | 09:45-10:00 |             |
|   |  |                       | 205   | On the errors in annual energy yield estimation due to monodirectional wave spectra assumption   | Giulia Cervelli                    | 10:00-10:15 |             |
|   |  |                       | 305   | Validation of ERA5 Wave Energy Flux through Sailor diagram in Spain (2005-2014)  | Jon Saenz                          | 10:15-10:30 |             |
|   | Oteiza/<br>Economical, social, legal and political aspects of ocean energy                                       | Pablo Ruiz-Minguela   | 154   | Do recent renewable energy policy changes in Ireland satisfy the requirements of a nascent wave energy technology development sector?                  | Carrie Anne Barry                  | 09:00-09:15 |             |
|   |  |                       | 157   | Integration of wave energy into Energy Systems: an insight to the system dynamics and ways forward   | George Lavidas                     | 09:15-09:30 |             |
|   |  |                       | 306   | Can Risk-Based Approaches benefit future Marine Renewable Energy deployment, planning and consenting processes?  | Emma Verling                       | 09:30-09:45 |             |
| 351   |  |                       | Towards increased social acceptability of marine renewable energy | Niall P. Dunphy  | 09:45-10:00                        |             |             |
| 362   | Environmental Effects of MRE: Advancing the Industry through Broad Outreach and Engagement                       | Mikaela Freeman       | 10:00-10:15   |  |                                    |             |             |
| 397   | Informing development of a socioeconomic data collection toolkit for marine energy: a literature review          | Deborah Rose          | 10:15-10:30   |  |                                    |             |             |
| Refreshments, networking & posters exhibition (Terrace and Chillida room) |  |                       |   |  |                                    |             |             |
| 10:30-11:00   |  |                       |   |  |                                    |             |             |
| Oral presentations  | Room /Track  | Chairman              | Paper ID  | Title  | Presenter                          |             |             |
|   | Baroja/<br>Wave device development and testing   | Urko Izquierdo        | 453   | The Impact of Uncertainty on the Control of a Multi-Axis Wave Energy Converter   | Carrie Hall                        | 11:00-11:15 |             |
|   |  |                       | 531   | Spectral control co-design of wave energy converter array layout   | Yerai Peña-Sanchez                 | 11:15-11:30 |             |
|   |  |                       | 548   | A new seawater low-head turbine for the OBREC  | Pasquale Contestabile              | 11:30-11:45 |             |
|   |  |                       | 549   | Experimental investigation on the hydrodynamic performance of a pile-supported OWC-type breakerwater   | Yusuf Almalki                      | 11:45-12:00 |             |
|   |  |                       | 661   | Weight Reduction Methodologies for Wave Energy Devices: A Structural Analysis Approach   | Michael O'Shea                     | 12:00-12:15 |             |
|   |  |                       |   |  |                                    |             | 12:15-12:30 |
|   | Laboa/<br>Grid integration, power take-off and control   | Eider Robles          | 215   | Wave Farms Integration in a 100% renewable isolated small power system -frequency stability and grid compliance analysis                               | Marcos Blanco                      | 11:00-11:15 |             |
|   |  |                       | 309   | Wave-to-Wire Control of an Oscillating Water Column Wave Energy System Equipped with a Wells Turbine   | Marco Rosati                       | 11:15-11:30 |             |
|   |  |                       | 510   | Maximizing Wave Energy Converter Power Extraction by Utilizing a Variable Negative Stiffness Magnetic Spring   | Jeff T. Grasberger                 | 11:30-11:45 |             |
|   |  |                       | 561   | Development of control strategies for novel systems of a full scale OWC for the WEDUSEA project  | James Kelly                        | 11:45-12:00 |             |
|   |  |                       | 346   | Enhancing energy system resilience using tidal stream energy   | Danny Coles                        | 12:00-12:15 |             |
|   |  |                       | 551   | Analysis of Ocean Energy Integration in Ibero-American Electric Grids  | Marcos Lafoz                       | 12:15-12:30 |             |
|   | Arriaga/<br>Wave resource characterization   | Jesús M. Blanco       | 529   | Impact of Resource Uncertainties on the Design of Wave Energy Converters   | Markel Peñaalba                    | 11:00-11:15 |             |
|   |  |                       | 539   | Discussions on Wave energy period in higher wave energy potential marine waters of Taiwan  | Shiao-Yih Tang                     | 11:15-11:30 |             |
|   |  |                       | 159   | Internal waves: a potentially untapped marine energy resource  | Kastubha Raghukumar                | 11:30-11:45 |             |
|   |  |                       | 197   | Feasibility of wave energy harvesting in the Ligurian Sea  | Manuel Alejandro Corrales-Gonzalez | 11:45-12:00 |             |
|   |  |                       | 378   | Identification of optimal sites for the deployment of wave energy converters: the importance of a technology-centred approach                          | Ricardo Novo                       | 12:00-12:15 |             |
|   |  |                       | 558   | Operating and Extreme weather conditions for testing Offshore Devices at Marine Renewable Energy Lab (MaRELab)   | Pasquale Contestabile              | 12:15-12:30 |             |
|   | Oteiza/<br>Economical, social, legal and political aspects of ocean energy                                       | Peter Frigaard        | 398   | Techno-economic analysis of marine hybrid clusters in two potential Latin American markets   | Emilian Gorr-Pozzi                 | 11:00-11:15 |             |
|   |  |                       | 399   | Techno-economic optimization of an offshore hybrid power system: Argentine Basin case study  | Sarah Palmer                       | 11:15-11:30 |             |
|   |  |                       | 452   | Ensuring Resilience in Ocean Energy Power Plants: A Survey of Cybersecurity Measures   | Thalita Nazare                     | 11:30-11:45 |             |
|   |  |                       | 340   | On the complementarity of wave, tidal, wind and solar resources in Ireland   | Hafiz Ashan Said                   | 11:45-12:00 |             |
|   |  |                       | 335   | A Comparison of the European Regulatory Framework for the deployment of Wave Energy Converters   | Claudio Moscoloni                  | 12:00-12:15 |             |
|   |  |                       |   |  |                                    | 12:15-12:30 |             |
| Lunch & posters exhibition (Terrace and Chillida room)                    |  |                       |   |  |                                    |             |             |
| 12:30-14:00   |  |                       |   |  |                                    |             |             |
| Oral presentations  | Room /Track  | Chairman              | Paper ID  | Title  | Presenter                          |             |             |
|   | Baroja/<br>Wave device development and testing   | Tony Lewis            | 350   | Performance enhancement of pitching WECs via oscillating water columns technology  | Marco Fontana                      | 14:00-14:15 |             |
|   |  |                       | 357   | Numerical investigation of the energy performance of a wave energy converter comprising a multi-body power take-off                                    | Félix Elefant                      | 14:15-14:30 |             |
|   |  |                       | 395   | Hybrid wind-wave systems: The case of the VoltumUS-S semi-submersible platform   | Maximilian Hengstmann              | 14:30-14:45 |             |
|   |  |                       | 439   | Analysis of the viability of a radial Double Decker Turbine for application in Oscillating Water Column devices  | Aito Vega-Valladares               | 14:45-15:00 |             |
|   |  |                       | 445   | An Early Design Phase Method for Characterizing and Comparing Wave Energy Converter Archetypes   | Aeron Roach                        | 15:00-15:15 |             |
|   | Arriaga/<br>Wave resource characterization   | Jose L. Villate       |   |  |                                    |             | 15:15-15:30 |
|   |  |                       | 564   | Upsampling wave temporal resolution: Investigating wave parameters and the influence on WEC power performance  | Hannah Mankie                      | 14:00-14:15 |             |
|   |  |                       | 619   | On spatial interpolation of ocean energy source variables: A comparative analysis  | Leonardo Gambarelli                | 14:15-14:30 |             |
|   |  |                       | 584   | Numerical Study on Overlapping Performance of Multi-stage Overlapping Wave Energy Converters   | Guoliang Zhang                     | 14:30-14:45 |             |
|   |  |                       | 475   | The application of temporal gating in the measurement of response amplitude operators  | Ben Cazzolato                      | 14:45-15:00 |             |
|   |  |                       | 310   | Analysis of the impact of floater interactions on the power extraction of a dense WEC array with adaptable nonlinear PTO                               | Alva Bechlenberg                   | 15:00-15:15 |             |
|   | Oteiza/<br>Economical, social, legal and political aspects of ocean energy                                       | James Benhin          | 483   | New design options for the improvement of the Muviku power plant   | Urko Izquierdo                     | 15:15-15:30 |             |
|   |  |                       | 507   | Ocean Energy: Markets – Currency – Impact. Dimension of & Choices in the Technology Development Stage  | Jochem Weber                       | 14:00-14:15 |             |
|   |  |                       | 223   | Using human-centered design to develop a national research landscape for marine energy in the United States  | Samantha Quinn                     | 14:15-14:30 |             |
|   |  |                       | 385   | Choosing Wave Energy Devices for Community Led Marine Energy Development   | Molly Gear                         | 14:30-14:45 |             |
| 388   | A Socioeconomic, Environmental, and Regulatory Assessment for Current Energy Converter Technologies              | Dominic Forbush       | 14:45-15:00   |  |                                    |             |             |
| 413   | Forecasting wind and wave energy technologies: applications, synergies and role in decarbonization in Portugal   | Craig White           | 15:00-15:15   |  |                                    |             |             |
| 436   | Wave energy communication and social opposition: can we improve perception of ocean energy development projects? | Maria C. Uyarra       | 15:15-15:30   |  |                                    |             |             |
| Closing ceremony  | Mixelena Auditorium  | Jesús M. Blanco       | Local Committee   | 15:40-15:45  |                                    |             |             |
|   |  | Jose L. Villate       | Local Committee   | 15:45-15:50  |                                    |             |             |
|   |  | Iñigo Ansolu          | Chair EVE   | 15:50-15:55  |                                    |             |             |
|   |  | Bruce Cameron         | Chair PAMEC 2024  | 15:55-16:00  |                                    |             |             |
|   |  | C H Jo                | Chair AWTEC 2024  | 16:00-16:05  |                                    |             |             |
|   |  | Cameron Johnstone     | EWTEC Executive Board   | 16:05-16:10  |                                    |             |             |
|   |  | Luis Gato             | IST Lisbon (Chair of EWTEC25)                                     | 16:10-16:15  |                                    |             |             |
| Social programme  | Technical visits:<br><br>Option 1: MUTRIKU<br><br>Option 2: BIMEP  |                       |   |  |                                    | 16:30-20:30 |             |
|   | (Executive Board Meeting and Dinner)   |                       |   |  |                                    | 21:00-22:30 |             |