

PRELIMINARY PROGRAMME **for the 15th European Wave &** **Tidal Energy Conference**

BILBAO 
3rd -7th SEPTEMBER 2023

	Day 1 Sunday September 3	Day 2 Monday September 4	Day 3 Tuesday September 5				Day 4 Wednesday September 6				Day 5 Thursday September 7				Day 6 Friday September 8				
08:00-08:30	Bus departure to Getxo Regatta	Registration (Main Hall)	Registration (Main Hall)				Registration (Main Hall)				Registration (Main Hall)					08:00-08:30			
08:30-09:00			Registration (Main Hall)				Registration (Main Hall)				Registration (Main Hall)					08:30-09:00			
09:00-09:30			Oral presentation WDD	Oral presentation TDD	Oral presentation WHM	Oral presentation THM	Oral presentation WDD	Oral presentation TDD	Oral presentation TRC	Oral presentation EIA		Oral presentation GPC	Oral presentation WRC	Oral presentation ESP		09:00-09:30			
09:30-10:00																09:30-10:00			
10:00-10:30	Regatta La mar en calma Sailing School in Getxo (10:00-15:00h)	Opening Ceremony (Mixelena Auditorium)	Refreshments, networking & posters exhibition (Terrace and Chillida room)												Social programme Guided tour through the river by BILBOATS	10:00-10:30			
10:30-11:00														10:30-11:00					
11:00-11:30		Keynote lectures + JRL-ORE (Mixelena Auditorium)	Oral presentation WDD	Oral presentation TDD	Oral presentation WHM	Oral presentation THM	Oral presentation WDD	Oral presentation TDD	Oral presentation TRC		Oral presentation WDD	Oral presentation GPC	Oral presentation WRC	Oral presentation ESP		11:00-11:30			
11:30-12:00														11:30-12:00					
12:00-12:30																12:00-12:30			
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14:00-14:30		Oral presentation WHM	Oral presentation ONM	Oral presentation SMM	Oral presentation GPC	Oral presentation WDD	Oral presentation TDD	Oral presentation WHM	Oral presentation THM	Oral presentation WDD		Oral presentation TRC	Oral presentation EIA	Oral presentation WDD			Oral presentation WRC	Oral presentation ESP	14:00-14:30
14:30-15:00		Bus returning to Bilbao														14:30-15:00			
15:00-15:30		Refreshments, networking & posters exhibition (Terrace and Chillida room)												Closing Ceremony				15:00-15:30	
15:30-16:00																		15:30-16:00	
16:00-16:30		Side event 1	Side event 2	Side event 3		Side event 4	Side event 5	Side event 6		Side event 7	Side event 8	Side event 9		Technical visits: Option 1: MUTRIKU Option 2: BIMEP	16:00-16:30				
16:30-17:00															16:30-17:00				
17:00-17:30													17:00-17:30						
17:30-18:00	2 Buses departing to Olatua Building Getxo Cruise Terminal every 30 minutes (around 6 buses)	Oral presentation WHM	Oral presentation SMF	Oral presentation SMM	Oral presentation GPC	Oral presentation WDD		Oral presentation WHM	Oral presentation THM						17:30-18:00				
18:00-18:30	Welcome Reception (Olatua Building Getxo Cruise Terminal)					Technical Committee Meeting (Elhuyar room)									18:00-18:30				
18:30-19:00															18:30-19:00				
19:00-19:30															19:00-19:30				
19:30-20:00															19:30-20:00				
20:00-20:30	Registration available	Social programme Pintxos Route				(Track Directors Dinner)				Opening of the galleries of the Museum (exclusive for Delegates)				(Executive Board Meeting and Dinner)	20:00-20:30				
20:30-21:00															20:30-21:00				
21:00-21:30															21:00-21:30				
21:30-22:00															21:30-22:00				
22:00-22:30	All Buses returning to Bilbao													Gala Dinner (Atrium of the Guggenheim Museum)		22:00-22:30			
22:30-23:00	<div>15th ewtec 2023 European Wave and Tidal Energy Conference Series</div>														22:30-23:00				
23:00-23:30	<div>BILBAO 3rd -7th SEPTEMBER 2023</div>														23:00-23:30				

Colour code:	Olatua Building	Mitxelena (440 pax)	Main Hall	Barandiarán (16 pax)	Elhuyar (24 pax)	Chillida (220 m2)	Oteiza (60 pax)	Terrace (800+400 m2)	Baroja (160 pax)	Laboa (110 m2)	Arriaga (60 pax)
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Important Note: The Organizing Committee of the EWTEC'23 reserves the right to modify this program at any time according to the circumstances

Tuesday September 5							
Registration (Main Hall)						08:00-09:00	
	Room /Track	Chairman	Paper ID	Title	Presenter		
Oral presentations	Baroja/ Wave device development and testing	Diego Vicinanza	138	Analysis of Mutlu's OWC performance	Isabel Casas	09:00-09:15	
			144	Successful innovation strategies to overcome the technical challenges in the development of wave energy technologies	Pablo Ruiz-Minguela	09:15-09:30	
			266	Spatial focussing of wave energy for improved power capture by an oscillating water column	Robert Mayon	09:30-09:45	
			352	Reliability of Robustness and Uncertainties Analysis in the Optimal Design of Wave Energy Converters	Filippo Giordano	09:45-10:00	
			178	Tuning Wave Energy Converters to local wave conditions	Wilson Guachaman-Azoro	10:00-10:15	
			496	Enabling the Ocean Internet of Things with Renewable Marine Energy	Matthew Topper	10:15-10:30	
	Laboa/ Tidal device development and testing	Stephanie Ordoñez-Sánchez	166	Integrate Active Blade Pitch Control for Cross-Flow Tidal Turbines Using Embedded Electric Drive Systems	Zhao Zhao	09:00-09:15	
			209	Numerical optimisation of the active lift turbines using OpenFOAM's oswat method	Ian Robin	09:15-09:30	
			231	Non-dimensional scaling of passive adaptive blades for a marine current turbine	Katherine Van Ness	09:30-09:45	
			264	Optimal Design of a Submerged Tidal Device for Low Current Environment	Seoung-won Jeong	09:45-10:00	
			343	Designing Vortex Generators for Tidal Turbine Blades	George Papadakis	10:00-10:15	
	Arriaga/ Wave hydrodynamic modelling	Gareth Thomas	317	Verification and validation of ModHydro - A free simulation tool for modelling moored MRE devices	Johannes Palm	09:00-09:15	
			521	A hybrid linear potential flow - machine learning model for enhanced prediction of WEC performance	Claes Eskilsson	09:15-09:30	
			476	Design Wave analysis of the M wave energy converter device	Orlaine Lynggaard Hansen	09:30-09:45	
			497	Hydrodynamic studies of a 15 MW semi-submersible PTO to assess the suitability of the inclusion of a damper system	Yu Gao	09:45-10:00	
			145	On the state-of-the-art of CFD simulations for wave energy converters within the open-source numerical framework of HAWC2	Aljondro Crespo	10:00-10:15	
			168	A Study on Wave Energy Converter Problem of Turbine-Integrated OWC Chamber	Jenny Seok Kim	10:15-10:30	
	Oleiza/Tidal hydrodynamic modelling	Tim O'Doherty	503	Large-eddy simulations of interaction between surface waves and a tidal turbine wake in a turbulent channel	Tim Stallard	09:00-09:15	
			195	Actuator-Line CFD Simulation of Tidal-Stream Turbines in a Compact Array	David Aspey	09:15-09:30	
218			High-fidelity modelling of a vertical axis tidal turbine model under realistic flow conditions	Mikael Grondreau	09:30-09:45		
307			Synthetic eddy generation and modelling of turbine operation in a turbulent tidal flow	Francesco Salvatore	09:45-10:00		
367			A study on tidal rotors under the combined effects of currents and waves using actuator-line CFD simulations	Federico Zili de Arcos	10:00-10:15		
334			Impact of lateral turbine spacing on the performance of a multi-rotor tidal energy device	Bryn Townley	10:15-10:30		
Refreshments, networking & posters exhibition (Terrace and Chillida room)					10:30-11:00		
Oral presentations			Baroja/ Wave device development and testing	Claes Eskilsson	197	Experimental evaluation of phase and velocity control for a cycloidal wave energy converter	Andrei Ermakov
	169	Wave Energy Power Take-off Validation with a Hydraulic Actuated Rotary Dynamometer and a Bi-directional High-power DC Busbar: Methods for validating wave energy converter mechanical and electrical power conversion systems			Casey Nichols	11:15-11:30	
	212	A Removable elevated-chimney wave generator for testing marine energy devices			Pedro Lomonaco	11:30-11:45	
	293	Wave energy converter power take-off characterisation: comparing dynamometer and field data			Curtis Rusch	11:45-12:00	
	446	Limiting the available pneumatic power in a U-OWC			Joao Henriques	12:00-12:15	
	499	HAWC2M: Two Rapid Prototyping Environments for Wave Energy Control	Alexandra Price	12:15-12:30			
	Laboa/ Tidal device development and testing	Alberto Peña	285	A methodology for developing a prediction model for the remaining fatigue life and residual strength of tidal turbine blades	Tenir Rangan Munawera Thandiraj	11:00-11:15	
			177	Multi-Actuator Full-Scale Fatigue Test of a Tidal Blade	Sergio Lopez Dubon	11:15-11:30	
			203	Experimental techniques for evaluating the performance of high-stroke cross-flow turbine arrays	Ardan Hunt	11:30-11:45	
			277	Observations from structural testing of full-scale tidal turbine blades	William Finnegan	11:45-12:00	
			322	Experimental flow conditions effects on a bottom-mounted ducted twin vertical axis tidal turbine compared to real sea conditions	Martin Moreau	12:00-12:15	
	Arriaga/ Wave hydrodynamic modelling	Markel Peñaalba	498	Experimental comparison of the flow-induced loading between a ducted bottom-mounted twin vertical axis tidal turbine at still and in uniform currents	Saouli	12:15-12:30	
			496	Dynamic Simulation of Wave Power Absorbers Connected by a Common Floating Platform	Thiago Sakamaki Hatake	11:00-11:15	
			628	Hydrodynamic and Static Stability Analysis of a Hybrid Offshore Wind-Wave Energy Converter: An Expansion of Semi-discrete Floating Wind Turbine Concept	Payam Aboulkhalil	11:15-11:30	
			626	Study on Large Eddy Simulations of energy dissipation due to bedrock flow in wave overlapping	Claudio Sandoval	11:30-11:45	
			383	Nonlinear WEC modelling using Sparse Identification of Nonlinear Dynamics (SINDy)	Billy-Lyn	11:45-12:00	
Oleiza/Tidal hydrodynamic modelling	Gustavo Eskilsson	392	Nominal and Experimental Characterisation of Rotational Floating Body Drag	Bryson Robertson	12:00-12:15		
		490	A development and validation of the software hydrodynamics code and the PTO software for TADIS wave energy converter	David Ogden	12:15-12:30		
		416	A turbines module adapted to the marine site for total farms layout optimization	Mikol Pucci	11:00-11:15		
		442	High-fidelity modelling of a six-turbine tidal array in the Shetlands	Pablo Otero	11:15-11:30		
		454	Instabilities in tidal turbine wakes	Anna Young	11:30-11:45		
		505	On the accuracy of BEMT and CFD on the power and trust prediction of tidal turbines	Ignacio Maria Viola	11:45-12:00		
		506	The performance of counter-rotating tidal turbine in different sea states	Cameron Johnstone	12:00-12:15		
		544	Comparison of Actuator Line Modelling of Tidal Power Kites with ADCP Measurements	Nomai Prabahar	12:15-12:30		
		Lunch & posters exhibition (Terrace and Chillida room)					12:30-14:00
		Oral presentations	Baroja/ Wave device development and testing	Yago Torre-Enciso	242	Experimental Investigation into the Air Compressibility Scaling Effect on OWC Performance and Wave Height	Andre F.L. Gomes
185	Enhancing the efficiency of an axial impulse turbine with a diffuser				Geetam Sahas	14:15-14:30	
260	Numerical performance assessment of a new wave energy conversion system				Andre F. L. Gomes	14:30-14:45	
522	Basin testing of the 1:2-1 M4 WEC				Hugh Wolgamot	14:45-15:00	
451	Experimental Investigation on Performance of Counter-rotating Impulse Turbine with Middle Vanes for Wave Energy Conversion				Kichiro Sato	15:00-15:15	
Laboa/ Tidal device development and testing	Daniel Coles		298	Design of an integrated generator and housing body	Nick Baker	15:15-15:30	
			343	Designing Vortex Generators for Tidal Turbine Blades	Marinos Manolesos	14:00-14:15	
			366	A two-scale blockage correction for an array of tidal turbines	Daniel Dehyrlov	14:15-14:30	
			365	Performance Assessment of a Multi-Rotor Floating Tidal Energy System	Nicholas Kaufmann	14:30-14:45	
			391	The Influence of the Downstream Blade Sweep on Cross-Flow Turbine Performance	Abigale Snorland	14:45-15:00	
Arriaga/ Wave hydrodynamic modelling	Sara Russo		420	Additive Manufacturing for Powering the Blue Economy Applications: A Tidal Turbine Blade Case Study	Miguel Gonzalez-Montijo	15:00-15:15	
			504	Design and Demonstration of a Passive Pitch System for Tidal Turbines	Stefano Gambuzzi	15:15-15:30	
			164	Wave Amplification Induced on Open Chamber Chambers for Wave Energy Conversion in Harbours with Multiple Energy Inputs	Jiahui-Hong Chen	14:00-14:15	
			313	System Identification for Modelling M4 Wave Energy Converter	Xueli Wang	14:15-14:30	
			198	Semi-analytical and CFD Simulations of a spherical floater	Spyridon Zafeiris	14:30-14:45	
Oleiza/Tidal hydrodynamic modelling	AbuBakr Bahaj		278	Special-Order Modelling of Wave Energy Converters as an Efficient Tool for Adjustment of PTO Model Parameters	Jian Tan	14:45-15:00	
		333	A multiparty analysis of a PTO WEC farm	Beatrice Balbi	15:00-15:15		
		536	Effects of control strategies on the performance of floating WEC point absorbers operating attached to a breakerbar by time-varying devices	Markos Bonavola	15:15-15:30		
		579	Experimental characterisation of the wake of a bottom-mounted two tandem of cylinders placed in a high velocity area	Alina Santa Cruz	14:00-14:15		
		676	Development of a modified BEMT model for the analysis of helical bladed vertical axis tidal turbines	Mohammad Fereidoonmehr	14:15-14:30		
		199	A comparative study of power production using a generic empirical model in a tidal farm	Kabir Bashir Sherif	14:30-14:45		
		282	Objective Functions for the Blade Shape Optimisation of a Cross-Flow Tidal Turbine under Constraints	Karla Ruiz-Husmann	14:45-15:00		
		293	Investigating the impact of multi-rotor structure shadowing on tidal stream turbine performance	Bryn Townley	15:00-15:15		
		501	A methodology to capture the single blade loads on a cross-flow tidal turbine farm model	Stefan Hoerner	15:15-15:30		
							15:30-16:00
Side events	Mixelena/Side event 4	SafeWAVE project (by AZTI / WavEC)				16:00-17:30	
	Baroja/Side event 5	Technology Performance Level Assessment (TPL) (by SANDIA LAB. -TPL TEAM-)				16:00-17:30	
	Arriaga/Side event 6	NEMMO Project, On the Cutting Edge of Tidal Blade Design and Materials (by Ocean Energy Europe)				16:00-17:30	
Oral presentations	Baroja/ Wave device development and testing	Luis Galo	318	A Novel Hybrid Floating Breakwater-Wave Energy Converter Device: Preliminary Experimental Investigations	Sara Russo	17:30-17:45	
			329	Original-adapted clam design for wave energy conversion	Jingyi Yang	17:45-18:00	
			555	The Geometrical Design of the U-shaped Oscillating Water Column Using Artificial Neural Network	Chen-Chou Lin	18:00-18:15	
			274	Maximizing the surge amplitude of a floater through an adaptable mooring lightning technique	Andreas Aslaks	18:15-18:30	
			516	Reliability and Cost Assessment of Critical Components: Electrical generator failure of IDOM wave energy converter	Julia Fernandez Chozas	18:30-18:45	
	Arriaga/ Wave hydrodynamic modelling	Jesús M. Blanco	269	Heterogeneous WEC array optimization using the Hidden Genetic Genetic Algorithm	Ossama Abdelkhalik	18:45-19:00	
			355	Numerical investigation of a new hybrid floating wind turbine concept	Beatrice Fenu	17:30-17:45	
			376	Quantification of uncertainty in linear wave energy hydrodynamic models from experimental data	Mahdiyeh Faragani	17:45-18:00	
			379	An overview of an experimental campaign for arrays of wave energy conversion systems	Nicolas Faedo	18:00-18:15	
			428	Solution verification of WECs: comparison of methods to estimate numerical uncertainties in the OES wave energy modelling task	Claes Eskilsson	18:15-18:30	
	Oleiza/ Tidal hydrodynamic modelling	Pablo Ruiz-Minguela	473	HydroChemo: An Open-Source Hydrodynamics Package for Project Chemo	David Ogden	18:30-18:45	
			474	Nonlinear hydrodynamics of a heaving sphere in diffraction, radiation, and combined tests	Jana Orszagova	18:45-19:00	
			497	Modelling the effects of boundary proximity on a tidal rotor using the actuator line method	Huw Edwards	17:30-17:45	
			464	Characterisation of turbulent flow and the wake of a tidal stream turbine in proximity to a ridge	Suleiman Huruhi	17:45-18:00	
			566	Tidal turbulence in medium depth water, primarily a model study	Göran Broström	18:00-18:15	
	Technical programme	Elthuyar	Technical Committee meeting				19:00-20:00
316			Verification and validation of blade-resolved viscous-flow tidal turbine simulations	Manuel Rentschler	18:15-18:30		
544			Comparison of Actuator Line Modelling of Tidal Power Kites with ADCP Measurements	Nomai Prabahar	18:30-18:45		
Social programme	Track Directors Dinner					20:00-22:00	

Wednesday September 6									
08:00-09:00	Registration (Main Hall)					08:00-09:00			
09:00-10:30	Oral presentations	Room /Track	Chairman	Paper ID	Title	Presenter			
		Baroja/ Wave device development and testing	Gareth Tomas	291	Simulations of extreme wave load on an oscillating water column wave energy converter	Chris Chartrand	09:00-09:15		
				298	On the survivability of WECs through submergence and passive controllers	Elie Al Shami	09:15-09:30		
				393	A probabilistic framework for fatigue damage of lift based wave energy converters"	Abel Arredondo-Galeana	09:30-09:45		
				382	Preliminary design of an OWC wave energy converter battery charger	D.N. Ferreira	09:45-10:00		
				540	Development & performance enhancement of an AUV wave-charging system	Brian Rosenberg	10:00-10:15		
				550	A methodology to measure the energy flux captured by a submerged U-OWC by using temperature sensors	Luana Gumari	10:15-10:30		
		Laboa/ Tidal device development and testing	Gustavo Esteban	137	CFD analysis of hydrodynamic force on a horizontal axis tidal turbine	Kai Xu	09:00-09:15		
				150	Dynamic Responses of a 1.5-Scale Ocean Current Energy Converter	Shun-Han Yang	09:15-09:30		
				328	The Development of a passive blade-pitch mechanism to reduce the loads on a tidal turbine in high-flow conditions	Thomas Summers	09:30-09:45		
				348	Effects of non-isotropic blockage on a tidal turbine modeled with the Actuator-Line method	Enzo Mascrier	09:45-10:00		
				400	Intracycle Control Sensitivity of Cross-Flow Turbines	Ari Athair	10:00-10:15		
				402	Development of an Unmanned Mobile Current Turbine Platform	Manhar Dhanak	10:15-10:30		
		Arriaga/ Tidal resource characterization	Cameron Johnstone	258	Validation of the energy resource assessment with experimental data for the site selection of a tidal turbine in the Tagus River estuary	Bénédicte Hooft	09:00-09:15		
				302	On tidal array layout sensitivity to regional and device model representation	Connor Jordan	09:15-09:30		
				457	Resource assessment using a combination of seabed mounted and semi-stationary vessel-mounted ADCP measurements	Eloi Droniou	09:30-09:45		
				228	Measurements of tidal flow variability in Ramsey Sound, Penobscot Bay	Jon Miles	09:45-10:00		
				171	Investigation of Low Order Parameters Affecting Tidal Stream Energy Resource Assessments	Misha Patel	10:00-10:15		
		178	Mapping the Unresolved Tidal Resource in Estuaries	Matt Lewis	10:15-10:30				
		Oteiza/ Environmental impact and appraisal	Andrea Copping	187	Acoustic Characterization around the CalWave Wave Energy Converter	Kaustubha Raghukumar	09:00-09:15		
				214	A conditional probabilistic encounter-impact model for fish-turbine interactions	Jezella Peraza	09:15-09:30		
				303	SafeWAVE: The contribution of the SafeWAVE EU project to the future development of ocean energy	Juan Bald	09:30-09:45		
				623	Automated detection of wildlife in proximity to marine renewable energy infrastructure using machine learning of underwater imagery	David Gold	09:45-10:00		
				221	Choose Your Own Marine Energy Adventure Game: Collision Risk	Lenaig Hemery	10:00-10:15		
		284	Measurements of the wake from a floating tidal energy platform	Maricarmen Guerra Paris	10:15-10:30				
10:30-11:00	Refreshments, networking & posters exhibition (Terrace and Chillida room)					10:30-11:00			
11:00-12:30	Oral presentations	Room /Track	Chairman	Paper ID	Title	Presenter			
		Baroja/ Wave device development and testing	Urko Izquierdo	270	Biofin prevention in the generator of a direct drive wave energy converter	Nick Baker	11:00-11:15		
				330	Hydro-elastic interaction of polymer materials with regular waves	Krishnendu Puzhukilli	11:15-11:30		
				380	Degrees of Freedom Effects on a Laboratory Scale WEC Point Absorber	Courtney Beringer	11:30-11:45		
				155	Effects of projected wave climate changes on the sizing and performance of OWCs: a focus on the Mediterranean and Atlantic European coastal waters	Irene Simonetti	11:45-12:00		
				211	A multi-PTO Wave Energy Converter for Low Energetic Seas: Ensenada Bay Case	Paulino Meneses Gonzalez	12:00-12:15		
				216	Graphene oxide reinforced room-temperature-vulcanising elastomers for flexible wave energy converters	Xinyu Wang	12:15-12:30		
		Laboa/ Tidal device development and testing	Iñigo Bidaguren	418	Design, Manufacture and Testing of an Open-Source Benchmark Composite Hydrokinetic Turbine Blade	Miguel Gonzale-Montijo	11:00-11:15		
				456	Wake characterization of tidal turbines in the Pentland Firth using vessel-mounted ADCP measurements	Marion Huchet	11:15-11:30		
				553	Tidal Turbine Benchmarking Project: Stage I - Steady Flow Experiments	S.W. Tucker Harvey	11:30-11:45		
				574	Tidal Turbine Benchmarking Project: Stage I - Steady Flow Blind Predictions	R.H.J. Wilden	11:45-12:00		
				567	On the design of a small scale tidal converter for long time deployment at sea	Damiano Alizzio	12:00-12:15		
								12:15-12:30	
		Arriaga/ Tidal resource characterization	Vincenzo Nava	323	Influence of the spatial variation of upstream velocity on a vertical-axis tidal turbine performance	Lilia Flores Mateo	11:00-11:15		
				339	Tracking a large vortex at a tidal power site	Philippe Mercier	11:15-11:30		
				577	Overview of Resource and Turbine Modeling in the Tidal Stream Industry Engineer project: TIGER	Tim Stallard	11:30-11:45		
				165	Evaluating the performance of turbulence closure models for tidal stream resource characterization	Zhaoping Yang	11:45-12:00		
				296	Tidal turbine wake characterization by vessel-mounted ADCP data analysis	Pablo Garcia Novo	12:00-12:15		
		299	Estimation and characterisation of the wave-induced turbulent kinetic energy and turbulent dissipation from ADCP data	Clément Calvino	12:15-12:30				
		12:30-14:00	Lunch & posters exhibition (Terrace and Chillida room)					12:30-14:00	
		14:00-15:30	Oral presentations	Room /Track	Chairman	Paper ID	Title	Presenter	
				Baroja/ Wave device development and testing	Iñigo Albaina	263	A Dual Hardware-In-the-Loop (DHIL) platform for testing and validation of WEC subsystems	Giacomco Alessandri	14:00-14:15
						430	Hardware-in-the-loop testing framework for active accumulator wave energy converters	Chen Zeng	14:15-14:30
						354	Multi wave absorber platform design, modelling and testing - Investigating the integration of multiple wave energy absorbers into a floating offshore wind platform considering a future wind	Nial McLean	14:30-14:45
						481	Analysis of data from the full-scale prototype testing of the WASP - A novel wave measuring buoy	Brendan Walsh	14:45-15:00
484	Open Sea Trial of a Wave-Energy Converter at Tutuorin Port - Challenges					Abdus Samad	15:00-15:15		
576	Test rig for submerged transmissions in wave energy converters as a development tool for dynamic sealing systems					Anthony Jonsson	15:15-15:30		
Arriaga/ Tidal resource characterization	Rodolfo Olvera-Trejo			390	Turbine fatigue load prediction from field measurements of waves and turbulence	Hannah Mullings	14:00-14:15		
				428	Development of a Tool to Optimize Tidal Stream Energy Sites	Paul Evans	14:15-14:30		
				432	Principles of ADCP deployment methodologies	Penny Jeffcoat	14:30-14:45		
				467	Assessing wave-turbulence separation from ADCP measurements with artificial flow data	Michael Tognetti	14:45-15:00		
				478	Multi-criteria analysis to evaluate tidal energy potential in France	Jordi Serrat	15:00-15:15		
				563	Improved Modelling of Vertical Velocity Profiles at a Tidal Energy Site	Lilli Enders	15:15-15:30		
Oteiza/ Environmental impact and appraisal	Juan Bald			220	Siting tidal energy projects through resource characterization and environmental considerations	Andrea Copping	14:00-14:15		
				326	ITSASDRONE, an autonomous marine surface drone for fish monitoring around wave energy devices	Ainhize Uriarte	14:15-14:30		
				600	Empowering communities to participate in marine energy planning and development	Grace Chang	14:30-14:45		
				374	Assessing the effect of onshore and offshore Wave Energy Converters on seabed integrity combining image-based and acoustic methods	Iñigo Muxika	14:45-15:00		
				554	Effects of the spacing between two hydrokinetic turbines on the bedforms by numerical simulations	Fatima Khaleel	15:00-15:15		
675	Underwater noise impact assessment of a wave energy converter in the northern Atlantic (Spain)			José Antonio García	15:15-15:30				
15:30-16:00	Refreshments, networking & posters exhibition (Terrace and Chillida room)					15:30-16:00			
16:00-17:30	Side events			Mitxelena/Side event 7	"SUPPORTING THE FUTURE OF OCEAN ENERGY HERE AND NOW; A GLIMPSE OF BASQUE PUBLIC INITIATIVES TO FOSTER SECTOR SCALE-UP" (by EVE)			16:00-17:30	
				Baroja/Side event 8	Wave Energy Converter Simulator (WEC-Sim) (by SANDIA LAB. -WEC-SIM TEAM-)			16:00-17:30	
				Arriaga/Side event 9	"Instrumentation Instrumentation for Environmental Monitoring around Marine Energy Devices" (by Coastal Science Division-PNNL & WavEC)			16:00-17:30	
20:00-22:00	Social programme			Gala Dinner (Atrium of the Guggenheim Museum)				20:00-22:00	

Thursday September 7						
Registration (Main Hall)						08:00-09:00
	Room /Track	Chairman	Paper ID	Title	Presenter	
Oral presentations	Laboa/ 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: Sensativity of Realistic Wave Climates	Ander Zarketa-Astigarra	09:15-09:30
			500	Integrated hydrodynamic-electrical hardware model for wave energy conversion with IM 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 breakwater	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 Shahroozi	10:15-10:30
	Arriaga/ Wave resource characterization	Joannes Berque	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 parameters	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 ERAS Wave Energy Flux through Sailor diagram in Spain (2005-2014)	Alain Ulazia	10:15-10:30
	Oteiza/ Economic, 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	Deborah Rose	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	Baroja/ 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-Sánchez	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 breakwater	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
			170	Wave Excitation Tests on a Fixed Sphere: Comparison of Physical Wave Basin Setups	Jacob Andersen	12:15-12:30
	Laboa/ 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	Carlos Michelen	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/ Wave resource characterization	Jesus 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-González	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/ Economic, social, legal and political aspects of ocean energy	Yago Torre-Enciso	399	Techno-economic optimization of an offshore hybrid power system: Argentine Basin case study	Sarah Palmer	11:00-11:15
			452	Ensuring Resilience in Ocean Energy Power Plants: A Survey of Cybersecurity Measures	Thaila Nazare	11:15-11:30
			340	On the complementarity of wave, tidal, wind and solar resources in Ireland	Haftz Ashan Said	11:30-11:45
			335	A Comparison of the European Regulatory Framework for the deployment of Wave Energy Converters	Claudio Moscoloni	11:45-12:00
			507	Ocean Energy - Markets - Currency - Impact - Dimension of & Choices in the Technology Development Space	Jochem Weber	12:00-12:15
Lunch & posters exhibition (Terrace and Chillida room)						12:30-14:00
Oral presentations	Baroja/ 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	Aitor 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
						15:15-15:30
	Arriaga/ Wave resource characterization	Jose L. Villate	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
			475	The application of temporal gating in the measurement of response amplitude operators	Natalia Sergienko	14:30-14:45
			310	Analysis of the impact of floater interactions on the power extraction of a dense WEC array with adjustable nonlinear PTO	Alva Bechlenberg	14:45-15:00
			483	New design options for the improvement of the Mutriku power plant	Urko Izquierdo	15:00-15:15
						15:15-15:30
	Oteiza/ Economic, social, legal and political aspects of ocean energy	Jochem Weber	223	Using human-centered design to develop a national research landscape for marine energy in the United States	Samantha Quinn	14:00-14:15
			385	Choosing Wave Energy Devices for Community Led Marine Energy Development	Molly Gear	14:15-14:30
			388	A Socioeconomic, Environmental, and Regulatory Assessment for Current Energy Converter Technologies	Jonathan Colby	14:30-14:45
			413	Floating wind and wave energy technologies: applications, synergies and role in decarbonization in Portugal	Craig White	14:45-15:00
			436	Wave energy communication and social opposition: can we improve perception of ocean energy development projects?	Maria C. Uyarra	15:00-15:15
						15:15-15:30
Closing ceremony	Mitxelena Auditorium	Iñigo Ansola	Chair EVE (Basque Agency for Energy)	15:40-15:45		
		Irene Penesis	ICOE 2024 Melbourne (Australia)	15:45-15:50		
		AbuBakr Bahaj	PRIMARe 2024 Southampton (UK)	15:50-15:55		
		Bruce Cameron	PAMEC 2024 Barranquilla (Colombia)	15:55-16:00		
		C H Jo	AWTEC 2024 Hangzhou (China)	16:00-16:05		
		Luis Gato	EWTEC 2025 Madeira (Portugal)	16:05-16:10		
		Cameron Johnstone	EWTEC Executive Board	16:10-16:15		
Social programme	Technical visits: Option 1: MUTRIKU Option 2: BIMEP					16:30-20:30
	(Executive Board Meeting and Dinner)					21:00-22:30

Paper ID	Title of the poster	Authors' List
342	Vortex induced vibrations of marine risers: validating turbulence models	Chang, Wang; Antonis Vakis; Arthur Veldman; Eize, Stamhuis
313	Grid value of co-located offshore renewable energy	Erik, Jonasson; Irina, Temiz
545	Preliminary performance assessment from towing tank testing of a horizontal-axis turbine	David, Lande-Sudall; Sondre, Tollefsen; Kjetil, Gravelsæter; Harald, Moen; Jan Bartl
377	Life Cycle Assessment of a wave energy device – LiftWEC	Paula, Bastos; Fiona, Devoy-McAuliffe; Abdel, Arredondo-Galeana; Julia Chozas; Paul, Lamont-Kane; Pedro, Almeida Vinagre
184	Experimental passive and reactive control of a Laboratory Scale WEC Point Absorber	Bret, Bosma; Courtney, Beringer; Bryson, Robertson;
586	Combining offshore wind and wave energy to supply a big size desalination plant	Beatriz, Del Rio Gamero; Julieta, Schallenberg Rodríguez; Pedro, Suarez Arocha
422	Design, installation, capacities and expenses of an indoor multipurpose modular 2D wave flume and circulating water channel	Iñigo, Bidaguren; Natalia, Montalban; Urko, Izquierdo; Iñigo, Albaina; Alberto, Peña; Egoitz, Urtaran; Jesus Maria, Blanco;
578	Experimental Optimization Environment for Developing an Intracycle Pitch Control in Cross Flow Turbines	Stefan, Hoemer; Roberto, Leidhold; Shokoofeh, Abbaszadeh; Karla, Ruiz-Husmann; Timo, Bennecke; Zhao, Zhao; Christian-Tora, Weber; Pierre-Luc, Delafin;
570	Assessment of tidal energy resources in the Strait of Magellan in southern Chile	Leandro, Suarez Atias; Cristian, Escauriaza; Megan Williams; Maricarmen, Guerra;
325	Marine Renewable Energies and Maritime Spatial Planning: different national proposals for their legal and spatial context	Iratxe Mentxaka; Ibon Galparsoro; Emma Verling; Inés Machado; Enored LebBourhis; Thomas Soulard; Juan Bald
542	A Filtering device for improving the quality of cooling water in turbine generator of Sihwa Tidal Power Plant	Taekyun Kim; Hee Jin Kwak; Jee Hun Bang; Mosol Kim; Bem sug Kim
276	A new type of wave tank: prototype and proof of concept	Joannes Berque; Iñigo Zarate; Jesus Maria Blanco; Iñigo Bidaguren; Imanol Touzon; Luisa Fernandez
488	Comparison of physics-based and machine learning methods for phase-resolved prediction of waves measured in the field	Jialun Chen; Thobani Hlophe; Wenhua Zhao; Ian A. Milne; David Gunawan; Adi Kurniawan; Hyg Wolgamot; Paul H. Taylor; Jana Orszaghova
368	Development of the Exowave Oscillating Wave Surge Converter	Sarah Krogh Iversen; Jacob Andersen; Lars Wigant; Peter Frigaard

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